

Stuttgart – A Livable City

The global 2030 Agenda at local level

4th Voluntary Local Review

2025



STUTTGART





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4th Voluntary Local Review

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Foreword

Stuttgart – A Livable City for All

The core aim of the 2030 Agenda, adopted by the United Nations (UN) in 2015 along with the Sustainable Development Goals (SDGs), is to ensure a dignified life for all people within the planet's ecological boundaries.

Amidst humanitarian crises in a multipolar world, the UN's 2024 Sustainability Report states that over 80 percent of the targets set for 2030 have yet to be achieved. UN Secretary-General António Guterres therefore called for a "race to catch up" in the UN's joint political declaration for 2024. It states: "We will act with urgency to realise the vision (of the 2030 Agenda) as an action plan for people, the planet, prosperity, peace and partnership that leaves no one behind."

State Capital Stuttgart sees its sustainable actions at local level in a global context. Since 2017, the State Capital has taken key decisions and created appropriate instruments and structures to expand the scope and depth of anchoring of international sustainability goals. The Stuttgart process was given further impetus at the 2024 event in City Hall, "Stuttgart Together for the International Sustainability Goals – Network Meeting at the Midpoint of the Implementation of the UN 2030 Agenda".

The regular "Stuttgart – A Livable City" Voluntary Local Review (VLR) (since 2019), the dashboard and the underlying barometer showing the status of development (since 2024), as well as closer integration with budget planning, all play a key role in the city's monitoring of the international sustainability goals.

The mid-term barometer of the Statistics Office of the State Capital shows that slightly more than half of the indicators are showing a moderately positive trend for Stuttgart. There is still room for improvement in around a third of the indicators. On a positive note, no indicator shows a significantly negative trend.

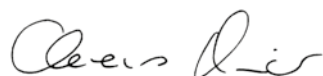
In this fourth VLR, the indicators were further adapted to the Stuttgart context in a participatory process, for the city districts for example. As a pilot local community, then, State Capital Stuttgart is once again contributing to nationwide and international projects, including the nationwide "Digital Platform for Sustainable Municipalities".

The developments, target conflicts and interrelationships depicted in "Stuttgart – A Livable City" create a data-based foundation for the further strategic alignment and impact-oriented design of transformation processes on the ground.

Social cohesion, climate protection and economic sustainability can be mutually beneficial. Stuttgart can achieve effective solutions if these areas are viewed holistically and tackled jointly by politics, administration, the private sector and civil society.

We would like to thank everyone involved in the VLR and invite you to use these reliable insights to take bold action to promote a sustainable and future-facing city – as part of a global initiative – beyond the year 2030.

For Stuttgart – A Livable City for All!'



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Structure and explanation

The sections that follow present the trends in selected indicators for measuring international Sustainable Development Goals ². The benchmark is always State Capital Stuttgart.

The individual SDG sections are structured as follows:

- a brief statement about the SDG in question,
- an overview of the topics relevant to the nationwide "SDG Indicators for Municipalities" project³,
- the presentation of the targets relevant to German local communities, along with a description of which targets are covered by indicators,
- a depiction (time series diagram) and description of the development of the indicator in question,
- classification, definition and calculation basis – in some cases with methodological notes,
- a presentation of the correlations with other SDGs and references to other indicators relevant to the SDG in question and explained under other SDGs,
- the presentation of selected new practical examples of State Capital Stuttgart drawn up by the specialist units.

As a rule, the time series of the indicators covers the years 2010 to 2023 or 2024, depending on the availability of data. This VLR reflects the most recent data available at the time of going to press. Indicators without a time series so far are presented as a data point in a number chart. The quantitative and qualitative data used for the VLR are provided by the Statistics Office and other offices and departments of State Capital Stuttgart. Some data were sourced from the "Wegweiser Kommune" [Community Guide] by the Bertelsmann Foundation and the State and Federal Statistical Office.

The texts of the individual indicators are based on the VLR of 2023. In certain cases, the figures in this report differ from the data in the last VLR. This is due to adjustments made with the aim of more accurately reflecting each of the indicators. Examples include the use of new data sources (e.g., indicator 1-1) or the use of annual averages instead of values on a specific date (e.g. for the

poverty indicators under SDG 1). Definitions and calculation formulae originating from the nationwide "SDG Indicators for Municipalities"⁴ project were partly adapted to the Stuttgart context.⁵ Appropriate definitions and calculation bases were formulated for the indicators contributed by the State Capital itself.

In the 2025 VLR, a direct link to the targets was also established for each indicator⁶. The target to which an indicator primarily contributes is highlighted in colour with a brief description next to each indicator text. Some indicators can be assigned to several targets. This is presented in the Overview of Indicators in Appendix II. In addition, the subsections entitled "Correlation with other SDGs" provide important information on synergies and target conflicts. These are relevant for decision-making processes in sustainable urban development and convey the added value of the holistic orientation framework of the 2030 Agenda.

The assignment of targets to indicators can sometimes appear to be slightly inaccurate. This is because global goals have been broken down to fit the local community context in Germany. The targets relevant to German local communities were adopted from the nationwide "SDG Indicators for Municipalities" project and presented in abridged format. If individual targets from this project are not yet covered by indicators in the current VLR, this is primarily due to a lack of suitable indicators or available data. A new feature of this VLR is the inclusion of small-scale data at the city district level for selected indicators. Fifteen new indicators and a new index have also been added. Last but not least, some existing indicators have been modified. The exact methodological approach and the data basis are presented in the concluding section, "Overall process and perspectives". This section also contains comments on the interim results of the process of anchoring the International Sustainability Goals in Stuttgart.

The colour-coded boxes contain additional information. Their aim is to provide additional information on the individual indicators from scientific studies or other relevant literature (such as results from the latest Stuttgart survey).



Overviews of the 17 Sustainable Development Goals of the United Nations with their 169 targets, the indicators specifically selected for the VLR in the State Capital and other possible SDG Indicators for Municipalities can be found in Appendices I, II and III. A list of figures appears below the bibliography.



All results of the SDG monitoring process are available in the city's own SDG dashboard. The dashboard provides an interactive display of all indicators and enables a detailed analysis of progress. The dashboard can be accessed at: **<https://sdg.dashboardstr.de/>**



A wide range of specific measures contributes to the implementation of the sustainable development goals. The practical examples from previous VLRs are still relevant; a full list can be found at the following link:

<https://www.stuttgart.de/lebenswertes-stuttgart>

The responsibility for practical examples lies with the specialist units or offices. This being the case, there may be differences in the presentation and the texts.



Further information on the implementation of the United Nations Sustainable Development Goals in Stuttgart can be found at: **www.stuttgart.de/global-und-nachhaltig**



SDG 1 – No Poverty
End poverty in all its forms everywhere



SDG 2 – Zero Hunger
End hunger, achieve food security and improved nutrition and promote sustainable agriculture



SDG 3 – Good Health and Well-Being
Ensure healthy lives and promote well-being for all at all ages



SDG 4 – Quality Education
Ensure inclusive, equitable and high-quality education and promote lifelong learning opportunities for all



SDG 5 – Gender Equality
Achieve gender equality and empower all women and girls



SDG 6 – Clean Water and Sanitation
Ensure availability and sustainable management of water and sanitation for all



SDG 7 – Affordable and Clean Energy
Ensure access to affordable, reliable, sustainable and modern energy for all



SDG 8 – Decent Work and Economic Growth
Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all



SDG 9 – Industry, Innovation and Infrastructure
Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation



SDG 10 – Reduced Inequalities
Reduce inequality within and among countries



SDG 11 – Sustainable Cities and Communities
Make cities and human settlements inclusive, safe, resilient and sustainable



SDG 12 – Responsible Consumption and Production
Ensure responsible consumption and production patterns



SDG 13 – Climate Action
Take urgent action to combat climate change and its impacts



SDG 14 – Life below Water
Conserve and responsibly use the oceans, seas and marine resources for sustainable development



SDG 15 – Life on Land
Protect, restore and promote the responsible use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss



SDG 16 – Peace, Justice and Strong Institutions
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels



SDG 17 – Partnerships for the Goals
Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development



SDG 1 No Poverty

"End poverty in all its forms everywhere"

Relevant targets for German municipalities include implementing social protection measures, ensuring a broad provision for the poor and vulnerable, increasing resilience in precarious situations and mobilising resources to end poverty in all countries of the Global South.



Overview of the relevant targets

The following targets of SDG 1 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Appendix II.



1.2 Reduce poverty at least by half



1.3 Implement social protection systems and programmes for all



1.4 Equal rights to property, basic services, technology and economic resources

The following relevant targets have not yet been represented by indicators:



1.1 Eradication of extreme poverty



1.5 Strengthen resilience to ecological, economic and social catastrophes



1.b Establish a political framework for combating poverty and promoting gender equality

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Indicator 1-1: At-risk-of-poverty rate

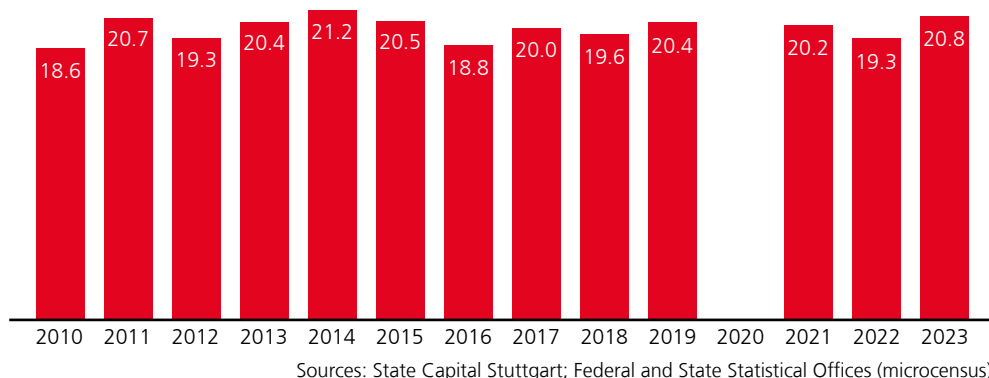


Figure 1:
Rate of private households in
Stuttgart that are at risk of
poverty (in percent)

The proportion of households whose household income was less than 60 percent of the median net equivalent income of private households in Stuttgart fluctuated between 19 and 21 percent throughout the period under review.^{7 8}



This indicator contributes to the measurement of SDG target 1.2:
"Reduce poverty at least by half"

Classification / Definition

This indicator was introduced in 2023. In the current issue, the data from the microcensus serves as the basis for calculation (in the last issue, data from the citizen surveys conducted by the Statistics Office of State Capital Stuttgart was used). The benefit here is that the obligation to provide information in the microcensus largely eliminates distortions in the sample and in the determination of net equivalent income.

The indicator describes the number of households with an income of less than 60 per cent of the median net equivalent income of households in Stuttgart. People whose income is below the 60 percent threshold are, by definition, affected by relative poverty. The indicator, then, makes a direct contribution to measuring target 1.2, which focuses on reducing the number of people living in poverty as defined nationally.

When interpreting the data, it is important to remember that Stuttgart has one of the highest average per capita incomes in Germany. According to a 2023 salary report by the job platform Stepstone, the average gross median annual salary for employees in Germany was 43,800 euro, while in Stuttgart it was significantly higher at 54,100 euro – ranking first among major cities. For managers, the average income was even

higher at 82,860 euro. This context is crucial when assessing the at-risk-of-poverty rate, as it is calculated relative to the local income level. The higher the number of salaries within the high-earner bracket, the higher the equivalent income. As a result, incomes in Stuttgart fall below the 60 percent threshold more quickly than in other regions due to the higher overall income level. That said, it is also important to consider that the cost of living – especially for rent, food, and other essentials – is among the highest in Germany, and this places a greater financial burden on many households.

To calculate the at-risk-of-poverty rate, a household's income is compared to its size and weighted according to the age of its members. The result is the equivalent income. The weighting is based on a scale developed by the Organisation for Economic Co-operation and Development (OECD). This scale also takes into account the savings a multi-person household can achieve compared to a single-person household. The person who is the main income earner is assigned a weighting of 1.0 and each additional person in the household aged 14 and over a weighting of 0.5. Children under the age of 14 are weighted at 0.3. This calculation method makes household incomes comparable, although it should be noted that income



data is often incomplete, as smaller or irregular proportions of income often go unreported. Consequently, the value of net equivalent income is underestimated.⁹ Dividing income into income classes can also lead to inaccuracies in the results, as shifting the class boundaries can result in a higher or lower at-risk-of-poverty rate.

Calculation

At-risk-of-poverty rate:

$$\frac{\text{Number of households with income} < 60\% \text{ of the median net equivalent income in Stuttgart}}{\text{Total number of private households}} \times 100$$

At-risk-of-poverty rate among children and young people



As analysed by the Baden-Württemberg State Statistical Office in the context of World Children's Day 2024, the risk of poverty can have "significant and lifelong effects on the opportunities for participation of the boys and girls affected."¹⁰ Notably, in 2023, children with a migration background living in Baden-Württemberg faced an at-risk-of-poverty rate of 28.3% – almost three times higher than that of children without a migration background (9.3%).

Children and young people from single-parent families are also especially vulnerable to poverty. In households with just one adult and one child, the at-risk-of-poverty rate for children was 39.7 percent in 2023. This is more than five times higher than for children living in households with two adults and one child (7.7%). This risk, already heightened, escalates with each additional child living in a single-parent

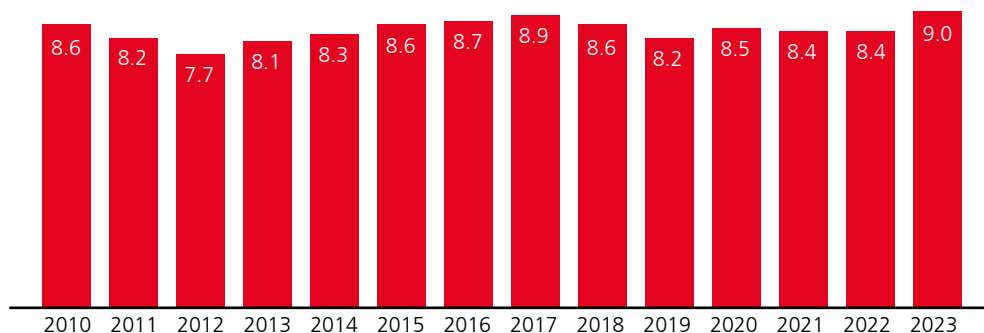
household. In 2023, the at-risk-of-poverty rate rose to 43.8 percent for single parents with two children, and to 54.8 percent for those with three or more children.

However, the number of children also affects the risk of poverty, regardless of whether the household is single-parent or not. As an example, 27.3% of children in 2023 living in households with two adults and more than three children were especially vulnerable to poverty.

Further information on child and youth poverty can be found under indicators 1-3 and 1-4. While the risk of poverty (among the other poverty indicators) is determined by the proportion of people entitled to minimum social security benefits, the at-risk-of-poverty rate is based on net equivalent income.



Indicator 1-2:

Receiving minimum social security benefits

Sources: State Statistical Office Baden-Württemberg; State Capital Stuttgart, Statistics Office and Office of Social Welfare and Participation; Statistics of the Federal Employment Agency

Figure 2:

Number of individuals entitled to and receiving minimum social security benefits (in percent)

During the period under review, the proportion of people receiving minimum social security benefits ranged between 7.7 and 9.0 percent. Between 2012 and 2017, the rate increased steadily, reaching a peak of just under 9 percent in 2017. One of the reasons for the increase between 2014 and 2017 is the influx of refugees in 2015/16, which contributed to a rise in the number of individuals receiving standard benefits under the Asylum Seekers Benefits Act. This, in turn, increased the proportion of people receiving minimum social security benefits. The sharp rise in 2023 can also be linked to the influx of refugees (in this case from Ukraine) and the rise in energy costs, partly as a result of Russia's war of aggression against Ukraine. The recent rise in unemployment impacts not only refugees but other population groups too. The consequences of the war are adversely affecting the German economy and the employment landscape.¹¹

The proportion of people receiving minimum social security benefits hinges essentially on both the overall economic climate and local economic conditions. The recession in 2009 had a direct impact on poverty rates, which is why the figure for 2010 also remained high. The economic recovery in the years that followed led to a slight decline in poverty rates.



This indicator contributes to the measurement of SDG target 1.3:
"Implement social protection systems and programmes for all"

State Capital Stuttgart is implementing a raft of measures to reduce the number of unreported cases of individuals who are eligible for benefits but do not apply for them. Assistance in applying for benefits and outreach social work is provided. The aim is to reduce the need for assistance by helping those affected achieve long-term independence from state support. The indicator also serves as an important basis for municipal planning. Transfer payment densities and minimum income support rates help to identify the need for state support for living expenses at local level and put targeted measures in place.



Classification / Definition

Minimum social security benefits include SGB II benefits (basic income support for job seekers), SGB XII benefits (social assistance) and standard benefits under the Asylum Seekers Benefits Act (AsylbLG). This indicator reflects the extent of support needed within the municipality. The focus is on both the financial and potential psychological burdens experienced by those affected.

The indicator is calculated as the proportion of persons receiving benefits under SGB II and SGB XII or standard benefits under the Asylum Seekers Benefits Act in relation to the population as a whole. As a rule, refugees are provided with benefits under the Asylum Seekers Benefits Act first, and subsequently under SGB II. The influx of refugees is expected to lead to an increase in the number of recipients of benefits under SGB II in the short term. The calculation differs from the first Voluntary Local Review (VLR) conducted in 2019, due to the inclusion of benefits under the Asylum Seekers Benefits Act. In addition, the figures differ from the 2023 VLR because annual averages have been used instead of figures from a specific date.

One challenge in interpreting the indicator is the number of unreported cases of people who would actually be entitled to benefits but fail to apply for them. Reasons for this include

ignorance, shame or a lack of confidence in dealing with authorities. The indicator only reflects the proportion of people who actually receive minimum social security benefits.

Crucially, the indicator only reflects income poverty, although poverty manifests in many different forms. Today, poverty is generally recognised as a multidimensional concept encompassing not only income or material deprivation but also social, political, educational, and cultural aspects. These various forms of poverty often overlap, though not in every instance.

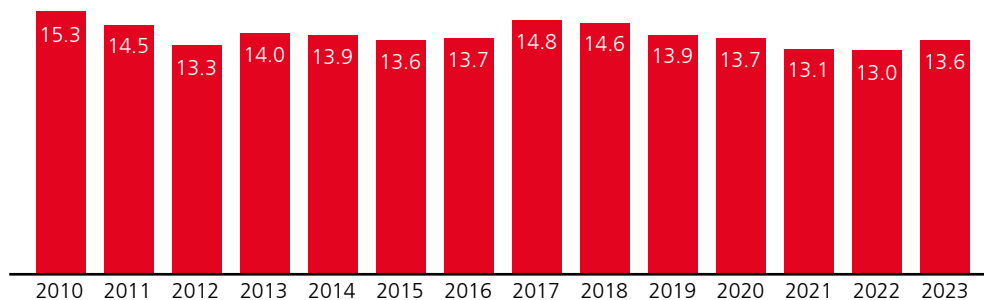
Calculation

Receiving minimum social security benefits:

$$\frac{\begin{array}{l} \text{Number of individuals entitled to and receiving benefits} \\ \text{under SGB II and SGB XII (annual average values)} \\ + \\ \text{Number of individuals receiving standard benefits under} \\ \text{the Asylum Seekers Benefits Act} \\ \text{(values on the specific date of 31.12.)} \end{array}}{\begin{array}{l} \text{Population} \\ * 100 \end{array}}$$



Indicator 1-3: Child poverty



Source: State Capital Stuttgart, Statistics Office; Statistics of the Federal Employment Agency

Figure 3:
Child poverty (in percent)

From 2010 to 2023, child poverty fluctuated between 13.0 and 15.3 percent. Higher values were observed in 2010, and also in 2017 and 2018. The latter can be attributed in part to the increased influx of refugees in 2015 and 2016. The figure has declined since 2018, reaching its lowest point of 13.0 percent in 2021 during the period under review. However, there was a slight uptick in the rate in 2023. One of the reasons for this is the influx of families from Ukraine.

Growing up and living in poverty entails a wide range of restrictions, obstacles, and personal challenges. Poverty and social exclusion also threaten social cohesion. Poverty is therefore addressed, alleviated and, ideally, prevented in many areas of State Capital Stuttgart through a raft of measures.¹²



This indicator is used to measure SDG target 1.3:
"Implement social protection systems and programmes for all"

Classification / Definition

Certain population groups – including single parents, women, children, and the elderly – face a higher risk of poverty, increasing their likelihood of social disadvantage. In this context, social inequality exists when the resources or living conditions of one group consistently provide better life chances and opportunities for self-fulfilment than those of another group.¹³

Child poverty is measured as the proportion of individuals below the age of 15 who are either entitled to benefits under SGB II or live in households with beneficiaries under SGB II, relative to the total population under 15. Unlike in the previous VLR, annual averages were used this time, which may explain the discrepancies in the figures.

Calculation

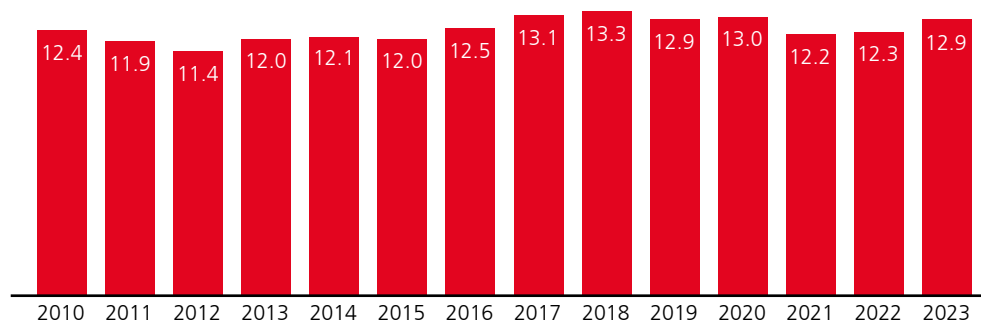
Child poverty:

$$\begin{aligned}
 & \text{Number of individuals entitled to and receiving benefits} \\
 & \text{under SGB II below the age of 15 (annual averages)} \\
 & + \\
 & \text{Number of individuals below the age of 15 who are not} \\
 & \text{entitled to benefits and living in households with entitled} \\
 & \text{individuals under SGB II (annual averages)} \\
 & / \\
 & \text{Population (under 15 years of age)} \\
 & * 100
 \end{aligned}$$



Indicator 1-4: Poverty among adolescents and young adults

Figure 4:
Poverty among adolescents
and young adults (in percent)



Source: State Capital Stuttgart, Statistics Office; Statistics of the Federal Employment Agency

The proportion of adolescents and young adults at risk of poverty was around twelve percent between 2010 and 2023, which is slightly lower than the proportion of children at risk of poverty. However, the proportion of young people at risk rose slightly after 2015, peaking at 13.3 percent in 2018. Since 2019, the figure has fluctuated between 12 and 13 percent, recently rising again to 12.9 percent. This increase, as well as the rises observed in 2017 and 2018, can be attributed in part to refugee movements.



This indicator is used to measure SDG target 1.3:
"Implement social protection systems and programmes for all"

Classification / Definition

The classification of the indicator for poverty among adolescents is similar to that of the indicator for child poverty (see Indicator 1-3). Poverty among adolescents and young adults is calculated as the proportion of the total number of people aged between 15 and 17 who are entitled to benefits under SGB II and of people aged between 15 and 17 who are not entitled to benefits but live in households with someone who is entitled to benefits under SGB II, relative to the total population aged between 15 and 17. Unlike in the previous year's VLR, annual averages were used this time, which may explain the discrepancies in the figures.

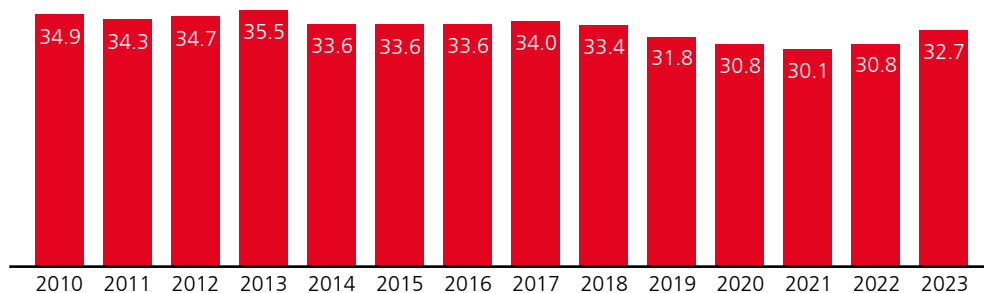
Calculation

Poverty among adolescents and young adults:

$$\begin{aligned}
 & \text{Number of people entitled to benefits under SGB II} \\
 & \text{between the ages of 15 and 17 (annual averages)} \\
 & + \\
 & \text{Number of persons between the ages of 15 and 17} \\
 & \text{who are not entitled to benefits and living in households} \\
 & \text{with persons entitled to benefits under SGB II} \\
 & \text{(annual averages)} \\
 & / \\
 & \text{Population (15–17 years of age)} \\
 & * 100
 \end{aligned}$$



Indicator 1-5:

Poverty among single parents

Source: State Capital Stuttgart, Statistics Office; Statistics of the Federal Employment Agency

Figure 5:
Poverty among single parents
(in percent)

The proportion of single parents receiving benefits under SGB II in State Capital Stuttgart fluctuated between 30.1 and 35.5 percent from 2010 to 2023. This rate initially decreased at the end of 2017. The rise observed in 2022 and 2023 can also be linked to the arrival of refugees from Ukraine, particularly as many displaced females arrived without a second legal guardian. Regardless, the risk of poverty among single parents has consistently remained high and is more than four times greater than that of couples with one or two children.



This indicator is used to measure SDG target 1.3:

"Implement social protection systems and programmes for all"

Classification / Definition

In State Capital Stuttgart, one in five families consists of children growing up with just one parent.¹⁴ In 2023, women accounted for 94.8 percent of single parents affected by poverty in State Capital Stuttgart.

Existing social and legal structures have so far been unable to offset the significantly higher risk of poverty among households with children. In particular, the additional costs for children and the burden of childcare, which is usually borne by wage earners, are not easily offset. Increasing numbers of children lead to greater household demands and childcare responsibilities. Single parents – especially women, who make up the majority – are recognised as a group with special sociopolitical support needs, as they cannot share the responsibilities of providing for their families and caring for their children with another parent in the household.¹⁵

There are many reasons why single parents are at high risk of poverty. Challenges in juggling work and childcare are a key factor. In the traditional division of roles, working mothers generally take on the role of supplementary earners, while fathers are the main breadwinners in most families. In cases of separation or divorce, mothers often face a double burden and a poverty trap because of contending with increased living

expenses and also with fathers failing to meet their maintenance obligations. This, combined with the income level often puts women in precarious situations. Against this backdrop, single parents are also more frequently affected by unemployment – a circumstance that is rooted in structural obstacles to reconciling work and childcare. In addition, women still earn less than men, their salaries increase at a slower rate and they earn less than men with the same qualifications.¹⁶

The indicator for single parents refers to the proportion of single parents receiving SGB II benefits. This is an important indicator, as single parents, especially mothers, are particularly vulnerable to poverty due to the increased financial burden and the difficulty of juggling work and childcare.

Calculation

Poverty among single parents:

Number of single parents receiving income support
under SGB II (annual averages)

/

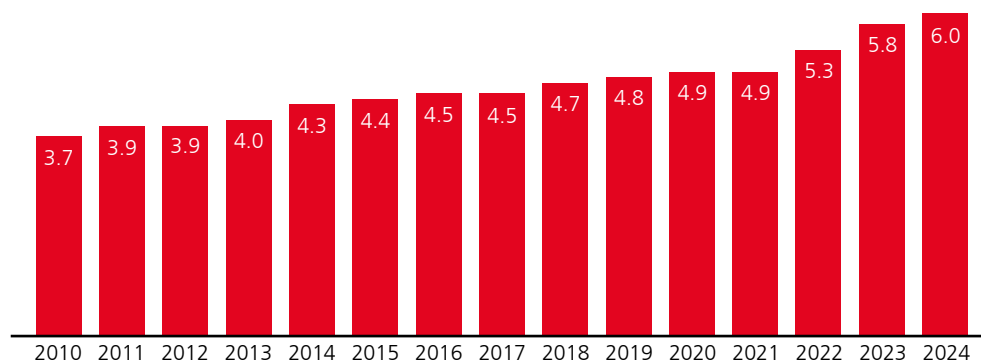
Number of single parents

* 100



Indicator 1-6: Poverty in old age

Figure 6:
Poverty in old age (in percent)



Source: State Capital Stuttgart, Statistics Office; Statistics of the Federal Employment Agency

The level of poverty in old age is lower than the level of poverty among children, adolescents and single parents. However, the trend differs in that poverty among the elderly has risen steadily between 2010 and 2024. The increase from 3.7 percent in 2010 to 6.0 percent in 2024 is significant. The sharp rise in old-age poverty by 0.9 percentage points from 2021 to 2023 was partly a consequence of the increasing number of older refugees from Ukraine. Aside this, however, there are also a number of factors that suggest that poverty in old age will increase in the future. The further increase in atypical employment relationships, precarious working conditions in the low-wage sector and interrupted employment biographies will have a long-term impact on disposable income in old age. Although private provision is growing in importance, pension levels are expected to decline steadily in the future due to recent pension law changes and demographic trends. Poverty in old age is associated with restrictions in almost all areas of life for those affected.¹⁷



This indicator is used to measure SDG target 1.3:
"Implement social protection systems and programmes for all"

Classification / Definition

Poverty in old age impacts women more than men. This is caused by underlying structural inequalities such as the gender pay gap, and influenced by traditional gender roles that often result in women spending less time in paid employment than men, leading to lower pension benefits.

Furthermore, a study by the Bertelsmann Foundation shows that the risk of poverty varies greatly between different groups.¹⁸ The risk is particularly high for people with low levels of education, single women and people who have been affected by long-term unemployment or who have a migrant background.¹⁹ This has an impact well into old age.

The risk of poverty in old age is calculated as the proportion of older people (aged 65 and over) affected by poverty.

Calculation

Poverty in old age:

Number of individuals receiving benefits under
SGB XII below the age of 65 (annual averages)

/

Population (under 65 years of age)

* 100



Stuttgart: A good place to grow old – despite rising poverty in old age

i

Despite the rising numbers of people affected by poverty in old age, Stuttgart is increasingly perceived as a good place to grow old. Over 55 percent of respondents to the 2023 Stuttgart survey rated the city as (very) good for older people. This reflects the city's ongoing efforts to develop an age-friendly environment in the face of growing social challenges. Stuttgart is increasingly perceived as a liveable city for senior citizens, especially among those over 74, who overwhelmingly rate it as good. This is particularly encouraging, as this age group has the best insight into the reality of life for older people. Upcoming surveys will show how well Stuttgart continues to meet the needs of its older population.²⁰

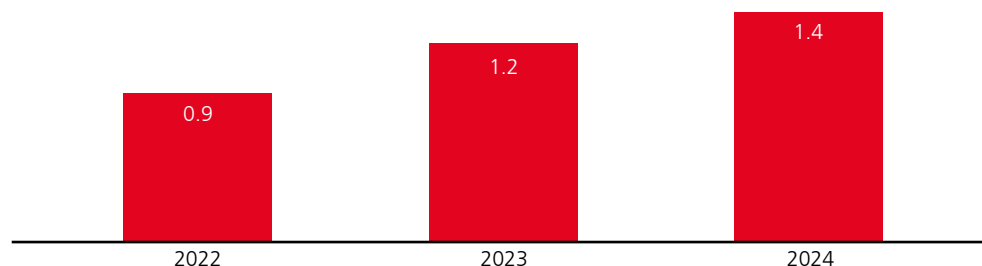
By joining the global WHO network "Age-friendly Cities and Communities", the City of Stuttgart declared its willingness to create age- and generation-friendly structures. The decision to join was made in 2022 by the municipal council (GRDs (municipal council document) 42/2022 State Capital Stuttgart joins the WHO's global network of Age-friendly Cities and Communities). Operating under the motto 'Our Stuttgart – at any age!', the Department for Strategic Social Planning oversees initiatives to make the city age- and generation-friendly, aiming to enhance life satisfaction and promote self-determined participation among older residents.

Further information can be found at: <https://www.stuttgart.de/in-jedem-alter>



Indicator 1-7: Homelessness

Figure 7:
Homelessness (in percent)



Source: Federal Statistical Office

According to homelessness statistics from the Federal Statistical Office, around 0.9 percent of Stuttgart's residents were classified as homeless in 2022. By 2024, the figure had risen to 1.4 percent. This corresponds to around 8,300 people in sheltered accommodation in 2024.

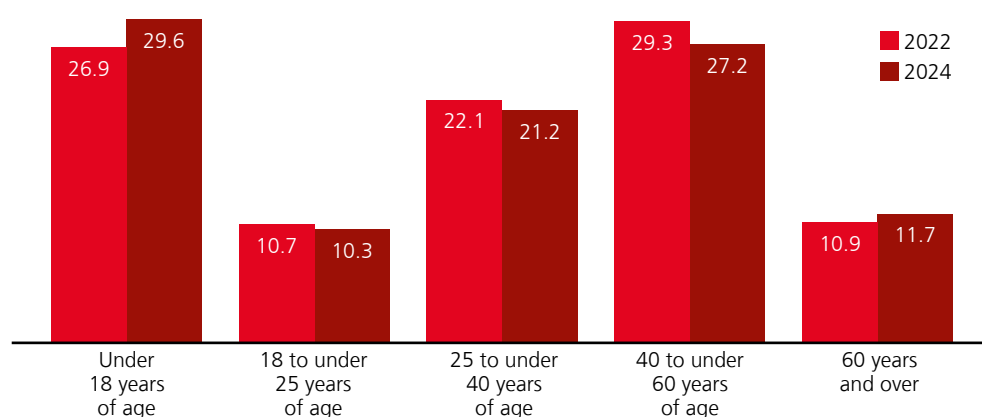
The Germany-wide increase in the number of homeless people in sheltered accommodation is also due to improvements in data reporting in the third year since the introduction of the statistics.²¹ In Stuttgart, the increase documented since 2022 appears to be mainly attributable to people who were housed in refugee accommodation due to homelessness, despite already having a residence permit. The majority of these individuals are Ukrainian nationals. This also explains why the proportion of homeless people without German citizenship (as a percentage of all those affected) was significantly higher in 2024 at 78 per cent than the proportion of people with German citizenship. The proportion of men was just over 50 percent in 2024.

The German government's goal is to end homelessness in Germany by 2030.²²



This indicator is used to measure SDG target 1.4:
"Equal rights to property, basic services, technology and economic resources"

Figure 8:
Proportion of homeless people in sheltered accommodation by age group (in percent)



Source: Federal Statistical Office



Looking at the age structure of people accommodated due to homelessness, it is notable that, in 2024, 29.6 percent of them were under the age of 18. This group has grown compared to 2022 (when it was 26.9%) and accounted for a significant proportion of all those affected. The increase is partly due to the fact that more refugee families with children were included in the statistics. This group is counted in the statistics on homeless people in accommodation when families are housed in refugee shelters, even though they hold residence permits and have the right to secure housing on the open market but are unable to do so, effectively being made homeless.

Support for those facing homelessness



State Capital Stuttgart offers various forms of support for homeless people and those at risk of homelessness. Including:

- **Help keeping their home:** People who are at immediate risk of homelessness receive advice and support to help them keep their homes.
- **Support for those facing acute homelessness:** People who are already homeless are supported with places in overnight shelters or emergency accommodation.
- **Advice hotline for tenants and landlords:** The advice hotline offers support to citizens who are at risk of losing their homes.

Over the long term, the city plans to strengthen support for refugees, especially in the areas of housing and integration. Preventive measures are also to be stepped up to prevent homelessness from arising in the first place.



<https://www.stuttgart.de/organigramm/leistungen/hilfe-fuer-wohnungslose.php>



When comparing large German cities with over 500,000 inhabitants, State Capital Stuttgart ranks second after Hamburg in terms of the proportion of homeless people in sheltered accommodation in relation to the total population, ahead of Berlin and Frankfurt am Main.²³ Leipzig, Dortmund and Dresden have the lowest proportions of homeless people in accommodation in comparison.²⁴ However, comparing cities is difficult. A lower rate of homelessness can also be attributed to a city providing fewer accommodation options for homeless people. At the same time, however, it can be assumed that the availability of overnight accommodation also influences demand. People without homes or shelter are increasingly drawn to large cities due to the available support, while rural districts with fewer resources are more often referring them to the facilities in these urban centres. In addition, the rates of homeless people in sheltered accommodation, completely homeless people and people living in hidden homelessness vary between the federal states (see the Federal Government's report on homelessness)²⁵, which makes it even more difficult to compare cities across regions. Nevertheless, the rate provides a good benchmark, as the take-up of support services reflects the true demand. The scope of support services is expected to be adjusted to meet this need.²⁶

Classification / Definition

This indicator was introduced in 2023. It is based on the Homelessness Reporting Act (WoBerichtsG). It takes into account persons who, due to homelessness, are accommodated in overnight shelters, emergency shelters, (semi-)residential facilities or other services provided by homeless assistance organisations. The proportion of homeless people in sheltered accommodation is not the same as the total number of people actually affected by homelessness. This is because it is not possible to record all people living on the streets or experiencing so-called hidden homelessness. In addition, the Federal Statistical Office's homelessness statistics only include people who are in sheltered accommodation due to homelessness. Homeless individuals placed in other support systems (e.g., integration assistance) due to different needs are not included in the statistics.

As these are federal statistics, responsibility lies with the Federal Statistical Office. Homeless people living on the streets are not included in the statistics. Furthermore, only homeless people who are homeless at the time of the survey – on the night of 31 January to 1 February of any given year – are recorded. This is therefore a snapshot survey that does not capture data over the entire year. The figures also include refugees who are no longer in the asylum process and have a residence permit but are nevertheless accommodated in refugee shelters.²⁷

Calculation

Homelessness:

$$\frac{\text{Number of homeless people accommodated in shelters}}{\text{Population}} \times 100$$



Correlation with other SDGs

Poverty is a multifaceted and complex issue that interacts with all SDGs.

Poverty is directly linked to inadequate access to healthy food and thus to malnutrition (SDG 2). For people living in poverty, this also has a direct impact on their health and well-being due to the psychological strain it causes (SDG 3). Good access to education is just as crucial for overcoming poverty (SDG 4) as gender equality (SDG 5). Rising energy costs place a significantly greater burden on people affected by poverty. This is directly linked to access to affordable and sustainable energy (SDG 7), which is even more evident in times of energy crisis.

Poverty is also closely linked to the creation of decent jobs (SDG 8). Precarious working conditions or unemployment exacerbate poverty, while fair economic policies and social security systems can pave the way out. Poverty reduction and the reduction of inequalities, including income disparities, go hand in hand (SDG 10). Ensuring access to affordable accommodation and providing social housing (SDG 11) are also key components in reducing poverty.

Poverty, then, is a key sustainability factor because it is linked to numerous other challenges such as environmental degradation and climate change, and can exacerbate these in the long term, particularly in relation to SDGs 13, 14 and 15. In terms of inequality, it is evident that, on average, middle-income groups and, to an even greater extent, higher-income groups have a higher carbon footprint and therefore have a significantly greater impact on the climate (per capita).

There are also links to poverty reduction in the Global South. More sustainable consumption and production patterns in Stuttgart improve the living conditions of people along supply chains, for example through procurement based on fair award criteria, and thus have a global impact (SDG 12). Climate change and climate policy could have a massive impact on poor people in the coming years (SDG 13). Vulnerable population groups in particular are already suffering from the consequences of climate change worldwide. Climate protection in Stuttgart therefore also contributes to poverty reduction in the Global South (SDG 13 and SDG 17).

The connections between SDG 1 and SDG 16 are also significant and should not be underestimated: Instability, corruption and a lack of the rule of law exacerbate poverty. Strong institutions and equitable social systems are crucial to ensuring that all people have access to basic resources and to combating poverty in the long term.

There is also a central link to SDG 17, "Partnerships for the Goals". Combating poverty calls for coordinated international collaboration, particularly between countries of the Global North and South. Global partnerships can promote knowledge transfer, the financing of development projects and the strengthening of local structures.

The following indicators are also directly relevant to SDG 1 "No poverty":

- SDG 2:** "Children with overweight (at school enrolment examination)"
- SDG 3:** "Infant mortality"
- SDG 3:** "Vaccination coverage"
- SDG 3:** "Dental health in children"
- SDG 3:** "Perception of loneliness"
- SDG 4:** "School leavers by school-leaving qualification"
- SDG 4:** "Childcare"
- SDG 5:** "Relative poverty among women"
- SDG 8:** "Unemployment"
- SDG 8:** "People increasing earnings"
- SDG 10:** "Relative poverty rate among recipients of benefits without German citizenship"
- SDG 11:** "Financial burden of housing costs"
- SDG 11:** "Proportion of social housing in the overall rental market"
- SDG 11:** "Allocation of accommodation with municipal occupancy rights to households with urgent housing needs"



Practical example 1:

Financial support for people with a Bonuscard + Kultur / vouchers for exercise

Context

Despite many low-threshold exercise programmes offered by the State Capital (free of charge, non-binding, no prior knowledge required), it has become apparent in recent years that people who are socially disadvantaged or in difficult life situations are still not being adequately reached by these programmes. This being the case, the Office for Sport and Exercise applied to the federal project KOMBINE (Kommunale Bewegungsförderung zur Implementierung der Nationalen Empfehlungen, Municipal Exercise Promotion for the Implementation of National Recommendations) in 2019. This project aims to implement the nationwide exercise recommendations at municipal level. The focus is on reaching socially disadvantaged individuals.

Description / Implementation

In 2024, over 70,000 people in Stuttgart (more than one in ten) had a "Bonuscard + Kultur" [Bonus card + Culture]. This voluntary social benefit provided by State Capital Stuttgart is intended to enable eligible individuals to participate in the cultural, sporting and social life of the city despite financial constraints. The 2019 Poverty Conference included calls to further develop the Bonuscard + Kultur for sport. This demand was further reinforced within the KOMBINE project by the committees that were convened. Socially disadvantaged people are underrepresented in sport and exercise programmes. Their financial circumstances may prevent them from participating in sports and exercise programmes. Conversely, it is assumed that financial support can be a building block in facilitating access to sports and exercise programmes.

For this reason, financial support for people with a Bonuscard + Kultur was introduced on a pilot basis in June 2022 as part of the KOMBINE project. Since then, they have been able to use the Bonuscard + Kultur to receive a 50 euro discount on memberships or courses at clubs and sports providers. The clubs and providers are reimbursed for the corresponding amounts by the Office of Sport and Physical Activity.

Experience / Results

From June 2022 to June 2024, over 2,000 people took advantage of the subsidy at 56 clubs and providers. The trend is rising sharply. The majority of people used the subsidy for an existing membership. Nevertheless, in 329 cases, the subsidy was also used for new memberships. A notable advantage is

that the Bonuscard subsidy is available to all age groups, including people of working age who do not qualify for other discounts (such as student or pensioner rates). The age group that makes the most use of the subsidy is 7- to 10-year-old children. The gender ratio is almost balanced, with a slight tendency towards boys/men (1,110 male / 931 female). In order to prevent possible stigmatisation of people with a Bonuscard + Kultur, the clubs were encouraged to actively promote the subsidy. Stickers with the words "Bonuscard willkommen" [Bonuscard welcome] have also been designed and can be displayed in suitable locations or digitally (website, club magazine) to inform people that the Bonuscard + Kultur can be presented here.

In the 2024/2025 double budget, financial support for people with a Bonuscard + Kultur has been made permanent. Starting with this double budget, a total of 3,000 "Exercise vouchers" will be available each year for people with a Bonuscard + Kultur. A further 3,000 vouchers are also available for children and young people aged 4 to 17. This allows children and young people who do not qualify for a Bonuscard + Kultur but require help for other reasons to receive support.

Division / Office / Public Undertaking

Office of Sport and Physical Activity in the
Public Safety, Order and Sport Division;
Office of Social Welfare and Participation in the
Social Affairs, Health and Integration Division

Further reading / links

National recommendations for physical activity
and physical activity promotion:
<https://www.bundesgesundheitsministerium.de/service/begriffe-von-a-z/b/bewegungsempfehlungen.html>
(Last access on 27.05.2025)

Bonuscard + Kultur:
<https://www.stuttgart.de/organigramm/leistungen/stuttgarter-bonuscard-kultur.php>
(Last access on 13.12.2024)

KOMBINE:
<https://kommunen-in-bewegung.de/>
(Last access on 13.12.2024)

Practical example 2:

Strategy for social neighbourhood development – development and implementation of a framework concept

Context

In recent years, the activities of social services (Public Health Office, Youth Welfare Office, Office of Social Welfare and Participation), housing companies, initiatives, religious communities, associations and independent welfare organisations in (social) neighbourhood development have steadily increased. The resulting need for control, coordination and harmonisation was recognised and prompted the municipal council to commission the administration at the end of 2021 to develop a strategy for social neighbourhood development.

Description / Implementation

Under the leadership of the health, youth welfare and social planning departments, an integrated process involving numerous project participants from the city administration and civil society stakeholders was used to develop a common understanding of social neighbourhood development and to draw up joint conceptual principles.

The framework concept for social neighbourhood development in Stuttgart is intended to be the first step towards an integrated strategy for promoting neighbourhood development in the State Capital.

The key objectives of social neighbourhood development can be divided into the following four areas of action:

- Promoting social cohesion
- Promoting individual and collective repertoires of action
- Establishing, developing or expanding a supportive social infrastructure that is barrier-free and low-threshold
- Enhancing liveable, needs-based, and sustainable housing and living environments through collaboration on urban planning matters with housing companies and the Urban Planning and Housing Office

Quality standards for all kinds of neighbourhood projects were developed during the framework concept process. These form the basis of the framework concept. The process was guided by questions about the practical design and implementation of neighbourhood development.

Significant contributions to the development of the framework concept came from the interdepartmental project group and participants in the November 2022 hearing, which included providers and institutions of independent social welfare, housing companies, socially engaged individuals, initiatives, religious communities, district leaders, government agencies, and other stakeholders.



All projects/processes can be implemented in joint consultation and according to common quality standards. The quality criteria can be used to evaluate applications and implementation for all neighbourhood projects and processes. The framework concept represents a decisive conceptual advancement.

Experience / Results

The framework concept highlights the city's (new) role in co-ordinating all neighbourhood development to better support all active stakeholders in the community. At the same time, it emphasises the necessity of integrating processes into lasting frameworks. The framework concept was presented to the municipal council in July 2023.

The framework concept will be implemented between 2024 and 2027 as part of a pilot phase. This will provide an opportunity to test and scientifically monitor the processes and structures that have been designed and to adapt them for permanent establishment from 2028 onwards. As diverse approaches as possible will be tested in three pilot areas. In the strategy for social neighbourhood development, coordination and integrated interdepartmental action are particularly important and are accordingly laid down in the framework concept. The Office of Social Welfare and Participation is responsible for implementing the framework concept.

Division / Office / Public Undertaking

Office of Social Welfare and Participation, Health, Youth and Social Planning (in the "Social Affairs, Health and Integration" and "Youth and Education" Divisions) in cooperation with other offices and civil society organisations

Further reading / links

GRDs 392/202, GRDs 0571/202, GRDs 0573/2025

<https://www.stuttgart.de/medien/ibs/rahmenkonzeption-soziale-quartiersentwicklung.pdf> (Last access on 13.12.2024)

<https://www.stuttgart.de/medien/ibs/strategie-soziale-quartiersentwicklung-entwicklung-und-umsetzung-einer-rahmnekonzeption-grds-392-2023.pdf> (Last access on 13.12.2024)

https://www.stuttgart.de/medien/ibs/dokumentation_fachforum_soziale_quartiersentwicklung_04_11_24.pdf (Last access on 27.05.2025)



Practical example 3: Stuttgart Ageing Survey 2024

Context

Addressing the latest demographic shifts, care challenges, and increasing poverty among the elderly requires a new overview of the increasingly varied living situations of older people. That is why the second Ageing Survey was conducted in Stuttgart in 2024.

The results provide the basis for the further development of social policy, ageing planning and the support system for older people and those in need of care. In particular, the links between poverty in old age, social networks and health are a necessary data basis for the further development of support systems.

A refreshed data basis is also required to meet the goals of the World Health Organisation's (WHO) global Age-friendly Cities and Communities network, which Stuttgart joined in 2022 with the intention of making the State Capital more age-friendly.

Description / Implementation

The Office of Social Affairs and Participation, in cooperation with the Statistics Office, the Public Health Office and Strategic Social Planning, is leading the new edition of the 2024 Ageing Survey.

This is a representative survey of older Stuttgart residents aged 50 and over. The questions could be answered online or by post.

One key focus of the survey is the relationship between poverty in old age, social participation, and health. The survey was conducted from November to December 2024. Some of the indicators will be evaluated for each city district. Alongside the biennial Stuttgart survey, this survey of residents aged 50 and over provides a deeper insight into the living conditions of older adults, their views on ageing, their attitudes and how they organise their lives, and the support needs of both older individuals and their caregivers.

Experience / Results

Services and plans can be developed in line with needs using the "2024 Ageing Survey", with older people able to participate in the planning processes. The results are expected in early 2026. They will provide crucial impetus for the further development and adaptation of the service structure in State Capital Stuttgart and, at the same time, offer an important basis for decision-making for the Municipal Council and the health and social planning and Strategic Social Planning Departments.

Division / Office / Public Undertaking

Office of Social Welfare and Participation in the Social Affairs, Health and Integration Division in cooperation with the Public Health Office, Strategic Social Planning and the Statistics Office in the Public Safety, Order and Sport Division

Further reading / links

https://www.stuttgart.de/medien/ibs/Alterssurvey_2012.pdf
(Last access on 10.02.2025)



Further practical examples at: www.stuttgart.de/lebenswertes-stuttgart



SDG 2 Zero Hunger

"End hunger, achieve food security and improved nutrition and promote sustainable agriculture"

Relevant targets of SDG 2 for German municipalities include, but are not limited to, improving nutrition and sustainability in agricultural production.



Overview of the relevant targets

The following targets of SDG 2 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Appendix II.



2.2 End all forms of undernourishment



2.4 Sustainable food production and resilient agricultural methods

The following relevant targets have not yet been represented by indicators:



2.1 Universal access to safe and nutritious food



2.3 Doubling the productivity and income of small food producers



2.5 Safeguarding genetic diversity in food production



2.a Investments in rural infrastructure, agricultural research, technology and gene banks

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Indicator 2-1:

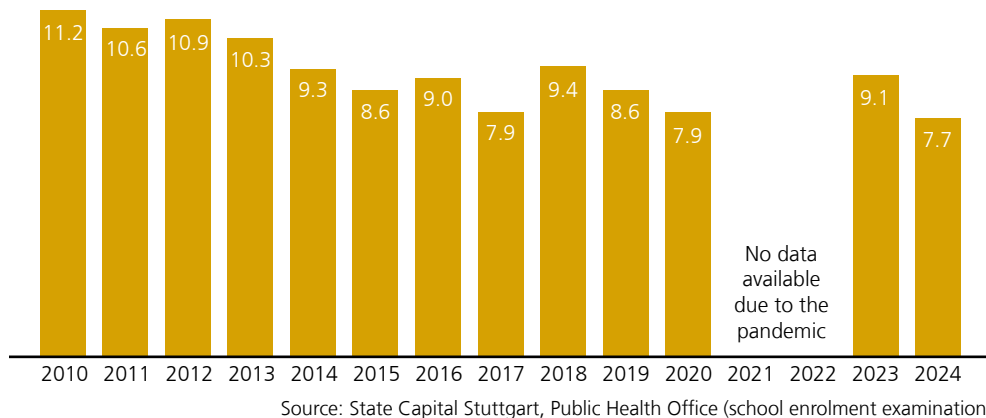
Children with overweight (at school enrolment examination)

Figure 9:
Children with overweight
(at school enrolment examination)
(in percent)

By 2015, there had been a significant decline in the number of overweight children aged 4 to 5 across the city. Since then, the value has remained stable, fluctuating between 7.9 and 9.4 percent annually. No data was collected in 2021 and 2022 due to the COVID-19 pandemic. While the proportion of overweight children rose to 9.1 percent in 2023, it fell sharply to 7.7 percent in the following year.

The proportion of overweight children is especially high in socially and economically disadvantaged families. This is partly due to the fact that these children often do less sport or have a less balanced diet. A study by the Statistics Office of State Capital Stuttgart shows a significant correlation between the proportion of overweight children in the population on the one hand and the proportion of registered unemployed persons or persons entitled to unemployment benefits, low incomes (close to the poverty risk threshold) and social welfare recipients in the population on the other.²⁸



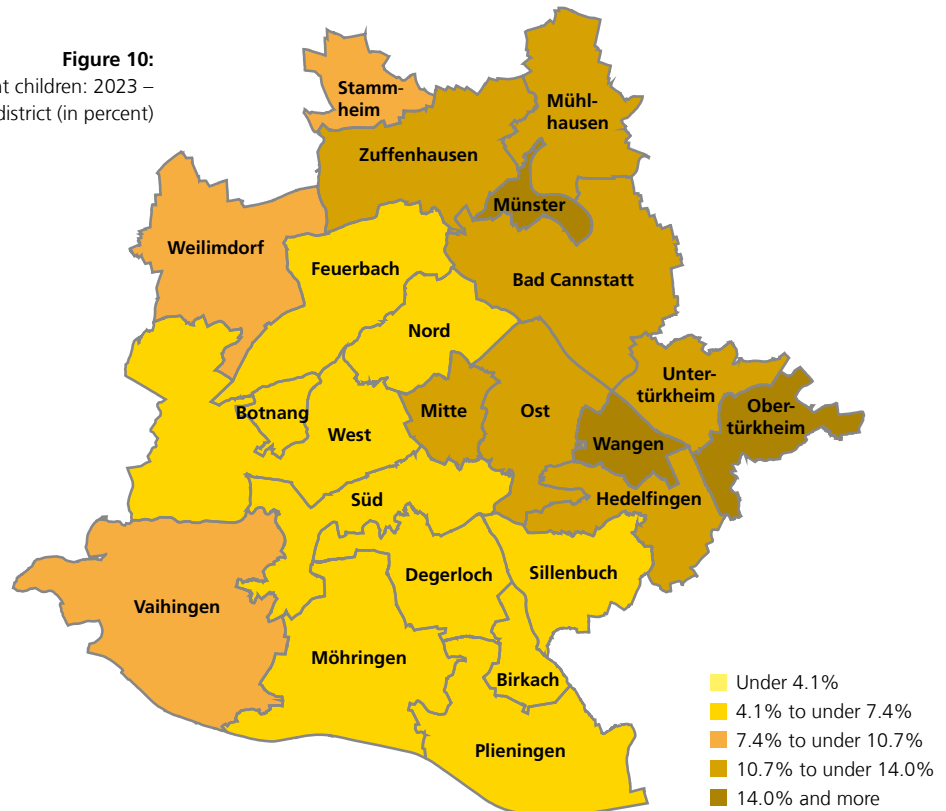
This indicator contributes to the measurement of SDG target 2.2:

"End all forms of undernourishment"





Figure 10:
Overweight children: 2023 –
City district (in percent)



Source: Social monitoring by State Capital Stuttgart

With values ranging from 4.7 to 14.4 percent, the proportion of overweight 4- and 5-year-olds varied considerably from district to district in 2023. That is why, in addition to comprehensive services, the city is focusing its obesity prevention and health promotion measures on those districts that are identified as needing support in social monitoring with regard to health and social indicators.

State Capital Stuttgart has implemented a raft of measures to improve nutrition, encourage exercise and provide advice and support for overweight children and their families, which are expected to positively impact children's weight. The city of Stuttgart is characterised by its heterogeneity, encompassing wealthy districts alongside socially challenged ones. For this reason, in 2015, the Children's Health Report evaluated the rates of overweight children by neighbourhood and district for the first time. These figures have been updated annually in the Social Monitoring Report since then (www.stuttgart.de/sozialmonitoring).²⁹



Stuttgart's services for preventing obesity in children

i

State Capital Stuttgart offers various services for the prevention and treatment of obesity in children and young people.

The obesity counselling centre for children and youth, run by the Stuttgart Public Health Office, assists families in understanding the specific causes of obesity and provides customised support to facilitate change. Counselling is free of charge and is offered over an extended period of time. Appointments can be made together with the child.

<https://www.stuttgart.de/organigramm/verwaltungseinheit/gesundheitsfoerderung-adipositasberatungsstelle-fuer-kinder-und-jugendliche.php>

Free sports programmes for children and adolescents in Stuttgart encourage physical activity, helping to combat one of the most common causes of obesity – a lack of exercise. They also help to offset the adverse effects of an unhealthy diet.

<https://www.stuttgart-bewegt-sich.de/entdecke/uebergewicht/angebote>

Classification / Definition

The definition of poor nutrition includes not only malnutrition and micronutrient deficiencies but also obesity.³⁰ The indicator therefore is directly linked to target 2.2. The indicator shows the proportion of overweight children at their school enrolment examination. Height and weight are recorded here in a standardised manner and converted into body mass index (BMI). To determine overweight, the BMI is then compared with the age- and gender-specific values of a reference population. The indicator shows the proportion of children whose BMI is above a threshold value. This threshold value is determined as the value below which 90 percent of all children of the same gender in the age group in Germany fall. BMI is calculated as: $BMI = (weight [in kg]) / (height [in m])^2$. The year indicated always refers to the year of enrolment. This means that the year indicated corresponds to the year of enrolment. The data were collected approximately 18 months in advance.

Due to the legally required school enrolment examination, in which an entire cohort of 4- to 5-year-olds ($N \approx 5000 - 6000$) is examined annually, State Capital Stuttgart has access to valid data for this age group.

Calculation

Children with overweight:

Number of children who are overweight
at school enrolment

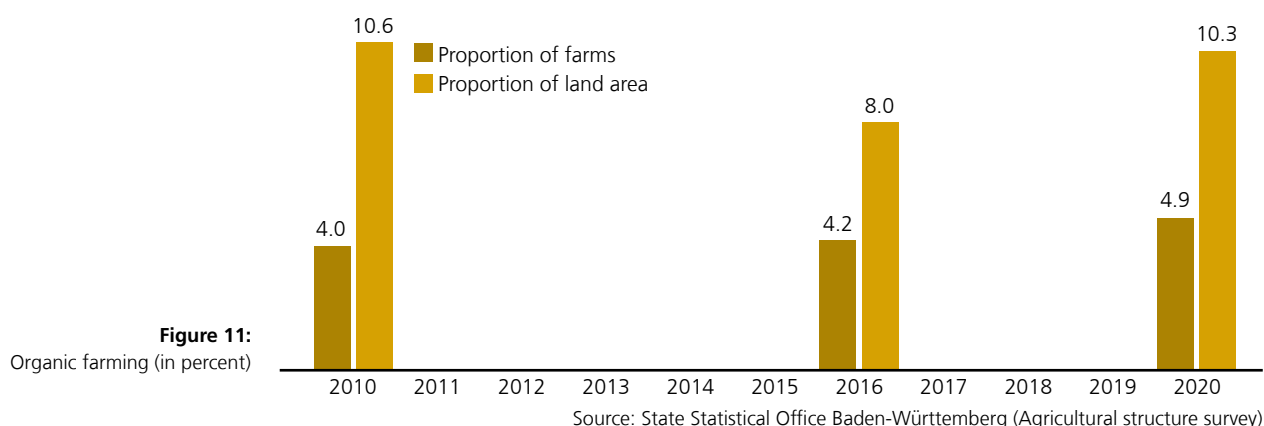
/

Total number of children examined
in a school enrolment cohort

* 100



Indicator 2-2: Organic farming



In 2007, there were seven organic farms in Stuttgart. This number increased to eight by 2016, while the total number of farms decreased from 257 to 191 during the same period. The proportion of farms practising organic farming rose accordingly from 2.7 to 4.2 percent. However, a total of 266 hectares were under organic cultivation in 2007, while this area declined to 200 hectares by 2016. Accordingly, the proportion of land used for organic farming fell from over 10 percent in 2010 to 8 percent in 2016. Since then, it has risen again and stood at a good 10 percent in 2020. In 2020, the number of farms practising organic farming also rose to 9.

The German government aims to achieve an average of 30 percent ecologically farmed land across the country by 2030.³¹



This indicator contributes to the measurement of SDG target 2.4:
"Sustainable food production and resilient agricultural methods"

Classification / Definition

Organic farming is part of a sustainable agricultural policy. It focuses on resource-conserving production methods and species-appropriate animal husbandry, the latter to be achieved by limiting the number of animals per unit of land. The use of mineral fertilisers and synthetic chemical pesticides is also prohibited in organic farming. The principle of farm-based cycles is central to organic farming. Unlike conventional farms, the purchase of feed from foreign sources is only permitted to a limited extent or not at all. This approach enables organic farming to assume responsibility on a global scale.

Data on organic farming is collected approximately every four years as part of the official agricultural structure survey. Current data are expected in the course of 2025. Farms with at least five hectares of land or with minimum production units that manage at least part of the farm in accordance with the guidelines of Regulation (EC) No 834/2007 are included.

Calculation

Organic farming (proportion of land):

$$\frac{\text{Area used for organic farming}}{\text{Total area used for agricultural purposes}} \times 100$$

Organic farming (proportion of farms):

$$\frac{\text{Number of organically managed farms}}{\text{Total number of agricultural farms}} \times 100$$



Indicator 2-3: Nitrogen surplus

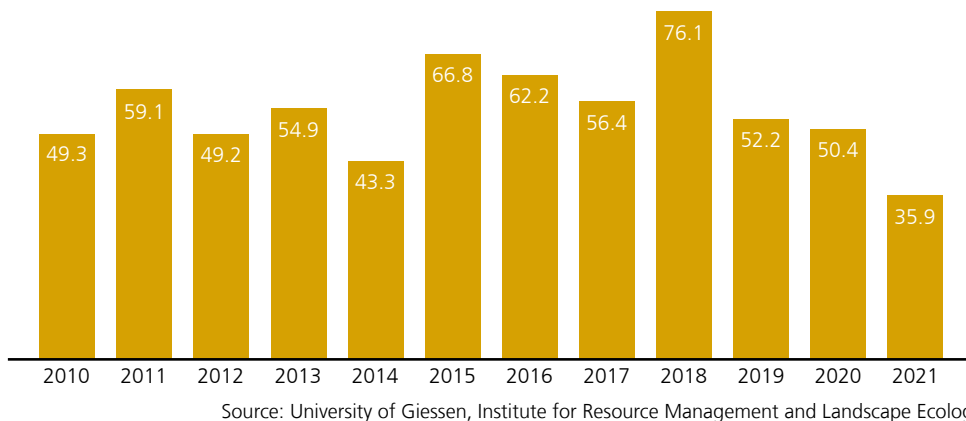


Figure 12:
Nitrogen surplus (N balance)
(in kg/ha)

The nitrogen surplus in State Capital Stuttgart, determined using model calculations, fluctuated considerably over the period shown and peaked in 2018 at 76.1 kg N/ha of agricultural land (AL). Since then, the value has been declining and reached a new low (since 2010) of 35.9 kg N/ha AL in 2021. The Federal Environment Agency states: "The nitrate concentration depends on several factors. [Annual differences can be down to different crops, fertilisation times and weather conditions.³²] The impact of land use in the catchment area of measuring stations is of paramount importance. Regional hydrogeological conditions, such as groundwater level and flow velocity, as well as the hydrochemical conditions in the subsoil, also play a key role."³³



This indicator contributes to the measurement of SDG target 2.4:
"Sustainable food production and resilient agricultural methods"

Classification / Definition

Nitrogen surpluses from agriculture continue to pose a major ecological problem, as they affect various ecosystems when they enter groundwater, surface water and the air. While nitrogen is an essential nutrient for plants, fertilisation beyond necessary levels and outside the natural growing season stresses ecosystems, diminishing their resilience to climate change and extreme weather.

The nitrogen surplus is determined using model calculations that take into account fertiliser use, atmospheric inputs, removals through inputs into plant and animal market products, and other aspects. The nationwide sustainability target of reducing the nitrogen surplus to an average of 70 kg N/ha AL between 2028 and 2032 refers to the total agricultural N balance surplus (consisting of the balances of the three sub-balances: Land balance, livestock balance and biogas balance).³⁴ However,

the total nitrogen (N) balance surplus is only available for Germany as a whole, not regionally, and averaged about 24 kg N/ha AL higher than the N area balance surplus between 2010 and 2021 (for Germany). If a comparable value is added to the figures for State Capital Stuttgart, the sustainability target was achieved in terms of individual annual figures in 2014 and 2021.³⁵

Calculation

Nitrogen surplus:

$$\frac{\text{Nitrogen surplus in kilogrammes}}{\text{Agricultural land in hectares}} \times 100$$



Correlation with other SDGs

At first glance, SDG 2, "Zero Hunger," seems to have little relevance for Stuttgart. Nevertheless, in 2024, around 2,500 people in need shopped at the Schwäbische Tafel Stuttgart e. V. every day,³⁶ which clearly links the goal to reducing poverty in all its dimensions and providing access to basic goods (SDG 1). Furthermore, the goal goes well beyond "zero hunger" and includes balanced nutrition and sustainable agriculture.

There are therefore further links between reducing malnutrition and the associated health impacts (SDG 3). Educational programmes for sustainable development (SDG 4) teach children and adolescents about the basics and interrelationships of healthy nutrition and sustainable farming methods. One example is harvesting their own food in school gardens.

In addition, promoting regional value chains for agricultural products offers an opportunity to positively link SDG 2 and SDG 8 ("Decent work and economic growth"). Local businesses benefit from increased demand for ecologically and sustainably produced food, which secures jobs and stabilises the regional economy.

Sustainable production and consumption (SDG 12) of regional, seasonal, certified organic food go hand in hand with a smaller ecological footprint (SDG 13, SDG 14, SDG 15). This also includes avoiding food waste, for example through food sharing.³⁷ A healthier diet, especially a plant-based one, not only prevents malnutrition and the havoc this wreaks on health (SDG 3), but also reduces the impact on the climate (SDG 13) and the ecological impact on land (SDG 15) and water (SDG 14). For example, unsustainable agricultural practices have a greater impact on the climate by releasing more climate-damaging gases such as methane from livestock farming or nitrous oxide and nitrogen oxides from excessive fertilisation of the soil. The use of pesticides and fertilisers, as well as land use and soil compaction, also impair local aquatic and terrestrial biodiversity and soil quality.

Nitrogen surplus is strongly dependent on the intensity of agriculture. Organic farming, for example, leads to a more favourable nitrogen surplus balance, which in turn contributes to better water quality (see SDG 6 "Clean water and sanitation").

Last but not least, there is also a close link to SDG 11 ("Sustainable cities and communities"). Urban agriculture not only contributes to food security, but also promotes sustainable land use and strengthens climate protection by reducing transport distances (SDG 13). Promoting community gardens or urban gardening initiatives in urban areas not only provides direct access to fresh food, but also strengthens the local community and raises awareness of sustainable farming methods.

The following indicators are also directly relevant to SDG 1 "Zero Hunger":

- SDG 3:** "Infant mortality"
- SDG 3:** "Promotion of physical activity in nursery schools"
- SDG 3:** "Dental health in children"
- SDG 4:** "Educational programmes for sustainable development"
- SDG 6:** "Quality of running water"
- SDG 12:** "Sustainable procurement"
- SDG 12:** "Environmental protection investments in the manufacturing sector"
- SDG 13:** "Greenhouse gas emissions"
- SDG 15:** "Soil index"
- SDG 15:** "Biodiversity"



Practical example 4:

Free exercise programmes for children and adolescents who are overweight or obese



Context

Around 15 percent of children and young people in Germany are overweight or obese; in Stuttgart, several thousand girls and boys are affected. Even in childhood, severe obesity can pose a risk to health. Overweight children often go on to become overweight adults.

Lack of exercise is a common cause of obesity in children and young people. Regular exercise supports weight loss and enhances overall well-being. However, affected children and adolescents often find sport at school and in clubs frustrating and exclusionary. That is why the Public Health Office, the Office of Sport and Physical Activity and the Department for Children's Affairs have partnered with various clubs and providers to develop a free sports programme exclusively for overweight children and adolescents.

Description / Implementation

Various sports courses are offered in collaboration with sports clubs and commercial sports providers such as dance schools. Registration for the courses is via the obesity counselling centre at the Public Health Office. Participation is free of charge and non-binding for children and young people.

Experience / Results

In July 2024, eight different activities were offered weekly for this target group, with 5 to 17 participants per activity. The feedback from participants was extremely positive. They reported enjoying the programme, improving their fitness and, most importantly, gaining self-confidence. In addition to physical activity, the courses also offer an opportunity to interact with other people affected by obesity. Some children have also found their way into regular club activities through the obesity programmes.

Division / Office / Public Undertaking

Public Health Office in the Social Affairs,
Health and Integration Division
Office of Sport and Physical Activity in the
Public Safety, Order and Sport Division
Department for Children's Affairs

Further reading / links

<https://www.stuttgart.de/leben/gesundheit/gesundheitsberatung/uebergewicht-und-adipositas.php>
(Last access on 13.12.2024)

<https://www.stuttgart-bewegt-sich.de/entdecke/uebergewicht/angebote>
(Last access on 13.12.2024)



Practical example 5: New Food Festival Stuttgart

Context

The Stuttgart region employs almost 10,000 people in the food industry and is home to over 30 manufacturers of food and beverages. In addition, more than 50 new companies have been founded in the food sector in Stuttgart since 2015. There are a large number of teaching and research institutions such as the University of Stuttgart, the Fraunhofer Institute and the University of Hohenheim with a variety of institutes that conduct excellent research in the food industry.

Against this backdrop, the Economic Development Department of State Capital Stuttgart has focused on the food industry as part of its strategic realignment in 2023.

Description / Implementation

The aim is to raise awareness and visibility of Stuttgart as a location for the plant-based economy and New Food (in the spirit of food innovations), to network stakeholders and to initiate further developments. Launched in 2024, the New Food Festival is a three-day international business event that brings the concept of New Food to the forefront. The festival's target groups are start-ups, innovators, investors, researchers in the food and agricultural industry, manufacturers, the catering industry, retailers and universities.

"New Food" refers to new approaches to the food of tomorrow. This includes the development of new cultivation methods and production processes that enable food to be produced as sustainably as possible. The aim is to provide healthier food for more people from the same amount of land.

Experience / Results

The New Food Festival is now set to take place annually. In support of this initiative, the Economic Development Department, together with the University of Hohenheim and funding from the state of Baden-Württemberg, launched the "FoodBRYCKE" accelerator programme, which actively supports young entrepreneurs in the early stages of their start-ups. In addition, a new pop-up space called the New Food Store has been established in Stuttgart city centre.

Division / Office / Public Undertaking

Economic Development Department

Further reading / links

<https://www.stuttgart.de/pressemitteilungen/2025/februar/new-food-festival-stuttgart-wie-innovationen-die-lebensmittelbranche-revolutionieren.php>



Further practical examples at: www.stuttgart.de/lebenswertes-stuttgart



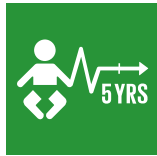
SDG 3 Good Health and Well-Being

"Ensure healthy lives and promote well-being for all at all ages"

Relevant targets of SDG 3 for German municipalities include, but are not limited to, combating infectious diseases, promoting mental health and well-being, preventing and treating the misuse of harmful substances, universal access to healthcare and reducing the impacts of pollution of air, water and soil.

Overview of the relevant targets

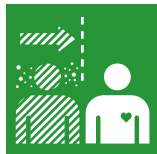
The following targets of SDG 3 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Appendix II.



3.2 End preventable deaths of children under 5 years of age



3.6 Reduce traffic accidents and fatalities



3.3 Combat infectious diseases



3.8 Access to basic health care services for all



3.4 Reduce premature mortality from non-communicable diseases and promote mental health



3.9 Reduce illness and death from hazardous chemicals and pollution

The following relevant targets have not yet been represented by indicators:



3.1 Reduce maternal mortality



3.b Support research, development and universal access to affordable vaccines and medicines



3.5 Prevent and treat abuse of harmful substances



3.c Increase funding for healthcare and support healthcare workers in developing countries



3.7 Universal access to sexual and reproductive care, birth control and education



3.d Improve early warning systems for global health risks



3.a Implementation of the WHO framework agreement to curb tobacco consumption

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Indicator 3-1: Infant mortality

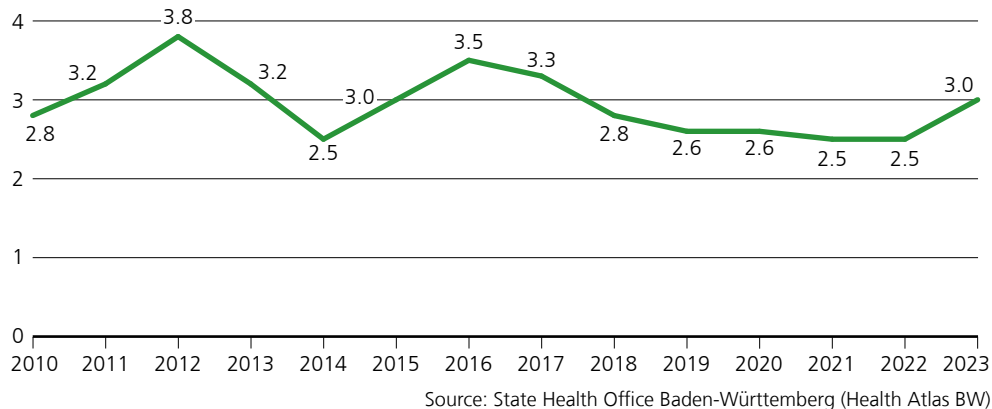


Figure 13:
Infant mortality in the first year
of life (per 1,000 live births)

The infant mortality rate in Stuttgart ranged between approximately 2.5 and 3.8 deceased infants per 1,000 live births on a 3-year moving average from 2010 to 2023. Since 2016, a slight decline has been observed in the moving average, with the level in 2021 and 2022, as well as in 2014, at around 2.5. However, in 2023, there are signs of an increase again, with the 3-year average rising to around 3.0 per 1,000 live births. This means State Capital Stuttgart is trending below the national average, standing at 3.2 infant deaths per 1,000 live births in 2022 and 3.0 in 2021.³⁸



This indicator is used to measure SDG target 3.2:
"End preventable deaths of children under 5 years of age"

Classification / Definition

This indicator was introduced in 2025. It shows the number of infants who died within their first year of life per 1,000 live births in a calendar year, calculated as a 3-year moving average. Infant mortality includes children born alive who died after birth. Stillborn children are not included. Due to the low number of cases, averages over three years are used. The reported year always refers to the last year of the respective three-year period (e.g. "2020" covers data from 2018 to 2020). The data on live births and deceased infants refer to the place of residence, not the place of birth, such as the hospital.

Infant mortality, when compared over time and internationally, is an indicator of the general quality of living conditions and medical care.

Calculation

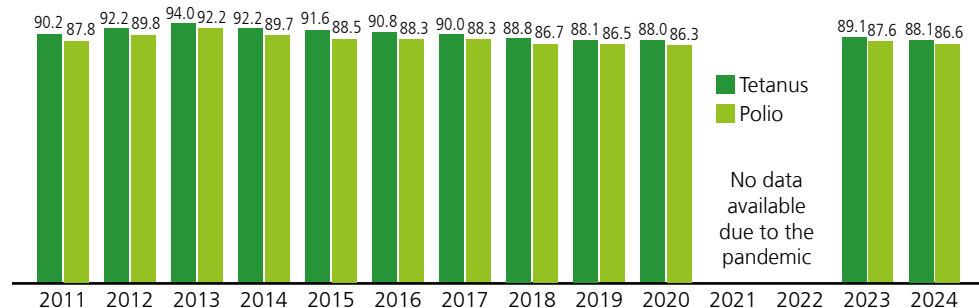
Infant mortality:

$$\frac{\text{Number of deaths of children under 1 year of age}}{\text{Number of all live births}} \times 1,000$$

Indicator 3-2:

Vaccination coverage at school enrolment examination (tetanus, polio, measles and rubella)**Figure 14:**

Proportion of fully immunised children at the school enrolment examination (polio and tetanus; in percent)

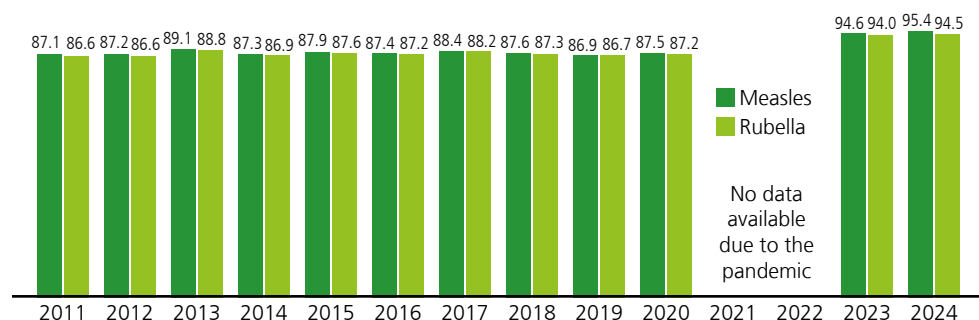


Source: State Health Office Baden-Württemberg (school enrolment examination)

The proportion of children vaccinated against tetanus and polio at the school entry examination has been around 90 percent since 2011, with a slightly declining trend between 2013 and 2020. Immediately after the COVID-19 pandemic, during which no data are available for 2021 and 2022, vaccination rates rose slightly in 2023. However, in 2024, the vaccination rates dropped again to a somewhat lower level, at 88.1 percent for tetanus and 86.6 percent for polio. The vaccination coverage against tetanus was consistently around 2 percentage points higher than the coverage against polio throughout the period under review.³⁹

Figure 15:

Proportion of fully immunised children at the school enrolment examination (measles and rubella; in percent)



Source: State Health Office Baden-Württemberg (school enrolment examination)

The proportion of children vaccinated against rubella and measles at the school enrolment examination remained relatively constant at 87 percent between 2011 and 2020. After the pandemic years 2021 and 2022, for which no data are available, the rate increased to 94 and 95 percent respectively. One reason for this is the Measles Protection Act, which came into effect in 2020. Due to the commonly used combination vaccines⁴⁰, this also affects the proportion of children vaccinated against rubella and mumps (see section Classification / Definition).⁴¹ Throughout the period under review, the proportion of children vaccinated against measles was slightly higher than that of children vaccinated against rubella, with annual differences ranging from 0.2 to 0.9 percentage points.⁴²



This indicator is used to measure SDG target 3.3:
Combat infectious diseases



Classification / Definition

This indicator was introduced in 2025. It represents the percentage of children at the school enrolment examination (SEE) who are considered fully immunised against tetanus and polio according to the recommendations of the Standing Committee on Vaccination (STIKO). The SEE is performed according to the school year. The reported year always refers to the year in which the cohort starts school. The examination period always covers the two preceding years (e.g. "2023" includes data from the cohort starting school in 2023, examined in 2021/2022).⁴³

Children who have received at least four vaccinations against tetanus and polio are considered fully immunised according to STIKO (basic immunisation following the 3+1 schedule). Since the examination year 2022, children who have received three vaccinations, respecting the recommended intervals and using an approved vaccine, are also deemed fully immunised if this is documented (basic immunisation according to the 2+1 schedule, STIKO recommendation since 2020). The data refer to children with vaccination records submitted during the school enrolment examinations.

Regarding vaccination coverage against measles and rubella, the indicator also reflects the percentage of children at the school enrolment examination who are considered fully immunised according to STIKO recommendations. Children who have received at least two vaccinations against measles and rubella are generally considered fully immunised. Measles and rubella vaccinations are usually administered in combination with the mumps vaccination in the form of a triple vaccine. The vaccination rate for mumps is almost identical to that for rubella each year and is therefore not reported separately here. The slightly higher vaccination coverage rate for measles compared to

mumps and rubella is down to the occasional administration of single vaccines against measles. Here, too, the data refer to children with vaccination records submitted during the school enrolment examinations.

In Stuttgart, over 95 percent of vaccination records have been submitted and evaluated for years, so the results on vaccination coverage rates can be considered valid.

Vaccinations are among the most effective and important preventive measures in the world of medicine. The tetanus vaccination is regarded as an indicator of basic willingness to be vaccinated and an indicator of access to vaccination in general. The World Health Organisation (WHO) has been working towards the global eradication of polio since 1988. Europe was declared polio-free in 2002. According to the WHO, a vaccination coverage rate of at least 95 percent in the population is required to eradicate measles. Vaccinations are key to achieving these goals and maintaining the status quo.

Calculation

Vaccination coverage at school enrolment examination (Tetanus and polio or measles and rubella):

Number of fully immunised children per disease
at the school enrolment examination

/

Total number of children at the school enrolment
examination

* 100

Indicator 3-3: Children with conspicuous screening of gross motor skills (at school enrolment examination)

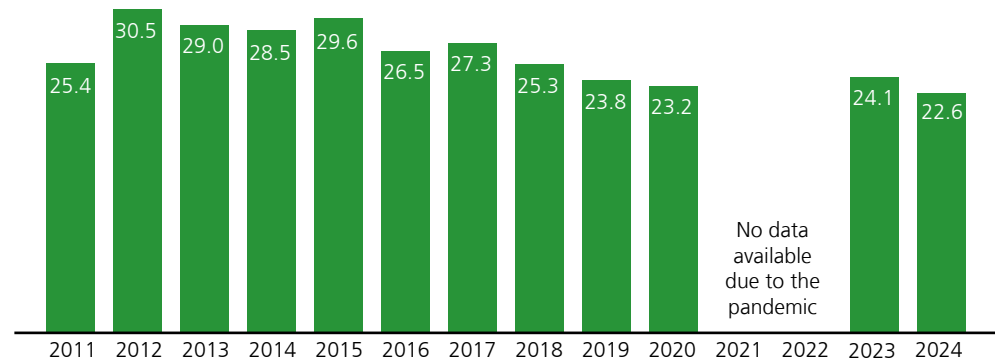


Figure 16:
Gross motor skills among children
(percentage of 4- and 5-year-olds
with conspicuous screening at
school enrolment examination)

Source: State Capital Stuttgart, Public Health Office (school enrolment examination)

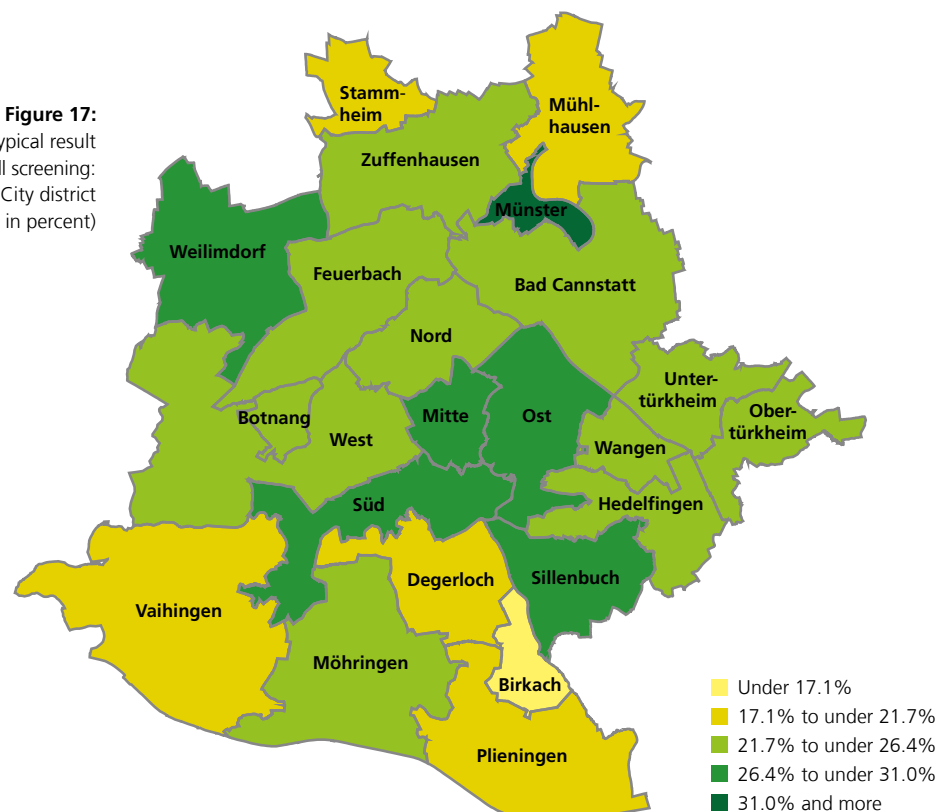
The proportion of 4- and 5-year-old children with an atypical result from gross motor skills screening in the school enrolment examination fluctuated between 22.6 and 30.5 per cent in the period under review. Between 2017 and 2020, the number of atypical findings declined steadily. In 2023, the rate rose slightly again to 24.1 percent, but in 2024 it reached the lowest level in the period under review at 22.6 percent. The examination period for school enrolments years 2021 and 2022 coincided with the pandemic years. Due to the COVID-19 pandemic, the cohorts could not be fully examined, meaning that no data are available for these years.



This indicator is used to measure SDG target 3.4:

"Reduce premature mortality from non-communicable diseases and promote mental health"

Figure 17:
Children with atypical result
from gross motor skill screening:
2023 – City district
(figures in percent)



Source: Social monitoring by State Capital Stuttgart



An analysis of the figures at city district level shows a rather heterogeneous picture for Stuttgart. The figures range from 8.2 percent in the city district of Birkach to 34.1 percent in Münster (see Figure 17).

Classification / Definition

The indicator shows the rate of children with an atypical result from gross motor skills screening (documentation from the school enrolment examination). Gross motor development is assessed by a standardised examination (hopping on one leg) and evaluated based on age-specific thresholds. As this is a screening examination, a certain degree of overestimation is to be expected. The year indicated always refers to the year of enrolment. This means that the stated year is the year of school enrolment, while data collection takes place approximately 18 months earlier, hence covering children aged 4 and 5.

The relevance of this indicator for target 3.4 is not apparent at first glance. However, gross motor development is important for all physical activities. It forms the foundation for movement and exercise, helping to prevent non-communicable diseases such as cardiovascular conditions and type 2 diabetes, promoting mental well-being, and therefore making a direct contribution to achieving target 3.4.

Calculation

Children with conspicuous screening of gross motor skills:

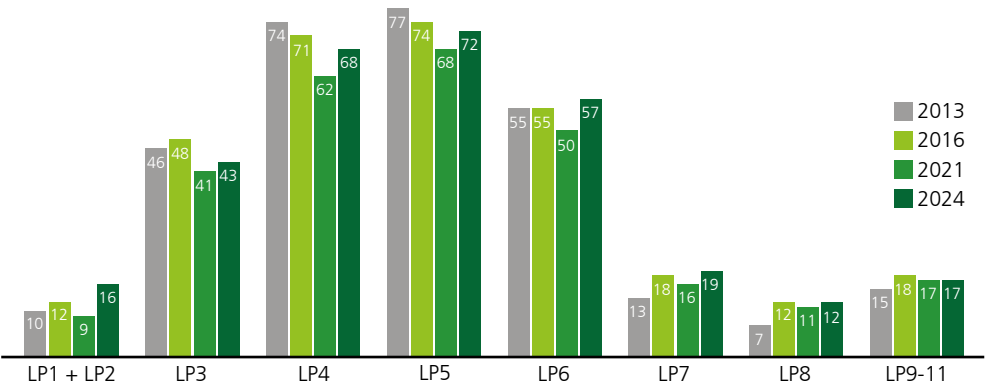
Number of children in a school enrolment cohort with conspicuous screening of gross motor skills

/

Total number of children examined in a school enrolment cohort

* 100

Indicator 3-4:
Level of organisation in sports



Source: State Capital Stuttgart, Office of Sport and Physical Activity

Figure 18:
Level of organisation of different life phases (LP) in sport clubs (in percent)

The level of organisation in sports clubs is particularly high among children. In life phases (LP) 4 and 5 (children aged 6 to under 14), over half are members of sports clubs. However, for children and adolescents in LP 3 to 5 (ages 3 to under 14), the number of club memberships has slightly declined over the long term. For example, the number of memberships in LP 3, 4 and 5 was higher in 2013 and 2016 than in 2024. In LP 6 (adolescents aged 14 to under 18), the involvement rate is around 50% and above average in a long-term comparison. With the transition to adulthood (LP 7), the rate of sports club involvement drops significantly, and in LP 8 (ages 25 to under 40), it falls to below 13%. From age 40 onwards (LP 9), the number of club memberships increases again but remains below 20%.

Compared to the pandemic year 2021, which led to a decline in sports club memberships, the rate of sports involvement in 2024 has increased across all life phases, even exceeding pre-COVID-19 pandemic levels in life phases 1, 2 and 6.⁴⁴



This indicator is used to measure SDG target 3.4:

"Reduce premature mortality from non-communicable diseases and promote mental health"

Classification / Definition

Sport and physical activity are key factors in the promotion of health. Besides individual exercise, involvement in sports clubs is a key expression of physical activity. The Office of Sport and Physical Activity of State Capital Stuttgart records the number of members in sport clubs by life phase. A distinction is made between eleven different life phases.⁴⁵

- Life phase 1: Pregnancy and children under 1
- Life phase 2: Children under 3
- Life phase 3: Children from 3 to under 6
- Life phase 4: Children from 6 to under 10
- Life phase 5: Children/adolescents from 10 to under 14
- Life phase 6: Adolescents from 14 to under 18
- Life phase 7: Young adults from 18 to under 25
- Life phase 8: Adults from 25 to under 40
- Life phase 9: Adults from 40 to under 60
- Life phase 10: Adults from 60 to under 75
- Life phase 11: Adults from 75 and older

For each of the eleven life phases, the number of people involved in sports clubs is recorded and related to the total population. The resulting value represents the degree of involvement expressed as a percentage.

Sport and physical activity play a crucial role in preventing non-communicable diseases such as cardiovascular conditions and type 2 diabetes – and for promoting mental health, thereby making a direct contribution to achieving target 3.4.

Calculation

Level of organisation in sports:

Number of people organised in sports clubs
by life phase

/

Number of residents (by life phase)

* 100

Sports initiatives in Stuttgart

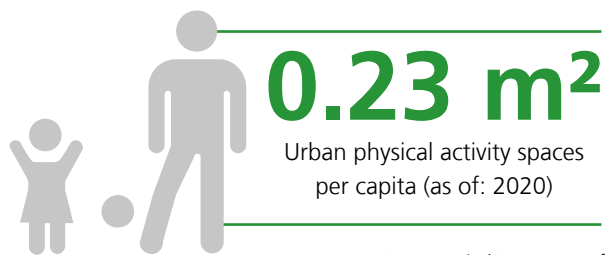
Stuttgart has a diverse sports club landscape with around 400 clubs offering a wide range of activities for all ages and skill levels. Whether it's recreational activities, competitive sports or exercise designed to improve health, there are options to suit everyone. State Capital Stuttgart actively supports club sport and offers numerous initiatives to promote physical activity. Residents can easily find local clubs, sports activities and training programmes in their area using the online platform "Stuttgart bewegt sich" (Stuttgart gets moving).

Thanks to close cooperation between the city, nurseries, schools, clubs and other partners (e.g., Gemeinschafts-erlebnis Sport - Sport as a Shared Experience), children and adolescents are also introduced to physical activity to encourage sports participation from an early age.

<https://www.stuttgart-bewegt-sich.de>



Indicator 3-5: Urban physical activity spaces



Source: State Capital Stuttgart, Office of Sport and Physical Activity

Sport and physical activity are part of urban life in Stuttgart. Alongside the sports and exercise programmes offered by clubs, a growing number of physical activities are now happening outside traditional sports venues. At the same time, more people are choosing to exercise outdoors by themselves and the variety of activities on offer is steadily expanding. The result is a broader range of demands on public spaces. With the "Stuttgart Master Plan for Urban Physical Activity Spaces," the city administration is developing strategies to promote exercise in public areas and secure it for the long term. In 2020, there were 0.23 m² of urban physical activity space per resident. The master plan aims to double this figure over the long term.



This indicator is used to measure SDG target 3.4:

"Reduce premature mortality from non-communicable diseases and promote mental health"

Classification / Definition

The indicator refers to areas that are specifically equipped for sports and exercise and are accessible to all. Including, for example, football pitches, basketball courts, boules lanes and table tennis tables. These areas are related to the population size. The indicator was introduced in 2021. It should be noted that this indicator only refers to actual sports areas. For example, in the case of boules facilities, only the area of the facility itself is measured, not the park in which it is located.

Calculation

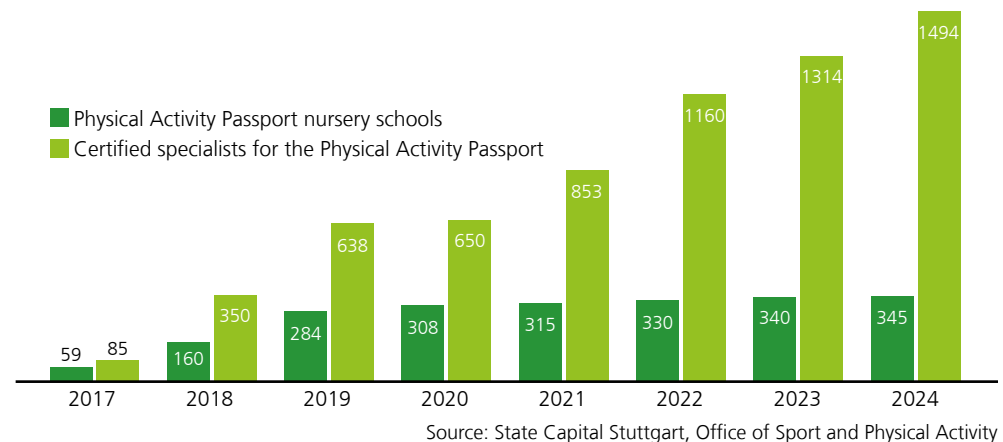
Urban physical activity spaces:

Sports areas accessible to all in square metres
/
Population
* 100

Sport and physical activity are essential for the prevention of non-communicable diseases such as cardiovascular conditions and type 2 diabetes, promoting mental well-being, and therefore making a direct contribution to achieving target 3.4.

Indicator 3-6: Promotion of physical activity in nursery schools

Figure 19:
Promotion of physical activity in
nursery schools (number)



Since its launch, the number of childcare facilities participating in the "Physical Activity Passport" programme has increased significantly – recently reaching 345 nursery schools. There were a total of 1,494 certified specialists for the Physical Activity Passport in Stuttgart in 2024, and the number continues to grow.

The Stuttgart Physical Activity Passport was developed to help nursery schools and sport clubs promote physical activity. It is aimed at children aged three to under six years. One of its goals is to make physical activity a regular part of family life. Eight animated animals teach children various exercises, each of which can be performed at four levels of difficulty. The video clips explain how to do the exercises correctly. The Physical Activity Passport supports educators, instructors and parents in promoting children's motor skills and in carefully observing, guiding, and assessing their developmental progress.

For children, everyday physical activity plays a crucial role in healthy development. In collaboration with local clubs and childcare facilities, State Capital Stuttgart offers "Growing up actively" – a programme to encourage physical activity tailored to each age group. In addition to the Physical Activity Passport, this programme includes several other components aimed at fostering movement and motor development in children (kitafit, schwimmfit (nursery fitness, swimming fitness), minisport voucher).⁴⁶



This indicator is used to measure SDG target 3.4:

"Reduce premature mortality from non-communicable diseases and promote mental health"

Classification / Definition

The regular participation and registrations of nursery schools in the individual sub-projects of the "Growing up actively" programme are the basis of the quantitative survey on how actively nursery schools implement the promotion of physical activity.

Promoting physical activity in daycare centres helps children discover the joy of movement in a way that suits their age, helping to prevent overweight and obesity. It is the first step

in avoiding non-communicable diseases and increasing the mental well-being of children (target 3.4). Early childhood experience is vital for developing behaviour that promotes health and maintaining this healthy attitude in later life.

Calculation

Promotion of physical activity in nursery schools:

Number of Physical Activity Passport nursery schools and certified specialists for the Physical Activity Passport



Indicator 3-7: Suicide mortality

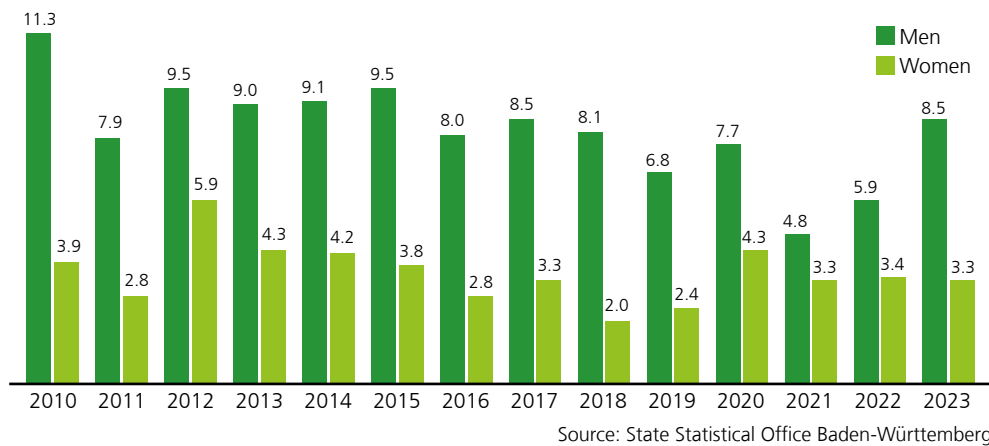


Figure 20:
Suicide mortality among
men and women (cases
per 100,000 individuals)

The number of suicides per year varies considerably, which is not unusual statistically given the relatively small number of cases. What is striking is the quite different distribution over time between men and women. In the period under review, 2010 was the year with the highest number of suicides among men, while 2012 stood out for women. Between 2010 and 2020, there was a steady decline in the suicide rate among men. In 2021, there was even a significant decline in the suicide rate among men, reaching a low of 4.8 cases per 100,000 individuals – the lowest level since 2010.⁴⁷ Since then, however, this figure has risen again and reached 8.5 cases in 2023.

A study published in the Deutsches Ärzteblatt (German Medical Journal) found no correlation between suicide rates and the COVID-19 pandemic based on an analysis of data from police crime statistics. However, due to the complex data situation, continued monitoring is advisable in the coming years to rule out potential long-term effects of the pandemic.⁴⁸



This indicator is used to measure SDG target 3.4:

"Reduce premature mortality from non-communicable diseases and promote mental health"

Help in suicidal crises

In Stuttgart, there are numerous support services available for people experiencing a life crisis and who may be at risk of suicide, as well as for relatives and those bereaved by suicide. At the following link and QR code, you will find contact information and phone numbers for organisations that offer competent and experienced support to help overcome a suicidal crisis.⁴⁹

www.stuttgart.de/medien/ibs/WEB_Hilfe-in-Suizidalen-Krisen_Feb_2021.pdf





Classification / Definition

Suicide is one of the possible causes of premature death. It is usually the result of severe psychological distress or mental illness, which is why the number of deaths by suicide can be used as an indicator in this context. Completed suicides vary between men and women and therefore have to be considered as a gender-specific issue.

The data is based on the official cause-of-death statistics, which in turn are derived from death certificates issued by physicians who determine the cause of death. It is assumed that, in addition to the suicides officially recorded in statistics, there is a number of unreported cases that are classified as accidents or other causes of death. This may occur if the suicide is not recognised, is ambiguous, or if physicians (who confirm the death) – due to loyalty to the family – tend to indicate another cause of death. The indicator presents the number of completed suicides relative to the population, disaggregated by gender.

Calculation

Suicide mortality:

$$\frac{\text{Number of suicides among men}}{\text{Population}} \times 100,000$$

$$\frac{\text{Number of suicides among women}}{\text{Population}} \times 100,000$$



Indicator 3-8: Perception of loneliness



Source: State Capital Stuttgart, Statistics Office

In 2023, according to a survey conducted by the Statistics Office of State Capital Stuttgart, 11.6 percent of Stuttgart's population reported feeling lonely. Based on the total population (people aged 16 and older), this corresponds to approximately 58,000 individuals. This puts State Capital Stuttgart close to the national average of 11.3 percent (see the German Federal Government's Loneliness Barometer). People with a migration background, poor overall health and low income are more frequently affected. Additionally, men tend to be more affected by loneliness than women. Age and educational attainment, on the other hand, do not play a key role in explaining loneliness.⁵⁰



This indicator is used to measure SDG target 3.4:

"Reduce premature mortality from non-communicable diseases and promote mental health"

Paths out of Loneliness: Stuttgart's Strategy for Social Inclusion

i

Loneliness in Stuttgart is understood as a complex phenomenon influenced by social, economic and health-related factors. Those particularly affected are people with limited social networks who rarely maintain personal relationships and, as a result, experience emotional isolation. Experiences of discrimination, cultural barriers and language difficulties further increase the risk of loneliness, especially among people with a migration background. Chronic illnesses or disabilities can also reduce participation in social life. It is also evident that social activities like sports not only improve physical health but also foster social connections and significantly decrease the risk of loneliness.

Stuttgart's strategy against loneliness focuses precisely on these points: Since 2022, stakeholders from culture, sports, education and the social and therapeutic sectors have been systematically involved in developing services to prevent loneliness and provide targeted support for those affected. Special attention is given to groups who face a higher risk of loneliness due to their circumstances. By consolidating and connecting existing services and creating new programmes, low-threshold access points and opportunities for social interaction are established to promote social inclusion.⁵¹ Alongside direct support services, increasing public awareness and reducing stigma around the issue are also major priorities. Loneliness, then, is recognised as a collective challenge, which is being addressed through sustainable and inclusive measures.

<https://www.stuttgart.de/leben/soziales/gemeinsam-gegen-einsamkeit/>

Classification / Definition

This indicator was introduced in 2025. Loneliness is a subjective feeling that describes the perceived gap between desired and actual social relationships. For those affected, loneliness is a painful, negative and enduring experience. Loneliness carries a stigma and often leads to social withdrawal.⁵² It has consequences for both physical and mental well-being and also impacts physical health (such as reduced life expectancy and cardiovascular diseases), which in turn results in high costs for the healthcare system.⁵³ Loneliness also diminishes trust in other people and societal institutions, thus posing a threat to democracy and social cohesion.⁵⁴

There are many different triggers for loneliness. Common causes include moving to a new place, changing jobs, children leaving home, the end of a relationship, illness or need for care, as well as the loss of relatives, friends, or close confidants.⁵⁵ Loneliness requires attention at municipal level, as it has far-reaching consequences for community life and social participation.⁵⁶ In 2024, the German federal government introduced its first-ever strategy to prevent and address loneliness, incorporating a wide range of measures to raise awareness and tackle the issue.⁵⁷

Calculation

The indicator refers to the perceived loneliness of the surveyed individuals. Loneliness is measured using the scientifically validated questionnaire developed by De Jong-Gierveld et al. (2006)⁵⁸, which consists of six questions. The scale values of three of the six questions in the questionnaire below are first recoded so that the values from 1 to 5 are assigned the same meaning. The arithmetic mean value is then calculated from the scale values. Individuals with a loneliness index greater than 2.5 are classified as lonely.

Questionnaire:

1. I miss people with whom I feel comfortable.
2. There are enough people who would help me if I have problems.
3. I often feel abandoned.
4. I know people I can truly rely on.
5. I miss feelings of security and warmth.
6. There are enough people with whom I feel a close connection.

Number of people feeling lonely

/

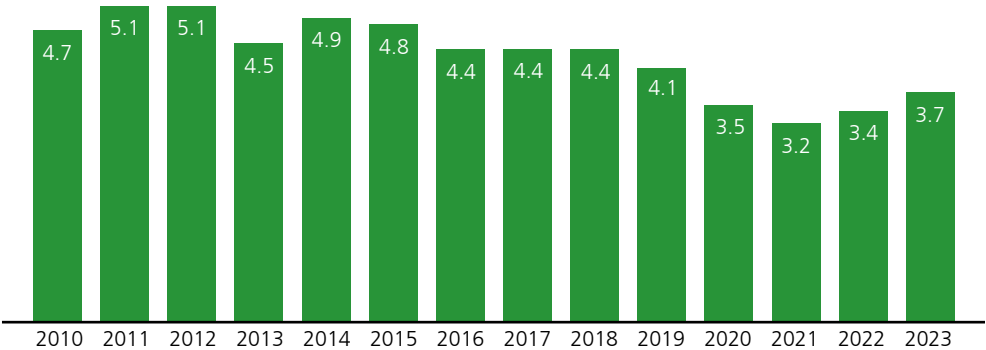
Total number of respondents

* 100





Indicator 3-9:
Traffic casualties



Source: Federal and State Statistical Offices

Figure 21:
Traffic casualties (number of casualties per 1,000 individuals)

The number of traffic accident casualties fluctuated between 3.2 and 5.1 per 1,000 inhabitants from 2010 to 2023. Although the pattern is irregular, there has been a general downward trend since 2012. This decline is likely due, among other factors, to the monitoring and traffic engineering management of accident hotspots in the city. Particular attention is being paid to school routes. The low figures for 2020, 2021 and 2022 can at least partly be attributed to the COVID-19 pandemic, which led to reduced traffic volume. Accordingly, the number rose somewhat again in 2023 but remained below pre-pandemic levels.



This indicator is used to measure SDG target 3.6:
"Reduce traffic accidents and fatalities"

Classification / Definition

This indicator relates the number of people injured or killed in traffic accidents to the total population. It is directly linked to target 3.6, which aims to reduce traffic accidents and fatalities. Until the 2021 reporting year, it was assigned to target 11.2, "Sustainable Mobility". Due to the high volume of traffic in cities and the convergence of different modes of transport (cars, bicycles, pedestrians), road safety is an important issue. The traffic casualties indicator reflects how successful traffic safety measures ultimately are.

One limitation of the indicator is that, strictly speaking, the number of casualties should be related to the number of road users rather than to the population as a whole. This is because commuters travelling into the city, in addition to its residents, contribute to urban traffic volume.

The number of traffic casualties also directly relates to SDG 11 concerning sustainable mobility: shifting from motorised individual transport to more environmentally friendly modes of transport (public transit, cycling, walking) can help reduce the number of accidents.

Calculation

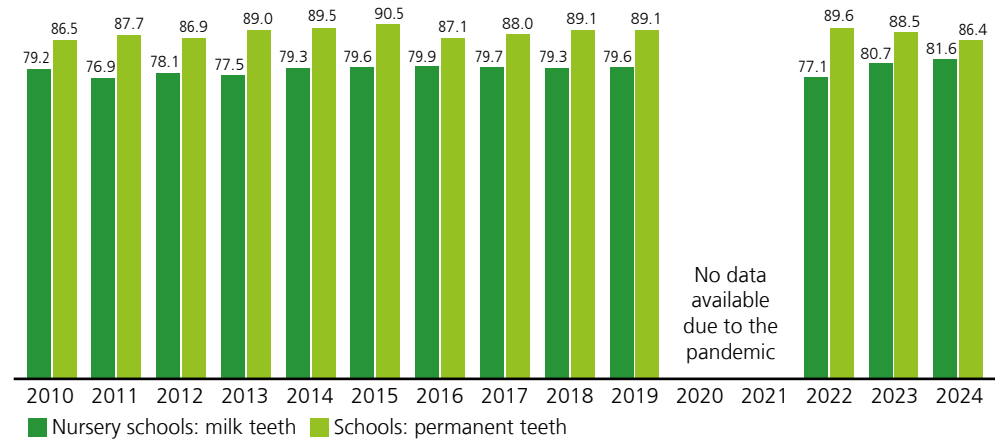
Traffic casualties:

$$\frac{\text{Number of persons injured or killed through traffic accidents}}{\text{Population} \times 1,000}$$

Indicator 3-10: Dental health in children

Figure 22:

Nursery children with naturally healthy teeth and schoolchildren with naturally healthy permanent teeth (in percent)



Source: State Capital Stuttgart, Public Health Office

Since 2010, the proportion of children in nursery schools with naturally healthy teeth (no obvious tooth decay) among all examined children has been around 80 percent. In 2024, this figure reached a new high of 81.6 percent. While the focus in nurseries is on children's milk teeth, the emphasis in schools is on permanent teeth. The proportion of children with naturally healthy permanent teeth among all examined children has varied between 86.4 percent and 90.5 percent since 2010. Unlike the positive trend seen in the health of milk teeth, recent years have shown a decline in the health of permanent teeth.

Looking at the long-term trend in dental health, it is evident that the rates have risen significantly in both nurseries and schools – from around 60 percent in the early 1990s to the late 2000s – and have since stabilised.



This indicator is used to measure SDG target 3.8:
Access to basic health care services for all

Classification / Definition

This indicator was introduced in 2025. The services for children and adolescents in daycare centres and schools include examinations for dental, oral and jaw diseases, assessments of dental status and enamel hardness, nutritional counselling, and oral hygiene education. Parents of young children are offered consultations called "1x1 for Children's Teeth," parent information sessions and participation in numerous public events.

In primary schools, pupils in years 1 and 4 (German educational system) and in special needs classes are examined, with nine schools offering decay prevention programmes covering years 1 to 4. Pupils in year 6 (German educational system) at community and secondary schools, as well as those in inter-

national preparatory classes, are also regularly examined. Special educational and counselling centres conduct examinations across all years. This approach reaches more children, both with and without treatment needs, and signposts them to dental practices for care or preventive measures.

One goal of early childhood and adolescent prevention efforts, such as timely dental check-ups, is to minimise financial risks in adulthood (e.g. costs for dental treatments and especially prosthetics). This is ensured particularly through collaboration with the Baden-Württemberg Association of Statutory Health Insurance Dentists and the Baden-Württemberg State Dental Association. The dental health division, which includes the



Regional Working Group for Dental Health Stuttgart (RAGZ), has a legal mandate to maintain and promote dental health among Stuttgart's children and adolescents, laying the foundation for lifelong dental health. Other RAGZ partners include the Public Health Department of State Capital Stuttgart, the Stuttgart District Dental Association and statutory health insurance providers operating in the city.⁵⁹

The reported figures always refer to the school year, meaning that the 2024 value corresponds to the 2023/2024 school year.

Calculation

Dental health in children:

Number of nursery children with naturally healthy teeth and schoolchildren with naturally healthy permanent teeth

/

Total number of nursery and school children examined by dentists

* 100

Indicator 3-11:
Premature mortality

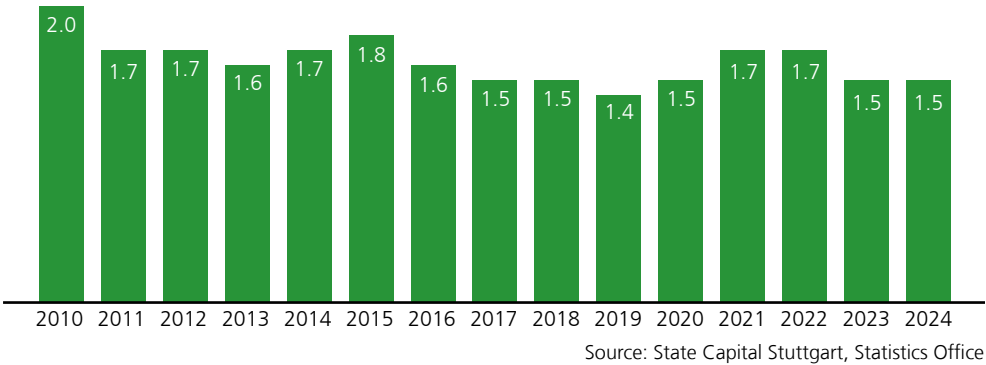


Figure 23:
Premature mortality
(number of deaths per
1,000 individuals under 65)

Premature mortality of people under 65 years in State Capital Stuttgart was two deaths per 1,000 individuals in this age group in 2010. Since then, despite fluctuating annual values, a slight decline can be observed. While the 7-year average between 2010 and 2016 was still 1.7 deaths, it decreased to 1.5 deaths between 2017 and 2024.

This decline is due to various factors, including improvements in medical care and the decrease in traffic accident casualties. The overall decline in premature mortality cannot be clearly attributed to specific measures in health prevention, accident hotspot elimination, or improved occupational safety. However, it is assumed that the entirety of measures and the availability of basic health services influence this development.



In the years 2021 and 2022, there was a slight increase in premature mortality. This increase is unlikely to be due to excess mortality from the COVID-19 pandemic, as the majority of COVID-19-related deaths occurred in the over-65 age group. Another possible reason is a larger population in older cohorts; however, the decrease in excess mortality in 2023 tends to contradict this theory.⁶⁰



This indicator is used to measure SDG target 3.8:
Access to basic health care services for all

Classification / Definition

Health status has a significant impact on people's quality of life. If deaths occur more frequently in people under the age of 65, this may indicate serious health risks and problems within the healthcare system. Measuring mortality under the age of 65 thus reflects widespread health risks.

In local communities, health care and the promotion of preventive health measures, including both physical and mental health, are given particularly high priority, as is improving road safety. In addition, local communities can work with business associations to help improve occupational health and safety. The indicator is defined as the number of deaths under the age of 65 per 1,000 individuals under the age of 65 (measured in ‰).

Calculation

Premature mortality:

Number of fatalities among persons under 65

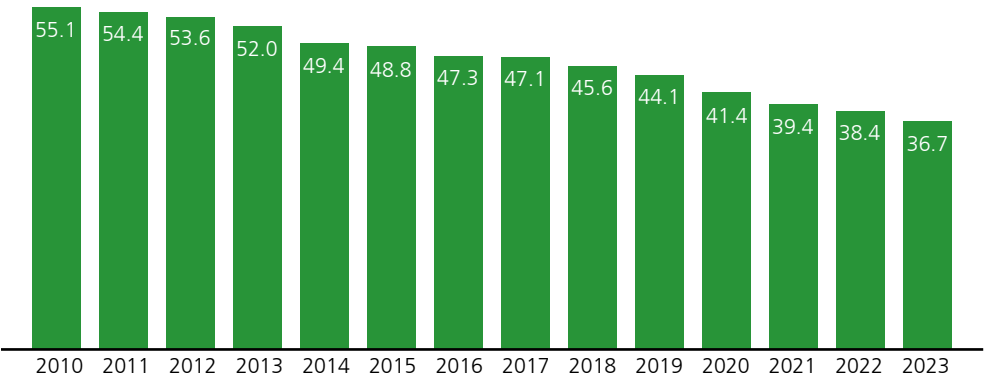
/

Population (under 65 years of age)

* 1,000



Indicator 3-12:
Medical care



Source: State Statistical Office Baden-Württemberg; District Medical Associations of Baden-Württemberg

Figure 24:
Medical Care (number of
general practitioners /
100,000 individuals)

According to data from the State Statistical Office Baden-Württemberg, the availability of general practitioners in State Capital Stuttgart has significantly declined relative to the population between 2010 and 2023 – from approximately 55 to just under 37 general practitioners per 100,000 individuals.



This indicator is used to measure SDG target 3.8:
Access to basic health care services for all

Classification / Definition

The indicator measures physician density and therefore serves as a key element of comprehensive healthcare, which is a core focus of target 3.8. General practitioners play a crucial role in this context, as they ensure primary care and refer patients to specialists when needed. At the same time, the availability of general practitioners can serve as an indicator of the overall performance of the healthcare system. Gaps in care often point to deficiencies in the widespread provision of health services.

A higher density of general practitioners typically improves the chances of flexible and individualised treatment – for example, through shorter waiting times as one aspect of accessibility. However, the indicator does not provide information about the quality of care or the actual accessibility of services, especially for less mobile population groups. It should also be remembered that more and more doctors are working part-time, which can have a negative impact on care, by making it more difficult to arrange appointments for instance.

Calculation

Medical care:

Number of general practitioners, primary care physicians and physicians without a specialty

/

Population

* 100,000

Public perception of medical care

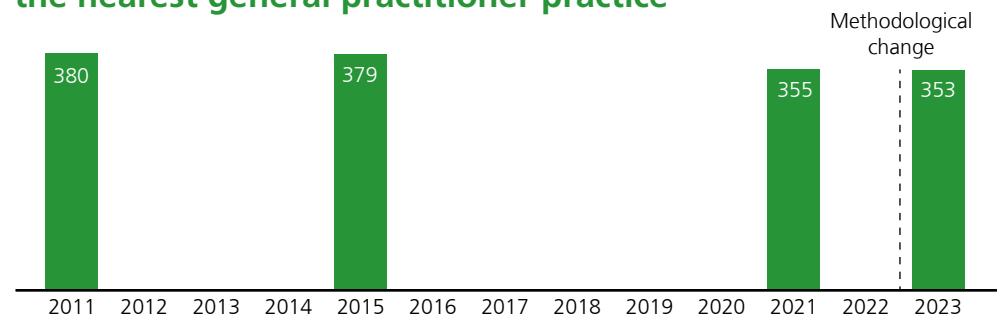


In the 2023 Stuttgart Survey, 61 % of respondents stated they were satisfied with medical care and hospitals, with 16% even saying they were very satisfied. Only around 11% were dissatisfied or very dissatisfied.⁶¹ This overall positive perception stands contrary to the declining trend of the indicator. Against the backdrop of demographic change, the population's assessment could change in the future: given the age structure of the medical profession, it is estimated that around 190 of the current 466 general practitioners in central Stuttgart (40.6%) will retire within the next five to ten years.⁶² At the same time, the need for general medical care is expected to increase due to the rising multimorbidity of an ageing population.

Indicator 3-13:

Primary care close to home – distance to the nearest general practitioner practice

Figure 25:
Linear distance to the nearest
GP practice (in metres)



Source: Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) in the Federal Office for Building and Regional Planning (BBR)

The estimated average distance to the nearest general practitioner's office was approximately 380 meters as the crow flies in the years 2011 and 2015, and it decreased to 353 meters by 2023. When interpreting these values, Stuttgart's topography should be taken into account. Due to the city's basin location with steep slopes in places, the actual walking distances can differ significantly from the linear distances used here.



This indicator contributes to the measurement of SDG target 3.8:
Access to basic health care services for all

Accessibility of medical practices

i

An analysis conducted by the Statistics Office of State Capital Stuttgart on the accessibility of medical practices shows that the majority are within easy walking distance. This result is also reflected in the Stuttgart Survey 2023, in which respondents generally expressed high satisfaction with medical care. However, there were significant differences between the city districts.⁶³ The highest density of medical practices in 2022 was found in the Stuttgart-Mitte district, where all residents could reach a medical practice within less than ten minutes on foot. The lowest density was in the Plieningen district, which had only two medical practices. On average, it took the longest to reach a medical practice in Vaihingen. Compared to 2020, no significant differences were observed, meaning general accessibility was still good in 2023. However, it remains unclear whether timely appointment scheduling was possible.⁶⁴

Classification / Definition

The indicator reflects the distance, as the crow flies, to the nearest GP practice weighted by residents.

The chosen approach only approximates the actual distance to the nearest general practitioner's practice. In the medium term, further development of the indicator is planned to take account of actual walking distances.

Calculation

Linear distance to the nearest GP practice:

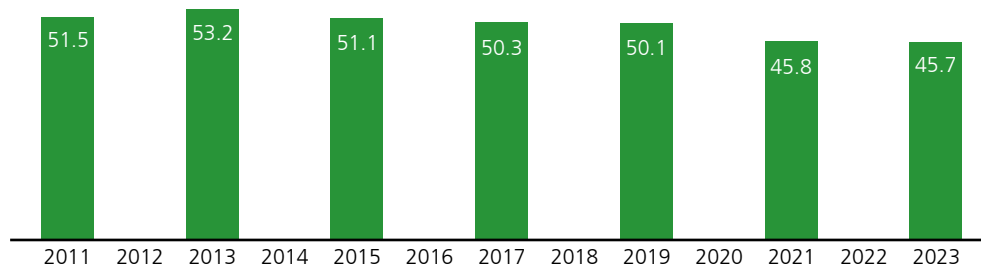
Up until 2021: The linear distance describes the absolute, relief-independent distance from a population unit (250 x 250 metres) to the nearest unit with a general practitioner's practice, as located by the address from the "Who-to-who" company database.

Linear distances do not cross water barriers such as rivers. This linear distance is weighted according to the proportion of the total population of the district or independent city, as a total of all population units. Population units are based on ATKIS Basis DLM250 (settlement land use data) plus census data from 2011 and 2022.

From 2023: The distance determined here describes the absolute, elevation-independent distance in a 100 x 100 metre grid along the OSM path network⁶⁵ from a residential unit (Census 2022) to the nearest unit with a general practitioner's office, located using the address from the Federal Points of Interest Dataset,⁶⁶ based on the infas360 database.⁶⁷



Indicator 3-14: Places in nursing homes



Source: Federal and State Statistical Offices; State Capital Stuttgart, Statistics Office

Figure 26:
Places in nursing homes
(given in number of places /
1,000 inhabitants)

The number of available full-time residential care places in State Capital Stuttgart declined slightly soon after 2013. From around 53 care places per 1,000 individuals aged 65 and older at that time, the figure dropped to just under 46 places in 2021 and 2023. In reality, the supply situation of residential nursing home places has deteriorated further due to the disproportionate increase in elderly people needing care.⁶⁸ In 2021, the number of residential care places fell significantly by around 500 compared to 2019. This figure increased slightly again in 2023 – to about 5,100 places.

Fundamentally, the approach is "non-residential rather than residential" – not least since the majority of people in need of care would prefer to be cared for at home. To align with this, the non-residential care infrastructure in State Capital Stuttgart has been significantly expanded in recent years. It can be expected that the number of people in need of care will increase and, due to demographic developments (an increase in older care-dependent individuals), even full occupancy of existing places will not be sufficient to meet the demand, even if non-residential care continues to be significantly expanded.



This indicator is used to measure SDG target 3.8:
Access to basic health care services for all

Classification / Definition

The provision of places in nursing homes is an essential aspect of the care of older people in need close to home. The importance stems on the one hand from the adequate care of people who require inpatient nursing services. However, the availability of nursing home places also provides relief for family members who would otherwise have to provide care themselves – bringing consequences for family dynamics and employment opportunities. Sufficient nursing home places also give security to families who currently do not need a care place but are considering a potential future need. A predictable future bottleneck in care means stress for families, even before the need actually arises. Because of these secondary effects, the "Places

in nursing homes" indicator reflects a broader range of relevant aspects. The indicator is defined as the number of available nursing home places in relation to 1,000 individuals aged 65 and older. The data are collected every two years.

Calculation

Places in nursing homes:

Number of places available in nursing homes

/

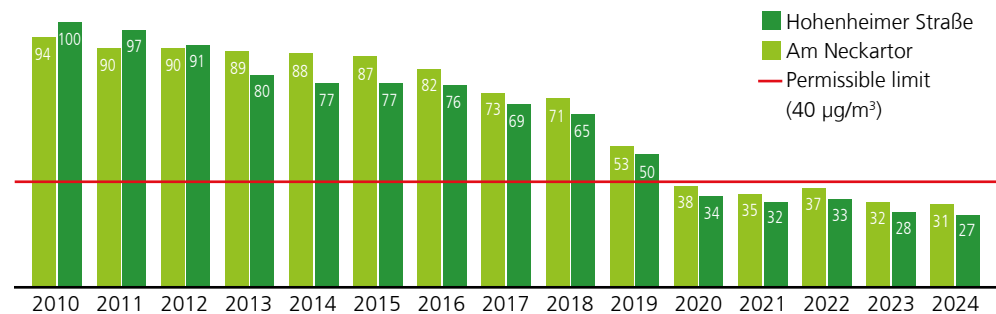
Population (under 65 years of age)

* 1,000

Indicator 3-15: Air quality

Figure 27:

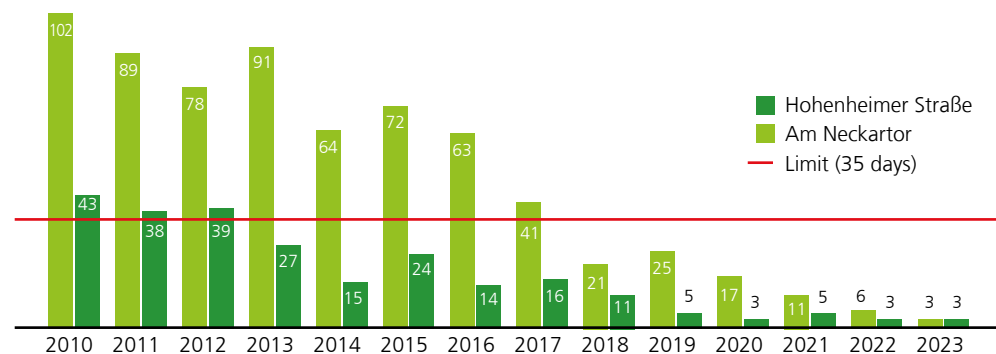
Nitrogen pollution:
Annual mean NO_2 at two traffic-
related monitoring stations
(in $\mu\text{g}/\text{m}^3$)



Source: State Capital Stuttgart, Environmental Protection Office

Figure 28:

Particulate matter pollution:
 $\text{PM}_{10} > 50 \mu\text{g}/\text{m}^3$ at two traffic-
related monitoring stations
(number of days)



Source: State Capital Stuttgart, Environmental Protection Office

Both the nitrogen dioxide and particulate matter pollution decreased significantly at Am Neckartor and Hohenheimer Straße in Stuttgart-Mitte during the period under review. In terms of nitrogen dioxide pollution, air quality measures led to the limit value of $40 \mu\text{g}/\text{m}^3$ being met for the first time in 2020 during the observation period. Levels dropped to 38 and $34 \mu\text{g}/\text{m}^3$, respectively, significantly lower than those recorded ten years earlier (94 and $100 \mu\text{g}/\text{m}^3$). Since then, the downward trend has continued. In 2024, the figures reached a new low, at 31 and $27 \mu\text{g}/\text{m}^3$, respectively. However, there are two other monitoring stations (Prag- and Talstraße), where the nitrogen dioxide thresholds were still exceeded recently.

The number of days on which the particulate matter ($\text{PM}_{10} > 50 \mu\text{g}/\text{m}^3$) was exceeded has remained below the threshold of 35 days since 2013 at the Hohenheimer Straße station and since 2018 at both monitoring stations. According to official measurement data of the Landesanstalt für Umwelt Baden-Württemberg (LUBW) [Regional Environment Office], the particulate matter thresholds were observed at all monitoring stations in the city area.⁶⁹

Traffic is the main source of air pollution. The decline in pollution levels reflects the improved measures aimed at reducing pollutant emissions. Air pollution caused primarily by non-traffic-related pollutants (e.g., sulphur dioxide, dust fallout) has decreased significantly in recent years, while ozone pollution has increased slightly.



This indicator is used to measure SDG target 3.9:
Reduce illness and death from hazardous chemicals and pollution

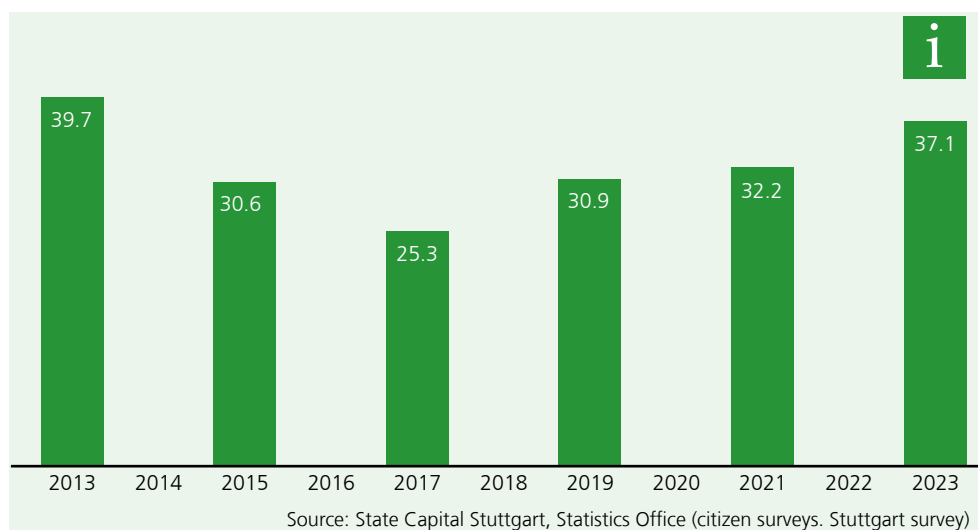


Figure 29:
Opinions on air quality:
Percentage of people who
are very satisfied/satisfied with
the air quality in Stuttgart
(in per cent)

Opinions on air quality

The proportion of citizens who stated in the citizen survey and Stuttgart survey that they were very satisfied or satisfied with the air quality in Stuttgart was highest in 2013 at nearly 40 percent, and reached its lowest point in 2017 at around 25 percent. Since then, the proportion has risen again and approached the 2013 level, reaching 37.1 percent in 2023 (see Figure 29). The discrepancy between the perceived and measured air quality has decreased since 2019, as the air quality at the two monitoring stations, as described, has significantly improved since 2013.⁷⁰

Classification / Definition

Air pollution control is important for the well-being and long-term health of the population. Due to the topographical urban basin situation, this has always been an important issue in Stuttgart since its beginnings – also when it comes to urban development. The chosen indicator is based on two limit values, compliance with which poses a particular challenge in Stuttgart.

These are precautionary values, meaning that exceeding them over the long term increases the risk of adverse health effects on humans. However, it is not easily possible to directly attribute specific deaths or illnesses to air pollution. Air quality in Stuttgart has been monitored around the clock for years,

in accordance with legal regulations. Baden-Württemberg accomplishes this task by operating a dedicated air quality monitoring network.

Calculation

Air quality:

Annual average nitrogen dioxide pollution:
permitted $40 \mu\text{g NO}_2 / \text{m}^3$

Number of days per year with a particulate matter (PM10) daily mean $> 50 \mu\text{g}/\text{m}^3$: permitted 35 days

Indicator 3-16: Noise pollution



11.7%

affected by day/evening/
night noise

12.6%

affected by night noise

(as of: 2022)

Source: State Capital Stuttgart, Environmental Protection Office

In 2022, 11.7 percent of Stuttgart residents were exposed to road traffic noise levels exceeding 65 dB(A) over a 24-hour weighted average (day-evening-night), and 12.6 percent were affected by night-time road traffic noise exceeding 55 dB(A).

To systematically and continuously reduce noise pollution, State Capital Stuttgart adopted a Noise Action Plan in 2009 in accordance with the EU Environmental Noise Directive, which was first updated in 2015 and reviewed again in 2019. The next complete update is scheduled for 2025.

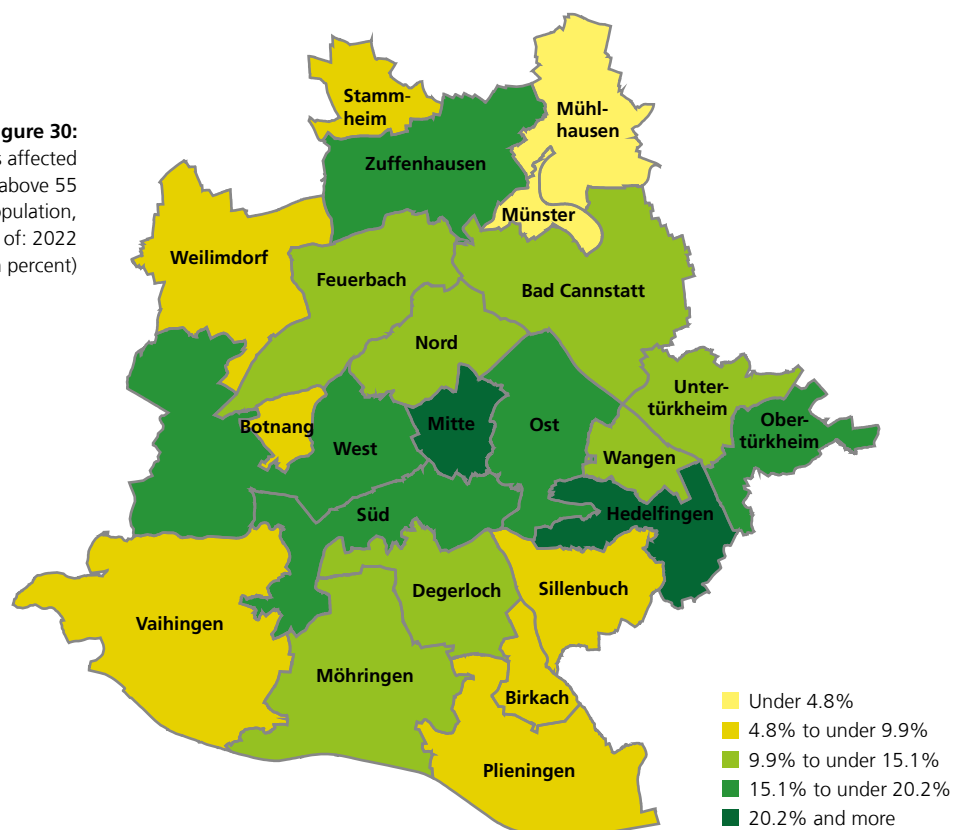
Since road traffic is the main source of noise pollution in Stuttgart, the measures focus primarily on reducing road traffic noise. Key areas of the noise reduction plan include speed limits on main roads, by-pass roads around residential areas for HGV traffic, increased installation of noise-reducing road surfaces and construction of noise barriers or embankments, such as raising the noise barrier on the B 10/27 in Zuffenhausen or a noise barrier on the A 831 in Vaihingen.



This indicator is used to measure SDG target 3.9:

Reduce illness and death from hazardous chemicals and pollution

Figure 30:
Proportion of residents affected
by night-time noise above 55
dB(A) relative to the population,
by city district; as of: 2022
(in percent)



Source: Social monitoring by State Capital Stuttgart



The impact of night-time noise on the population is shown in Figure 30 at district level. In 2022, a relatively high number of citizens in Stuttgart-Mitte and Hedelfingen (23.2% and 20.4% respectively) were affected by noise pollution, the figure for the district of Mühlhausen being just 1.9%.

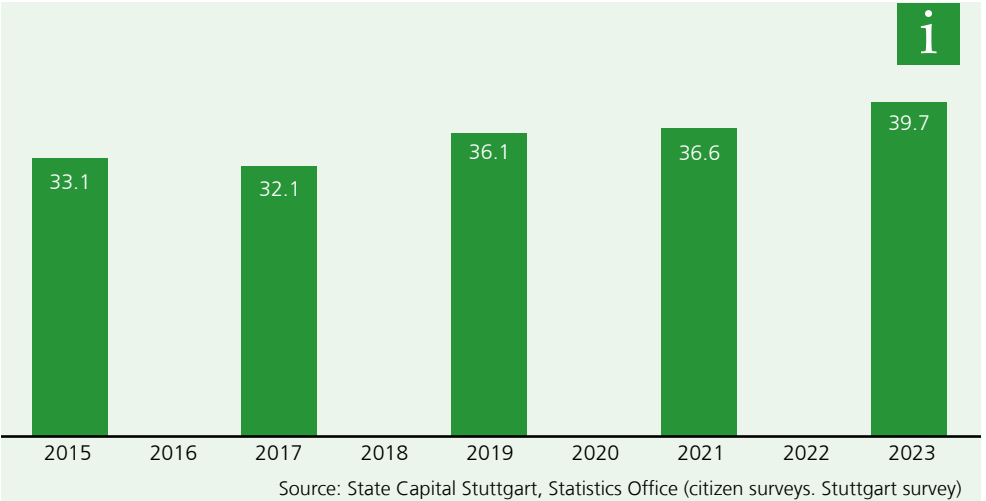


Figure 31:
Opinions on noise pollution:
Proportion of people who are
very satisfied/satisfied with the
noise pollution in Stuttgart
(in per cent)

Opinions on noise pollution

Since 2015, data on perceived noise pollution have been collected every two years as part of the citizen survey. The proportion of respondents who were very satisfied or satisfied with the noise levels in Stuttgart was around 30 percent in both 2015 and 2017. This figure increased to around 40 percent in 2023 (see Figure 31). In 2023, approximately 25 percent of respondents were dissatisfied or very dissatisfied with the noise levels, while the remaining 35 percent gave a neutral response.⁷¹

Classification / Definition

Noise is a physical and mental burden causing stress to those affected. This can lead to high blood pressure and cardiovascular diseases or even heart attacks. In particular, noise levels at night (L_{night}) above 55 dB(A) are detrimental to health. Noise pollution caused by excessive noise exposure therefore constitutes acoustic environmental pollution that negatively impacts both health and the environment.

Noise levels vary greatly across different parts of the city. Relatively high noise levels can be observed in certain spots, though these vary over the course of the day. Noise levels during the day, especially from road or air traffic, tend to be higher than at night. Yet night-time noise is particularly problematic because it can lead to sleeping disorders. The noise pollution indicator reflects the proportion of people exposed to road traffic noise levels exceeding 65 dB(A) during the day or 55 dB(A) at night.

In 2022, a new EU-wide standardised method was introduced for noise mapping, fundamentally altering the way populations exposed to noise are calculated and recorded. Under the new method, people living in a building are no longer evenly distributed across all façades but are assigned

only to the loudest 50 percent of façades. As a result, the number of people reported in higher noise level categories increases significantly, even though the actual noise exposure remains unchanged. This new method leads to higher reported values and will be used in all future EU reports. The data from previous years are therefore not directly comparable.

Calculation

Noise pollution, day/evening/night noise over 24 hours:

$$\frac{\text{Number of people affected by 24-hour weighted road traffic noise exposure exceeding 65 dB(A)}}{\text{Population}} \times 100$$

Noise pollution, night-time noise index:

$$\frac{\text{Number of people affected by night-time road traffic noise exposure exceeding 55 dB(A)}}{\text{Population}} \times 100$$



Correlation with other SDGs

SDG 3, "Good Health and Well-being" is directly linked to SDG 1 ("No Poverty"), since poverty and homelessness can have psychological consequences or are associated with inadequate access to medical care, nursing home places, or medication. Malnutrition or overweight also have a direct impact on health and can increase the risk of cardiovascular diseases or diabetes (SDG 2, "Zero Hunger").

There is also a link to SDG 4 ("Quality Education"), as preventive health measures like screenings and physical activity programmes are part of providing high-quality and free education in schools and nursery schools. In addition, quality education empowers individuals to make informed choices about their health, such as decisions related to nutrition, physical activity and disease prevention. Health education plays a crucial role in promoting a conscious lifestyle and can contribute to a healthier living environment in the long term.

Health and well-being are closely linked to gender equality (SDG 5). Women and girls often face poorer conditions in access to healthcare and preventive services due to discrimination. Reducing gender-specific inequalities, such as improving access to sexual and reproductive health services, has a direct impact on well-being and quality of life.

Consistent wastewater management and the provision of high-quality drinking water are also essential for good health (SDG 6, "Clean Water and Sanitation"). Pollution of water bodies – such as by microplastics or chemicals – affects not only aquatic and terrestrial ecosystems (SDG 14 and SDG 15) but also human health. Ensuring clean water quality is vital to minimising pollutant exposure and reducing health risks such as poisoning or infectious diseases. Health problems can also arise from the use of fossil fuels in households, especially through pollutant-rich heating and cooking methods. Transitioning to clean energy sources (SDG 7) reduces respiratory diseases commonly triggered by indoor pollution, thus making a direct contribution to improving health.

While a high workload can contribute to economic growth (SDG 8, "Decent Work and Economic Growth"), it can also present a target conflict, as too much work over time may impact health and well-being. Conversely, unemployment,

particularly long-term unemployment, can have adverse effects on mental health and general well-being. Social inequalities (SDG 10, "Reduced Inequalities") often have a strong impact on mental health and overall well-being. People from socially disadvantaged groups often have poorer access to healthcare services and are disproportionately affected by chronic illnesses. To compensate for this, inclusive health systems are necessary to provide medical care to all individuals, regardless of income, origin, or residency status.

Air quality and noise pollution are directly linked to urban traffic and the chosen means of transport (see "Transport means for commuting", under SDG 11). The "Air quality" indicator is also influenced by pollutants from other sources (e.g. "Greenhouse gas emission" indicator, SDG 13). In a carbon-based economic system, emissions are influenced by economic activities, particularly reflected in indicators such as Gross Domestic Product (SDG 8 and also SDG 9, "Industry, Innovation and Infrastructure"). Forests and trees (SDG 13, "Climate Action"), recreational spaces (SDG 11, "Sustainable Cities and Communities"), as well as natural habitats and biodiversity (SDG 15, "Life on Land") are linked to air quality and overall well-being.

Sustainable procurement of organic food and low-pollution products (SDG 12, "Responsible Consumption and Production") contributes to better health not only for Stuttgart's residents but also for people along global supply chains. Reducing the use of pesticides and antibiotics in agriculture improves food quality and lowers health risks caused by residues in food.

The increasing occurrence of urban heat islands, a consequence of climate change (SDG 13), directly affects health, often resulting in circulatory diseases and even heat-related deaths. Measures such as urban greening (SDG 11), creating shaded areas, or water-based cooling systems can significantly mitigate the health impacts of heat waves.

The availability of mobile working as part of the digital municipality (SDG 16) can improve work-life balance, especially by eliminating long commutes. This better work-life balance reduces stress and promotes mental health and well-being. Additionally, digitally connected healthcare with telemedicine



services enables better access to medical advice, especially for people in rural areas or with limited mobility. Reducing traffic volume can lower the number of traffic-related injuries and fatalities, directly linking to sustainable transport (SDG 11). Safe cycle paths, traffic calming measures and strengthening public transport help reduce accidents and health burdens.

Advances and innovations in medical technology and infrastructure (SDG 9) improve the diagnosis and treatment of serious illnesses, directly contributing to SDG 3. At the same time, expanding this infrastructure may cause target conflicts when resource-intensive or environmentally harmful methods are used. Sustainable hospital concepts – such as energy-efficient buildings – can help mitigate these target conflicts.

Conflicts between healthcare development and ecological sustainability (SDG 6, SDG 13, SDG 14, SDG 15) can also arise, particularly when building or expanding medical facilities. However, environmentally friendly, climate-conscious and resource-efficient construction methods can minimise these impacts and make health infrastructure more sustainable.

The following indicators are also directly relevant to SDG 3 "Health and Well-Being":

- SDG 1:** "Poverty"
- SDG 1:** "Homelessness"
- SDG 2:** "Children with overweight"
- SDG 5:** "Relative poverty among women"
- SDG 6:** "Wastewater treatment"
- SDG 8:** "Unemployment"
- SDG 8:** "Long-term unemployment"
- SDG 8:** "Occupational safety"
- SDG 10:** "Low-barrier housing"
- SDG 11:** "Financial burden of housing costs"
- SDG 11:** "Recreational areas"
- SDG 11:** "Transport means for getting to work (incl. walking)"
- SDG 11:** "Cycle paths"
- SDG 12:** "Environmental protection investments in the manufacturing sector"
- SDG 13:** "Forest areas"
- SDG 13:** "Trees in public spaces"
- SDG 13:** "Greenhouse gas emissions"
- SDG 15:** "Biodiversity"
- SDG 16:** "Violent deaths"
- SDG 16:** "Domestic violence against children and adolescents"
- SDG 16:** "Mobile working"



Practical example 6: Sport in the Park

Context

A healthy lifestyle can lower the risk of chronic illnesses and improve overall well-being across all stages of life. The World Health Organization (WHO) recommends at least 150 minutes of aerobic activity per week. However, only 45 percent of women and 52 percent of men in adulthood achieve these recommendations (Journal of Health Monitoring, 2021, 6(3)). This being the case, the Office of Sport and Physical Activity has set the goal of creating access to exercise opportunities and making them easier for everyone.

Description / Implementation

Inspired by a similar initiative in Munich, "Sport in the Park" was launched in Stuttgart in summer 2010. Since 2012, the Municipal Council has provided funding for this low-threshold exercise programme, which runs annually from May to the end of September. The programme is a joint project involving the Office of Sport and Physical Activity, the Stuttgart Sports Association, local sports clubs, private providers and the AOK health insurance company Stuttgart-Böblingen. The various partners are developing a diverse sports programme in which residents can participate free of charge and without registration throughout the summer.

Existing green spaces in Stuttgart serve as venues for the activities. Thanks to cooperation with partners in Stuttgart, participants have the opportunity to continue the programme throughout the winter and maintain their active, healthy lifestyle. At the same time, Sport in the Park helps to strengthen the network of stakeholders (municipality, clubs, businesses) and create synergies for further projects.

Experience / Results

Sport in the Park has become an integral part of the state capital's recreational landscape. In 2012, there were just under 600 participants attending 18 offerings at twelve locations. By 2023, over 80 exercise programmes at 40 locations were attracting a total of 24,500 participants. Feedback from participants has been thoroughly positive.

Division / Office / Public Undertaking

Office of Sport and Physical Activity in the Public Safety, Order and Sport Division in cooperation with other partners

Further reading / links

<https://www.stuttgart.de/sportimpark>

(Last access on 13.12.2024)

<https://www.stuttgart-bewegt-sich.de/entdecke/sport-im-park>
(last access on 13.12.2024)



Practical example 7:

Dental health in children

Context

The goal is to ensure general healthcare provision, secure access to high-quality basic health services and minimise financial risks in adulthood from dental treatments – particularly the costs of dentures – through preventive measures during childhood and adolescence.

The Dental Health Department and the Regional Working Group for Dental Health Stuttgart (RAGZ), through their legal mandate to maintain and promote dental health among children and adolescents in Stuttgart, lay the foundation for ensuring dental care for the Stuttgart population. This is achieved in co-operation with the Association of Statutory Health Insurance Dentists of Baden-Württemberg and the Dental Association of Baden-Württemberg. The Regional Working Group for Dental Health Stuttgart is organisationally integrated into the Dental Health Department. The RAGZ's cooperation partners include the Public Health Department of State Capital Stuttgart, the Stuttgart District Dental Association and the statutory health insurance providers operating in the city.

Description / Implementation

The services for children and adolescents in daycare centres and schools include examinations for dental, oral and jaw diseases, assessments of dental status and enamel hardness, nutritional counselling, and oral hygiene education. For parents of young children, consultation sessions titled "1x1 for Children's Teeth" are offered, along with parent information events and participation in numerous public activities.

Experience / Results

Based on a resolution by the Municipal Council, primary school pupils in years 1 and 4 (German educational system) have been examined in State Capital Stuttgart since 2016, including years 1 to 4 at nine schools participating in a caries prevention programme.

As a result, a greater number of children – with or without treatment needs – are reached and referred to dental practices for treatment or preventive care.

Further reading / links:

Niekusch, U. & Möller-Scheib, C. (2024) Gruppenprophylaxe – ein wesentlicher Beitrag zur Zahn- und Mundgesundheit von Kindern und Jugendlichen, Oralprophylaxe & Kinderzahnmedizin [Group Prophylaxis – A Key Contribution to the Dental and Oral Health of Children and Adolescents, Oral Prophylaxis & Paediatric Dentistry] 46:127–135



Practical example 8: Together against loneliness

Context

Loneliness can affect anyone. In Stuttgart, the aim is to raise awareness and encourage open conversations about loneliness. Drawing on experience gained during the COVID-19 pandemic, the Stuttgart Municipal Council commissioned the Department of Strategic Social Planning to develop a Stuttgart-based approach to combating loneliness.

Description / Implementation

Since 2022, Stuttgart's strategy against loneliness has been implemented as a participatory and ongoing process. This approach is based on findings from the 2023 Stuttgart Survey by the Statistics Office, which showed that 11.6 percent of residents – around 58,000 people aged 16 and older – experienced feelings of loneliness in Stuttgart. The strategy aims, among other things, to publicly destigmatise loneliness and to raise awareness among Stuttgart's network of service providers. Local authority offices and departments, as well as institutions and services from the social, education, sports and cultural sectors, were informed about the issue of loneliness and connected with one another. Only through collaboration can a broad-based approach to combating loneliness succeed.

Experience / Results

This network-building effort was supported by a Conference on Loneliness on November 7, 2022, as well as through additional informational events. The low-threshold event series "A Word Against Loneliness", developed by the Department of Strategic Social Planning, has proven particularly effective. Held nine times over the course of eighteen months, the series included both online and in-person sessions covering a wide range of topics. Experts from various fields presented their services aimed at reducing loneliness, connected with stakeholders across the city, and in some cases established direct contact with participants affected by loneliness. Topics included telephone counselling, the specific challenges of loneliness in old age (as seen by the Centre for Mental Health at Stuttgart Hospital), youth-focused support such as krisenchat.de and the digital streetwork initiative of the Stuttgart Youth Centre Association, sports and physical activity programmes by the Office of Sport and Physical Activity and volunteer initiatives such as the

"Welcome Mentors" of the Welcome Centre Stuttgart. In collaboration with Malteser Hilfsdienst, the series also addressed loneliness among people with dementia, while Evangelische Müttergenesung provided insights on alleviating loneliness among people with family responsibilities.

Once the topic had been firmly established in professional circles, the people of Stuttgart were directly addressed over the 2023/24 New Year period through the public campaign "GemEINSAMkeiten" with a broad poster and postcard campaign. The campaign focused on discovering commonalities, encouraging social encounters and promoting mindfulness toward others and one's own well-being. The message conveyed was that there are many paths out of loneliness; the website of State Capital Stuttgart – www.stuttgart.de/gemeinsam – serves as a resource.

To raise awareness about loneliness among digitally savvy and younger audiences, a three-week social media campaign was conducted in parallel. The main goals were to achieve broad reach and high visibility. This campaign, like the overall initiative, proved to be a huge success. Using a variety of social media visuals, the campaign managed to appeal to target groups in different life situations. More than 1.1 million users came across the campaign content. During the campaign period, the Stuttgart website recorded a total of 2,051 visits. Almost 66 percent of these visits were generated by the social media campaign.

Driven by data, the Stuttgart Strategy Against Loneliness is being steadily and systematically implemented, with additional partners from civil society and municipal departments being continuously integrated into the network.

Division / Office / Public Undertaking

Department for Strategic Social Planning in the Social Affairs, Health and Integration Division in cooperation with other offices and partners

Further reading / links:

www.stuttgart.de/gemeinsam
(last access on 25.10.2024)



Further practical examples at: www.stuttgart.de/lebenswertes-stuttgart



SDG 4 Quality Education

"Ensure inclusive, equitable and quality education and promote lifelong learning opportunities for all"

Relevant topics of SDG 4 for German municipalities include access to high-quality primary and secondary education, early childhood education, and technical, vocational and tertiary education. The focus is on reducing gender and socio-economic disparities in education and ensuring equal access to education for all. In addition, the promotion of education for sustainable development (ESD) and inclusive education play an important role.



Overview of the relevant targets

The following targets of SDG 4 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Appendix II.



4.1 Free quality primary and secondary education



4.2 Equal access to quality pre-school education



4.3 Equal access to affordable technical, vocational and tertiary education



4.4 Increase the number of persons with qualifications relevant to the labour market



4.5 Eliminate any discrimination in education



4.7 Education for sustainable development and global citizenship

The following relevant targets have not yet been represented by indicators:



4.6 General reading, writing and numeracy skills



4.a Establishing and expanding inclusive and safe schools

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Indicator 4-1: Transition from primary school

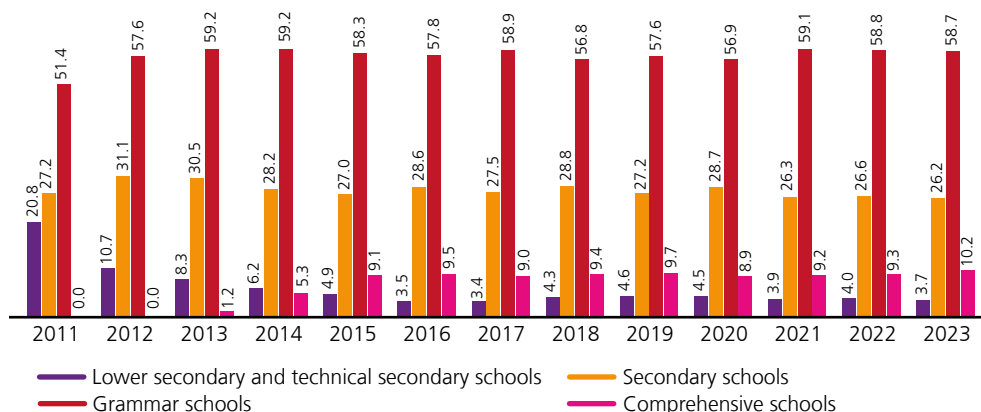


Figure 32:
Transition rates from primary school to secondary school (in percent)

Source: State Capital Stuttgart, Schools Administration Office

More than half of Stuttgart's primary school children move on to a grammar school after year four. This figure has remained relatively constant in recent years. Looking at the period since 2010 as a whole, two aspects stand out in particular: Firstly, as a result of the abolition of compulsory primary school recommendations from 2010 onwards, there has been an increasing shift from technical secondary schools and secondary schools to grammar schools. Secondly, the introduction and expansion of comprehensive schools from 2013 onwards led to a percentage increase in this type of school among school leavers.



This indicator is used to measure SDG target 4.1:
"Free quality primary and secondary education"

New study on truancy

The Statistics Office of the City of Stuttgart and the Stuttgart Partnership for Education Department have conducted the first comprehensive study on truancy. The aim was to record the extent, causes and approach to dealing with truancy at schools in Stuttgart. Schools anonymously recorded full-day absences, individual missed lessons, and whether these were excused or unexcused. Teachers also shared their insights into the causes and potential effects on school performance.

The results show clear differences between the types of schools. Particularly high levels of truancy were found at special educational and counselling centres and at lower secondary and technical secondary schools and comprehensive schools. While full-day absences are more frequent, individual missed lessons are much more likely to be unexcused – reaching up to 75 percent at comprehensive and technical secondary schools. Although approximately 80 percent of absences were excused overall, there are marked differences between school types: In primary schools, grammar schools, and special educational and counselling centres, most absences are excused. In contrast, at secondary schools, about one in three absences go unexcused; at community schools, this figure rises to

around 40 percent; and at technical secondary schools, nearly half of all absences remain unexcused.

These findings align with how 250 teachers rated the issue of truancy on a scale from 0 (no problem at all) to 10 (a major problem). Accordingly, truancy is perceived as a relatively minor problem in primary schools (2.7) and grammar schools (4.2), but as a major problem in comprehensive schools (6.3) and lower secondary and technical secondary schools (7.8).

Teachers observe that the negative impact on academic performance grows in line with the extent of truancy. Illness is the most common reason for absences. At lower secondary and technical secondary schools, disinterest, excessive demands and a lack of future prospects also play a role. Problems with public transport were mentioned above all at special educational and counselling centres and comprehensive schools.

The results form the basis for an interdisciplinary project group, which will use them to develop targeted preventive and supportive measures.⁷²



Classification / Definition

The transition rate from primary school to secondary school indicates the proportion of primary school children who move on to different types of secondary school. Transitions from public primary schools are shown.

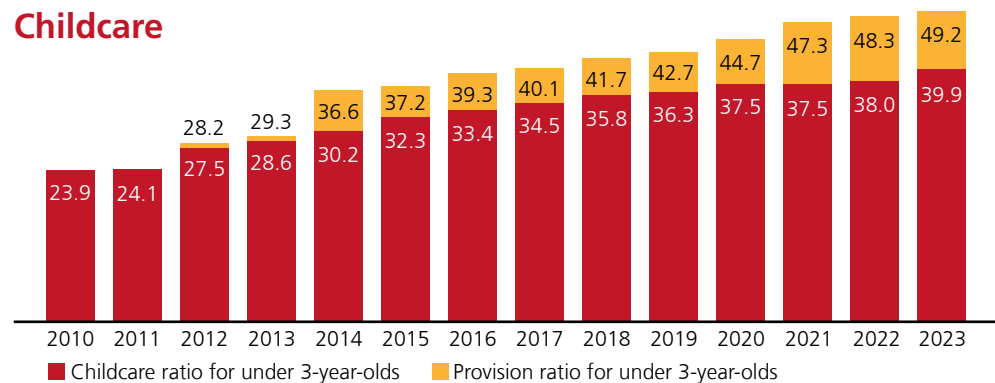
Calculation

Transition from primary school:

$$\frac{\text{Transition from primary school}}{\text{Total primary school children}} \times 100$$

Indicator 4-2: Childcare

Figure 33:
Childcare for under 3-year-olds
(in percent)



Source: State Statistical Office of Baden-Württemberg; State Capital Stuttgart, Youth Welfare Office and Statistics Office

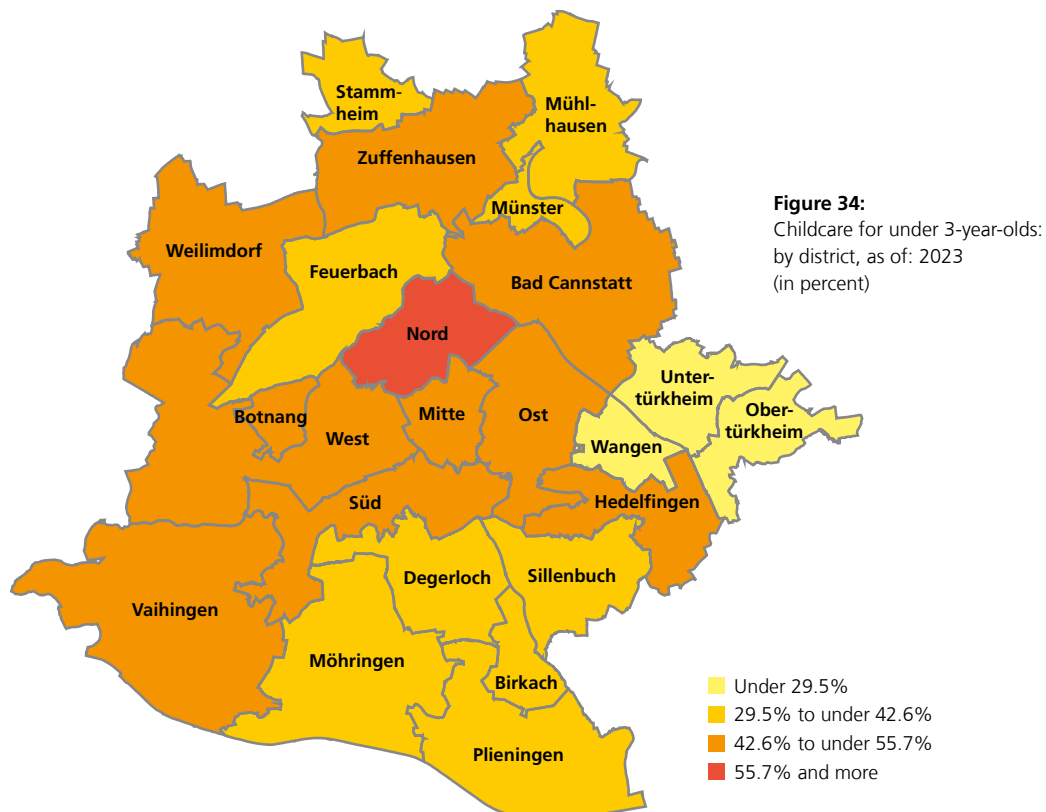
The childcare ratio for children under the age of three increased significantly during the reporting period. Their share rose from 23.9 percent in 2010 to 39.9 percent in 2023. These figures illustrate the intensified efforts to expand childcare facilities in Stuttgart in recent years.

At the end of 2023, Stuttgart was home to 16,266 children under the age of three. Between 2014 and 2018 in particular, this figure rose by over 2,000 as a result of high immigration and rising birth rates. After peaking at 18,435 children in 2018, the number of young children has now fallen again by just under 2,000. This is due to a slight decline in birth rates and a net migration loss of children and their families.⁷³

Due to the increase in the number of children between 2014 and 2018, the childcare ratio did not rise as sharply as in the years before 2014, despite an increase in the number of places available. In 2020, there was another sharp increase in the childcare ratio of more than one point to 37.5 percent, mainly due to the decline in the number of children. After remaining exactly at the previous year's level in 2021, a significant increase was observed again in 2022 and 2023. The rise is mainly caused by the decrease in the child population. The provision ratio, which refers to the theoretically available places (excluding places in day nursery centres) and not to the children actually in care, was around 49 percent in 2023. The target rate for children under the age of 3 is around 60 percent.



This indicator is used to measure SDG target 4.2:
"Equal access to quality pre-school education"



Source: Social monitoring by State Capital Stuttgart

The childcare ratio in Stuttgart's districts was highest in the "Nord" district in 2023, at 68 percent of children under the age of 3. The lowest childcare ratio, at less than 30 percent, were in the districts of Untertürkheim, Obertürkheim and Wangen. The remaining districts ranged between around 30 and 50 percent.

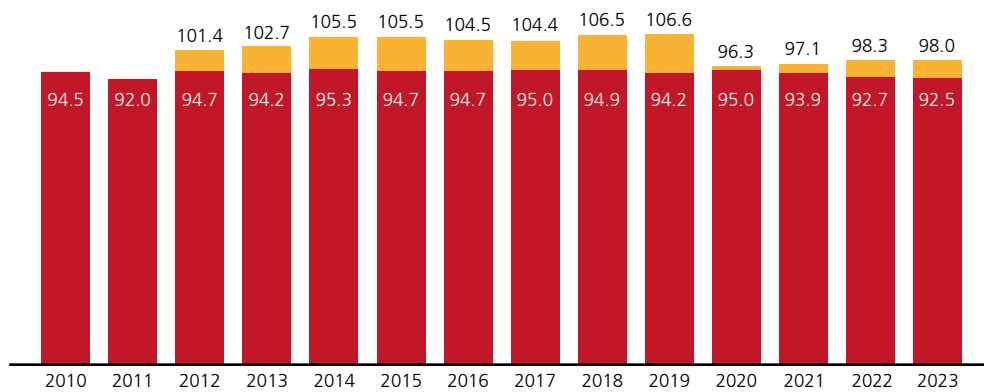


Figure 35:
Childcare ratio for 3- to 6-year-olds (in percent)

Source: State Statistical Office of Baden-Württemberg; State Capital Stuttgart, Youth Welfare Office and Statistics Office

The proportion of children aged between 3 and 6 in childcare remained largely unchanged during the period under review. The figure fluctuated between 93 and 96 percent. In 2021, 2022 and 2023, there was a slight decline in the childcare ratio for children aged between 3 and 6. This is particularly a reflection of the decline in childcare capacity, mainly due to staff shortages.

The overall statistical provision ratio, which is based not on the number of children actually in childcare but on the number of childcare places available (excluding day nursery places), was most recently 98 percent. In purely mathematical terms, Stuttgart has more or less enough available places. However, due to staff shortages, construction measures and similar factors, not all existing places can be filled.



Opinions on childcare

When asked about satisfaction in various areas of life in the 2023 Stuttgart survey, 37 percent of respondents said they were satisfied (31%) or very satisfied (6%) with the range of nursery school and daycare facilities available. There has been a marked decrease in these figures lately. In 2021, 50 percent were still satisfied or very satisfied. While 22 percent of respondents were dissatisfied or very dissatisfied with the availability of nursery school and daycare centres in 2021, the level of dissatisfaction rose to 34 percent in 2023.

In 2023, only 18 percent of respondents saw the problem of a lack of all-day childcare as very serious or fairly serious. In the ranking of the biggest problems facing State Capital Stuttgart, the lack of all-day childcare ranked 21 out of 32, while the lack of childcare facilities generally ranked 13.⁷⁴

Classification / Definition

Preschool childcare should improve children's educational opportunities, regardless of their parents' background and level of education, and prepare them for school. Parental preparation for school can also be appropriate and effective, but the SDGs give preference to institutionalised preschool education. The availability of pre-school education also gives parents the opportunity to work. For these reasons, early childhood education plays a key role both in social terms (e.g. in relation to education, equality and equal opportunities) and in economic terms (e.g. in relation to the financial situation of parents).

The "Childcare ratio" indicator reflects the actual care provided. The provision ratio, on the other hand, indicates the proportion of statistically available places for children of the relevant age in day nurseries, including places held by children from Stuttgart. The calculation of the provision ratio takes into account the fact that 6-year-old children also attend daycare facilities. The reference value therefore includes until 2014: 3.25 cohorts at 95 percent, from 2015: 3.27 cohorts at 98 percent and from 2020: 3.51 cohorts.

The indicator shows the proportion of children in childcare out of all children and distinguishes between age groups. The quality of childcare is not visible in either of the two sub-indicators. Nor does the indicator show whether children are not in childcare due to a lack of childcare facilities or places or due to parental decisions.

Calculation

Childcare ratio – Actual childcare for under 3-year-olds:

$$\frac{\text{Number of children under the age of 3 in daycare facilities}}{\text{Number of children under 3}} \times 100$$

Childcare ratio – Actual childcare for 3 to 6-year-olds:

$$\frac{\text{Number of children from 3 to under 6 in daycare facilities}}{\text{Number of children from 3 to under 6}} \times 100$$

Provision ratio – nursery school places available for children under 3:

$$\frac{\text{Number of places for children under 3}}{\text{Number of children under 3}} \times 100$$

Provision ratio – nursery school places available for children from 3 to 6:

$$\frac{\text{Number of places for 3 to 6-year-olds}}{\text{Number of children from 3 to 6}} \times 100$$

Indicator 4-3:

Children with speech impediments (at school enrolment examination)

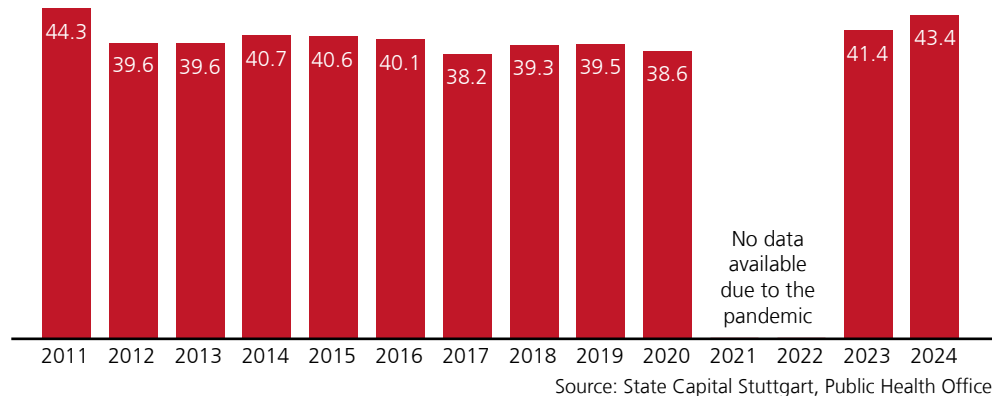


Figure 36:
Children with a speech impediment (at school enrolment examination) (in percent)

The proportion of children who appeared to have a speech impediment at the school enrolment examination remained constant between from 2012 to 2020 at between 38 and 40 percent. The examination period for enrolments years 2021 and 2022 coincided with the pandemic years, which is why no data are available for these years. Following the COVID-19 pandemic, the figure rose again above the 40 percent threshold and stood at 43.4 percent in 2024 – the highest level since 2012.



This indicator is used to measure SDG target 4.2:
"Equal access to quality pre-school education"

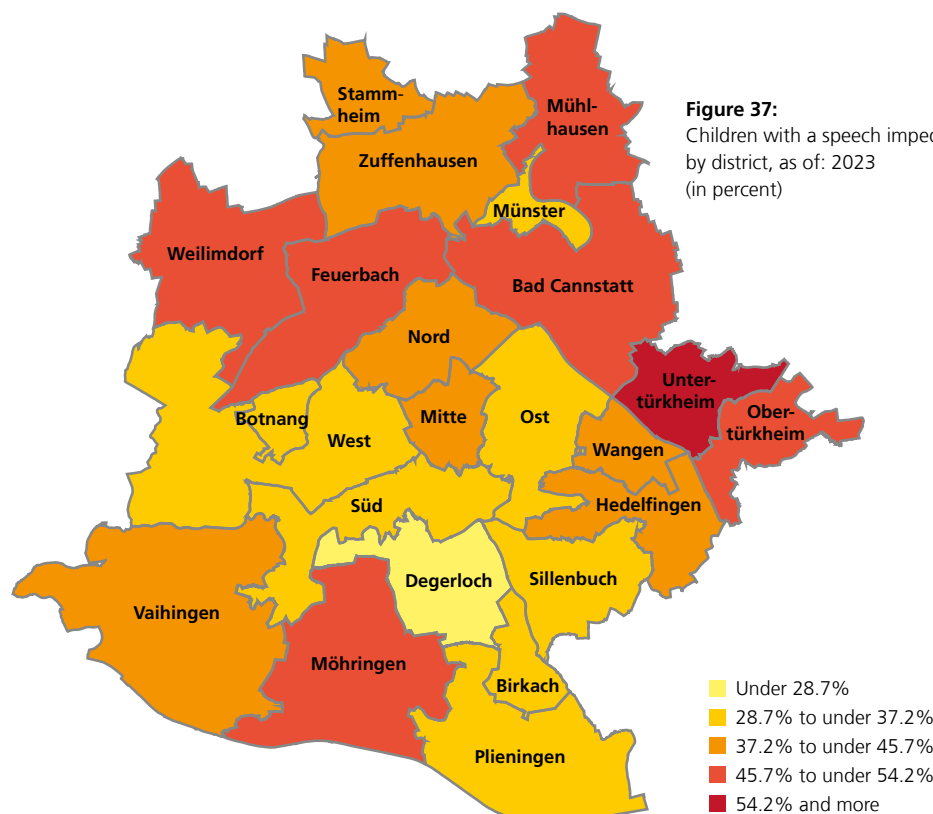


Figure 37:
Children with a speech impediment: by district, as of: 2023 (in percent)

Source: Social monitoring by State Capital Stuttgart



Figure 37 illustrates the distribution of the proportion of children with speech impediments at the district level in 2023. The range extended from around 27 percent in Degerloch to 70 percent in Untertürkheim. This wide variation can be explained in part by the fact that the only two categories were "speech impediment" and "no speech impediment", although German language proficiency also plays a key role. It is therefore anticipated that districts with a higher proportion of non-native speakers will also have higher speech impediment rates.

Classification / Definition

The indicator describes the proportion of children in a school entry cohort with an abnormal speech screening result. The Heidelberg Auditory Screening Test (HASE Screening) is used to assess language development. Appropriate thresholds are set for different age groups. The HASE test distinguishes between children with and without speech impediments. It includes tasks such as repeating sentences, reproducing number sequences and making up words.

The rate of children with an abnormal speech screening result is relatively high, as the test initially identifies all children with speech impediments. Further tests are carried out to determine the causes (e.g. lack of German language skills or speech development disorder), and the results are used to determine the type of support required. The year indicated always refers to the year of enrolment. This means that the year indicated corresponds to the year of enrolment, while data collection takes place approximately 18 months beforehand.

Calculation

Children with speech impediments:

Number of children with an abnormal
speech screening result according to HASE

/

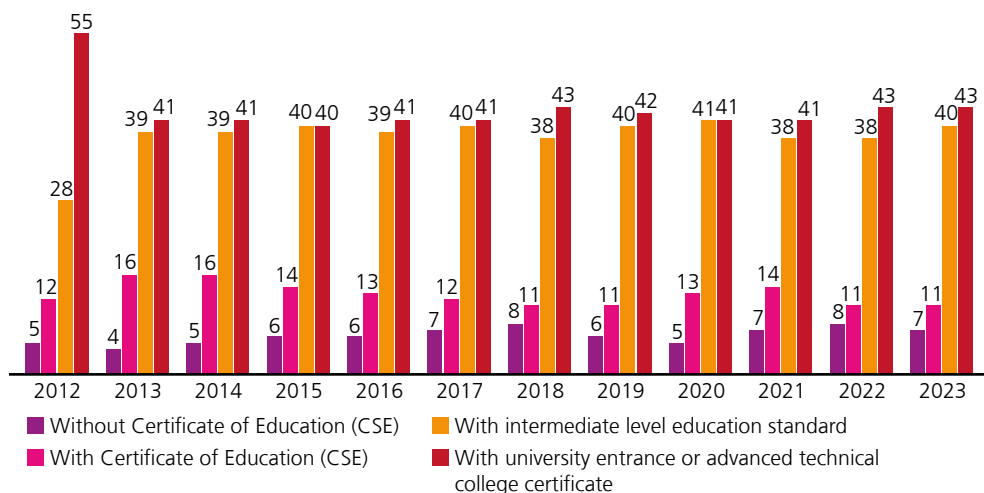
Total number of children examined
in a school enrolment cohort

* 100





Indicator 4-4:

School leavers by school-leaving qualification**Figure 38:**

School leavers from public and private general education schools by school-leaving qualification (in percent)

Source: State Statistical Office Baden-Württemberg (Official School Statistics)

Around 43 percent of school pupils in Stuttgart left school in 2023 with the Abitur (A-Levels), gaining entry to universities or advanced technical colleges. This figure has remained largely unchanged since 2010. 2012 was an "outlier year" when the Abitur rate rose to a one-time high of 55 percent. This outlier figure was due to the change in the length of secondary education from nine years at grammar school to eight years (with some model schools remaining at nine years). This meant a double Abitur year in 2012, while the number of school leavers from other secondary schools remained at normal level. Accordingly, the proportion of school leavers with the Abitur was significantly higher.

The proportion of pupils with an intermediate school leaving certificate also remained at around 40 percent between 2013 and 2023. By contrast, the proportion of pupils leaving school with a certificate of education has declined. During the period under review, this proportion fell from 21 to 11 percent. The proportion of school leavers without certificate of education remained relatively stable at between 5 and 8 percent.

It should be noted that these figures refer to educational institutions in State Capital Stuttgart. However, the pupils at these schools do not necessarily live in Stuttgart, but may also commute from outside the city. The figures also include school leavers who obtained their secondary school leaving certificate via adult education, i.e. pupils who, after earning their certificate of education or intermediate level education standard, attained a university entrance qualification, for instance through vocational programmes at technical schools, vocational extension schools, or vocational grammar schools.

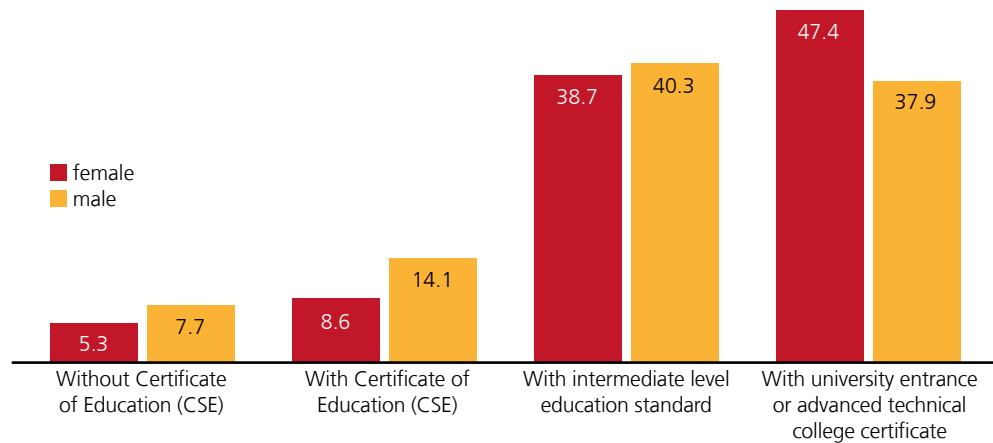


This indicator is used to measure SDG target 4.3:

"Equal access to entrance affordable technical, vocational and tertiary education"

**Figure 39:**

School leavers from public and private general education schools by qualification and gender in 2023 (in percent)



Source: State Statistical Office Baden-Württemberg (Official School Statistics)

A breakdown of school leavers by gender and qualification shows that in 2023, just under 47.4 percent of female school leavers will have left school with a university or advanced technical college certificate. Among male school leavers, this figure was just under 38%, while most of them (40.3%) left school with an intermediate level education standard. In 2019, this figure stood at 42 percent. Male pupils were also clearly in the majority among school leavers with and without a certificate of education. However, compared to the 2021 evaluation, the proportion of school leavers with a certificate of secondary education has decreased by 3.7 percentage points. Around 8 percent of male school leavers, but only around 5 percent of female school leavers, had no certificate of secondary entrance education.

High proportion of girls in upper secondary education

i

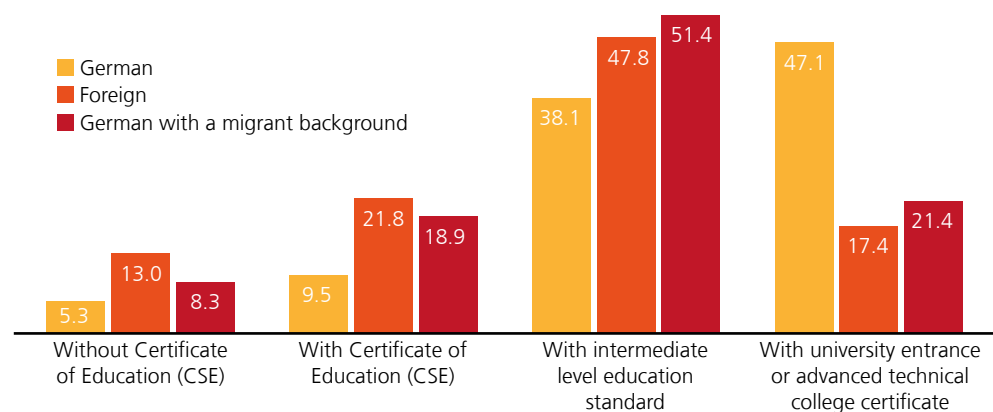
The 2022 census shows: 62,860 children and adolescents in Stuttgart went to school. 35 percent were in years 1 to 4, 47 percent in years 5 to 10, and 18 percent in upper secondary school – an above-average proportion compared to the federal and state levels.

The high proportion of girls in upper secondary general education stands out: 57 percent, significantly more than the national average (52.5%). This difference is most marked when compared to cities such as Hamburg or Cologne.

One possible explanation is Baden-Württemberg's tradition of vocational secondary schools, which have a technical focus and tend to attract more boys. Consequently, they are less frequently represented in upper secondary schools, which explains the higher proportion of girls in Stuttgart. This phenomenon highlights the unique characteristics of the region's educational structure.⁷⁵

Figure 40:

School leavers from public and private general education by qualification, nationality and migrant background in 2023 (in percent)



Source: State Statistical Office Baden-Württemberg (Official School Statistics)



In 2013, pupils with German citizenship graduated from school with higher educational qualifications at a disproportionately higher rate than pupils with a migrant background or foreign citizenship.

Some 47 percent of Stuttgart pupils with German citizenship (including those with dual citizenship) left school with university entrance or advanced technical college certificate. Among foreign pupils, this figure was only 17.4 percent, and among pupils with a migrant background, it was 21.4 percent. In these two groups, the majority of graduates attended intermediate secondary school (around 47.8% of foreign pupils and 51.4% of pupils with a migrant background) and not, as was the case with German pupils, went on to attain a university entrance or advanced technical college qualification. Among German pupils, the proportion of intermediate secondary education certificates was 38 percent in 2023.

Notably, the proportion of foreign pupils with or without a certificate of secondary education (just under 35%) was more than twice as high as that of pupils with German nationality (just under 15%). This figure (27.3%) was almost twice as high among pupils with a migrant background compared to their German counterparts.

Classification / Definition

The indicator describes the proportion of school leavers by qualification, gender and background in public and private general education schools, including second-chance education. Education, especially at the higher level, plays a crucial role in a knowledge-based society. A solid school education is the basis for good vocational training at universities or in apprenticeships. The Abitur or Fachhochschulreife (university or advanced technical college entrance qualification) is often required or deemed advantageous as a school leaving qualification. Academic achievement is therefore crucial not only for the economy but also for individual career prospects, as well as for potential earnings and life opportunities. A solid education is of great economic and social importance.

Calculation

1. School leavers by qualification:

$$\frac{\text{Number of school leavers by qualification}}{\text{Total number of school leavers}} \times 100$$

2. School leavers by qualification and gender:

$$\frac{\text{Number of school leavers by qualification (female and male)}}{\text{Total number of school leavers (female and male)}} \times 100$$

3. School leavers by qualification (German nationality):

$$\frac{\text{Number of school leavers by qualification (German nationality)}}{\text{Total number of school leavers (German nationality)}} \times 100$$

4. School leavers by qualification (foreign nationality):

$$\frac{\text{Number of school leavers by qualification (foreign nationality)}}{\text{Total number of school leavers (foreign nationality)}} \times 100$$

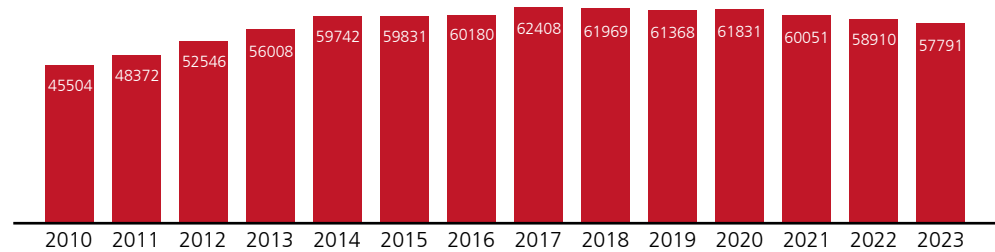
5. School leavers by qualification (migrant background):

$$\frac{\text{Number of school leavers by qualification (migrant background)}}{\text{Total number of school leavers (migrant background)}} \times 100$$

Indicator 4-5: Students

Figure 41:

Number of students at universities and colleges in Stuttgart since the winter semester 2010/2011 (number of individuals)



Source: State Statistical Office Baden-Württemberg (Student statistics)

The number of students at Stuttgart's universities has risen significantly since the winter semester of 2010/11. While the number of students was around 46,000 in the 2010/11 winter semester, it reached a peak of around 62,000 in the 2017/18 winter semester. Since then, this figure has fallen slightly again, standing at just under 58,000 in the 2022/23 winter semester. In 2023, the proportion of students in Stuttgart was around 9.5 percent of the population. There are a total of 13 state-recognised universities in Stuttgart. The University of Stuttgart and the University of Hohenheim account for the largest share of students.⁷⁶

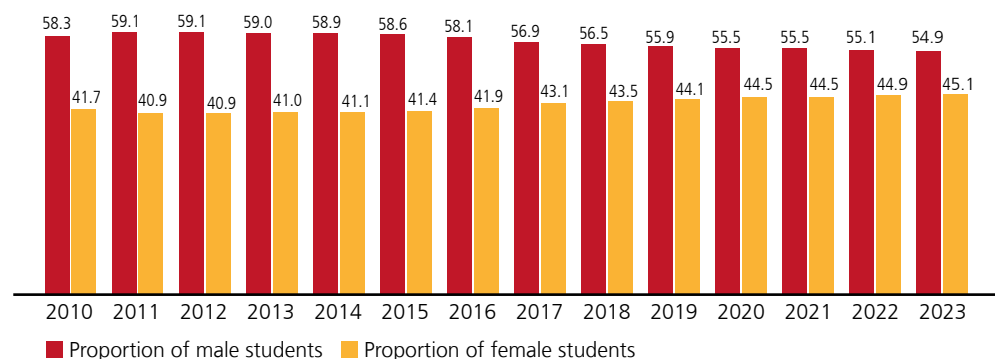


This indicator is used to measure SDG target 4.3:

"Equal access to affordable technical, vocational and tertiary education"

Figure 42:

Proportion of female and male students at universities in Stuttgart since the 2010/2011 winter semester (in percent)



Source: State Statistical Office Baden-Württemberg (Student statistics)

In Stuttgart, the proportion of male students is significantly higher than that of female students. The gap of 20 percentage points between male students (just under 60 percent) and female students (around 40 percent) in the 2010/2011 winter semester remained relatively constant until the 2016/2017 winter semester. Since then, the difference has decreased and was still around 10 percentage points in the winter semester 2022/23.

Classification / Definition

This indicator was introduced in 2023. It describes the number of students at the universities and colleges in Stuttgart for the winter semester of any given year. It also includes the percentage breakdown of female and male students. Access to universities and equivalent institutions reflects the access to tertiary education highlighted in target 4.3.

Calculation

Students:

Total number of students

Proportion of female and male students:

Number of female or male students

/

Number of students per winter semester

* 100



Indicator 4-6: Vocational qualifications

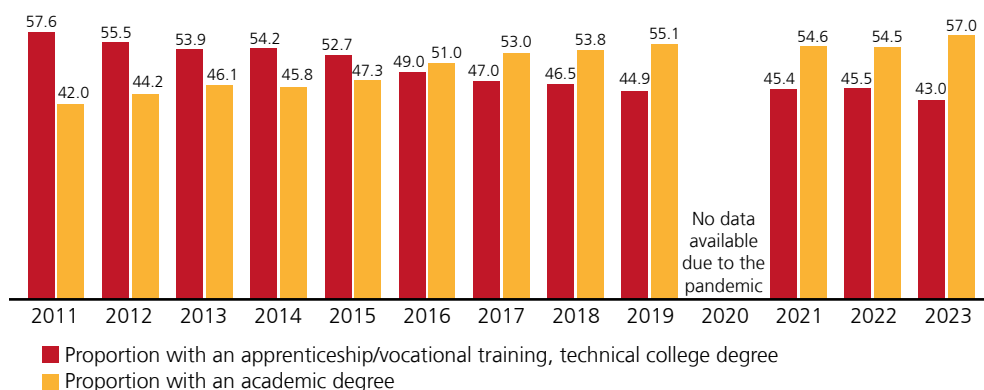


Figure 43:
Proportion of different vocational qualifications among the population aged 25 to 65 with vocational degree (figures in percent)

Source: State Statistical Office Baden-Württemberg (Micro census)

During the period under review, the proportion of academics with degree in Stuttgart rose from 42 percent in 2011 to 57 percent in 2023. At the same time, the proportion of people with an apprenticeship, vocational training, or technical college degree dropped from around 58% in 2011 to 43% in 2023. This decrease briefly halted in 2021 and 2022 but then resumed through 2023.

These shifts in the population's vocational qualifications are positive in that an increasing proportion of the urban population has a high level of education, but on the other hand, this development could exacerbate the shortage of skilled workers. This applies to many vocational professions (such as skilled trades, early education professionals or nursing staff), where the demand for workers tends to continue to rise – particularly in the care sector.



This indicator is used to measure SDG target 4.4:
"Increase the number of qualifications relevant to the labour market"

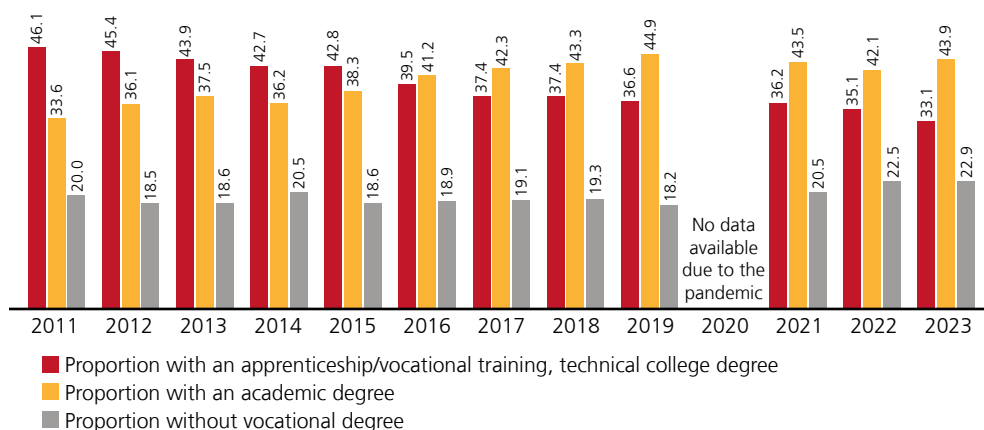


Figure 44:
Proportion of different vocational qualifications among the population aged 25 to 65 with and without vocational degree (in percent)

Source: State Statistical Office Baden-Württemberg (Micro census)

Looking at the entire population of Stuttgart between the ages of 25 and 65, the proportion of the population with no vocational training remained constant at 20 percent during the period under review. Since 2022, this figure has risen to just under 23 percent, which is partly due to refugees from Ukraine and the ongoing process of recognising their qualifications.



Classification / Definition

This indicator was introduced in 2023. It describes the proportion of certain vocational qualifications among 25- to 65-year-olds in the same age group with a vocational degree or in the same age group as a whole. Methodological changes in the microcensus have slightly impaired the comparability between reporting years before and after 2020. This could explain the brief interruption in the trend in the above time series. However, the COVID-19 pandemic may also be (partly) responsible for this, as no data is available for the reporting year 2020.

Calculation

Vocational qualifications, respective proportion of 25–65-year-olds with vocational degrees:

Number of persons with academic degrees or apprenticeship/vocational training and technical college degrees (25–65 years)

/

Number of persons with vocational degrees (25–65 years of age)

* 100

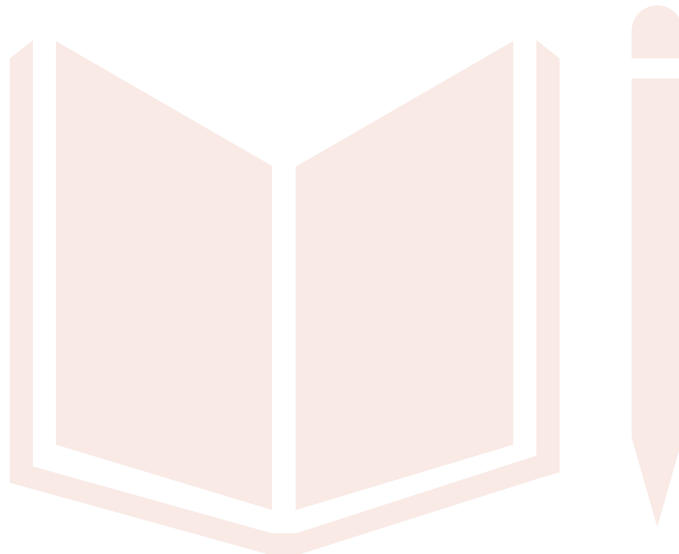
Vocational qualifications, respective proportion of 25–65-year-olds in total:

Number of persons with academic degrees or apprenticeship/vocational training and technical college degrees or without vocational degrees (25–65 years)

/

Population (25–65 years of age)

* 100





Indicator 4-7: All-day primary schools

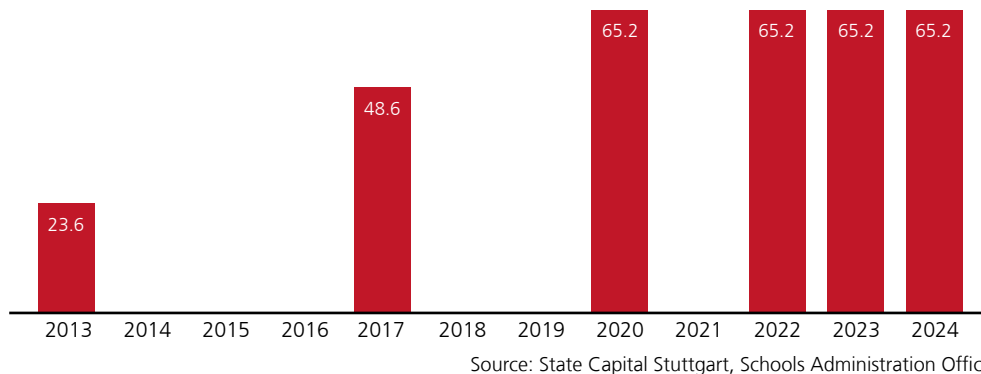


Figure 45:
Proportion of public all-day primary schools (in percent)

The framework concept for developing all-day primary schools in Stuttgart was adopted in April 2013, with the medium-term objective of converting all primary schools into (partially) integrated all-day schools that integrate teaching and extra-curricular all-day activities. Even in that year, there were 17 all-day primary schools (24%) in the State Capital.⁷⁷ In the years that followed, their proportion increased, and since 2020, 45 of the 69 primary schools offer all-day education and childcare (65%). The majority of Stuttgart's all-day primary schools meet high quality standards.⁷⁸



This indicator is used to measure SDG target 4.5:
"Eliminate any discrimination in education"

Classification / Definition

The indicator describes the proportion of all-day primary schools among all public primary schools in Stuttgart. All-day primary schools provide comprehensive education free of charge, as they offer the opportunity to spread learning and rest periods throughout the day and supplement lessons with educational activities from various subject areas and fields of interest (e.g. musical, sporting or cultural activities). At the same time, they lay the foundation for equal access to education for all children, regardless of their social background or their parents' occupation.⁷⁹ The higher the proportion of all-day primary schools, the greater the educational equality and equal opportunities for further schooling.

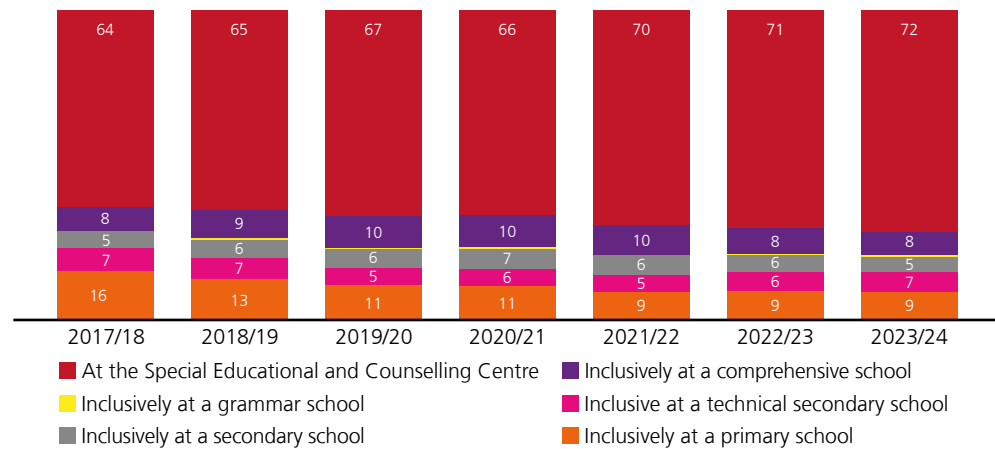
Calculation

All-day primary schools:

$$\frac{\text{Number of public all-day primary schools}}{\text{Total number of primary schools}} \times 100$$

Indicator 4-8: Inclusively educated pupils

Figure 46:
Proportion of inclusively
educated pupils among all
pupils with specialised
education entitlement
according to school type
(in percent)



Source: State Capital Stuttgart, Schools Administration Office

Most pupils with recognised special educational needs at a public school in Stuttgart attend a special educational and counselling centre. In the 2017/2018 school year, this figure was 64 percent. This figure rose over the years to 72 percent in the 2023/2024 school year.

A comparison of school types shows that the lowest proportion of pupils in inclusive education is found in grammar schools, where it has remained consistently below 1 percent since data collection began (not shown in the chart). The other types of schools showed fluctuating figures between 5 and 16 percent. Despite this, the proportion of pupils in inclusive education as a percentage of the total school population has declined slightly in recent years.



This indicator is used to measure SDG target 4.5:
"Eliminate any discrimination in education"

Classification / Definition

This indicator was introduced in 2023. It describes the proportion of pupils receiving inclusive education in relation to the total number of pupils with special educational needs at a public school in Stuttgart for the respective type of school. It refers directly to target 4.5, which aims to eliminate all discrimination in education. Inclusive education thus ensures that all children and young people are taught together.⁸⁰

The UN Convention on the Rights of Persons with Disabilities enshrined inclusion as a human right for people with disabilities in 2008. In the school year 2010/2011, the Local Education Authority Stuttgart launched inclusive education as one of five key priorities in a pilot project.⁸¹

In principle, it is the responsibility of the legal guardians to decide whether their child's entitlement to special educational provision should be met in primary or lower secondary education at a mainstream school or at a special educational and counselling centre (SBBZ).⁸²

Calculation

Inclusively educated pupils:

Number of pupils receiving inclusive education
per type of school

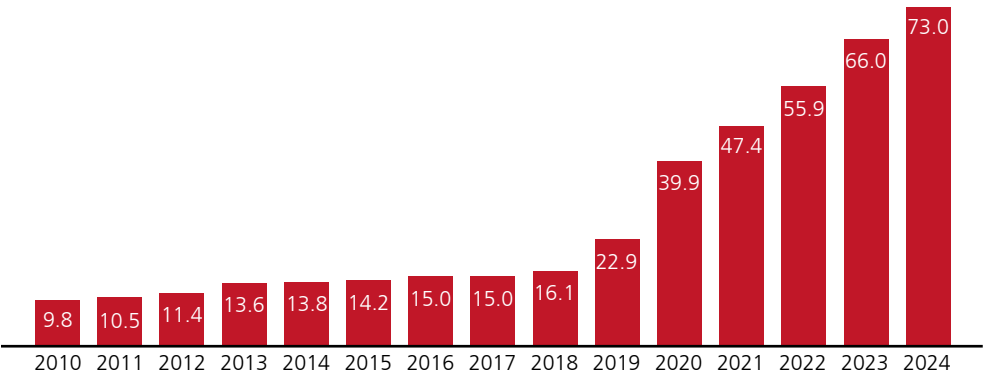
/

Number of all pupils with special educational needs

* 100



Indicator 4-9:
Digital devices at municipal schools



Source: State Capital Stuttgart, Schools Administration Office

Figure 47:
Proportion of pupils in
municipal schools who have
access to a digital device
(figures in percent)

The proportion of pupils in municipal schools who have access to a digital device increased almost fivefold from 2017 to 2024. While the increase between 2017 and 2019 was relatively moderate, it has risen sharply since 2019. In 2024, no less than 73 percent of pupils in municipal schools had access to a digital device.

Digital education is a key element of the curriculum in Stuttgart schools, as defined by the subject-integrated media education in the state's education plans. As the school authority, State Capital Stuttgart is responsible for ensuring appropriate equipment is available. To meet this requirement as a provider of school infrastructure and to ensure access for all pupils across different school communities and types, State Capital Stuttgart has been continuously expanding the digital equipment in schools for over 20 years. Digital equipment has been further expanded thanks to the digitisation measures initiated and implemented during the COVID-19 pandemic under the DigitalPakt Schule (Digital Pact for Schools) and its supplementary agreements.



This indicator is used to measure SDG target 4.5:
"Eliminate any discrimination in education"

Classification / Definition

The indicator describes the proportion of pupils in municipal schools who have access to a digital device. The indicator is directly related to sub-goal 4.5, "Eliminate all discrimination in education". Digital education and cross-curricular media education are part of the education plans. Only the provision of digital devices by the school authority ensures that all pupils can participate in digital education, regardless of their social background. A prerequisite for the use of digital devices in municipal schools is the creation of the necessary infrastructure, such as networking of municipal school buildings. In this respect, there is also a direct link to sub-goal 4.a "Establishing and expanding inclusive and safe educational facilities". Only

when digital education is accessible in all classrooms can subject-integrated media education be effectively delivered, enabling inclusive teaching in line with the education plan for pupils with disabilities alongside all other students.

Calculation

Digital devices at municipal schools:

$$\frac{\text{Pupils in municipal schools with digital devices}}{\text{Total number of pupils in municipal schools}} \times 100$$



Full networking of municipal schools

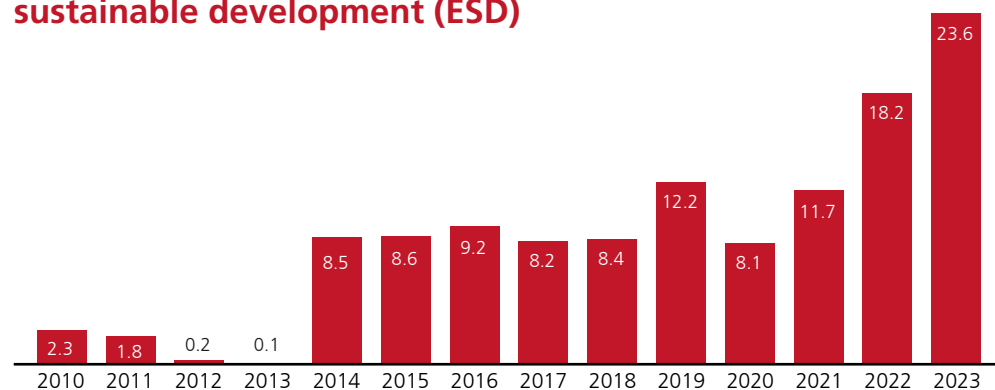
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The digitisation of Stuttgart's schools is not just about equipping them with digital devices. The continuous improvement of digital equipment in municipal school buildings is the second focus of the school digitisation strategy. This comprehensive access to digital devices in all school rooms is intended to enable more flexible use of digital media and a new way of teaching and learning. The aim is to ensure that all pupils, without exception, have access to digital media. As part of the DigitalPakt Schule and through ongoing renovation and investment projects by the Schools Administration Office, State Capital Stuttgart is continuously enhancing the digital equipment in school buildings and will continue to do so. In 2024, 90 of 148 schools were fully networked, i.e. approximately 61 percent (with at least 95 percent networking).

Indicator 4-10:

Educational programmes for sustainable development (ESD)

Figure 48:
Percentage of Stuttgart preschool children and school pupils participating in locally organised and funded ESD programmes (in percent)



Source: State Capital Stuttgart, Youth and Education Division

The number of participants in education programmes for sustainable development (ESD) has grown significantly in recent years. This increase is due in no small part to improved data availability, new education programmes and the expansion of existing programmes, including those offered by the municipal ESD network established in 2020.

In 2014, 6,537 preschool children and school pupils took part in municipal or municipally funded ESD programmes. By 2023, this figure had almost tripled to 18,848. This corresponds to just under 24 percent of all preschool children and school pupils. Between 2010 and 2023, a total of 96,217 children and young people in Stuttgart took part in ESD programmes recorded in the statistics. The decrease in figures for 2020 and 2021 is attributed to the social interaction restrictions imposed during the COVID-19 pandemic, whereas the low numbers for 2012 and 2013 result from a temporary suspension of statistical recording.

When looking at the statistics, it should be noted that in individual cases, groups of schoolchildren may have taken advantage of several ESD programmes offered by State Capital Stuttgart. This means that pupils will have been recorded multiple times in some cases. Such multiple recording is unavoidable, as participants in ESD programmes are not registered by name.



This indicator is used to measure SDG target 4.7:
"Educational programmes for sustainable development and global citizenship"

Classification / Definition

The statistics underlying the indicator are the result of an initial cross-departmental survey on the use of 15 municipally funded or implemented education for sustainable development (ESD) programmes between 2010 and 2023. These ESD programmes are implemented by five offices, nine departments and two municipal enterprises of State Capital Stuttgart. The indicator describes the number of preschool children and school pupils (from primary schools, secondary schools and special educational and counselling centres (SBBZ)) participating in the 15 educational programmes and support measures taken into account. These include ESD programmes that are implemented with the groups once or, depending on the programme format, several times.

The statistics bring together for the first time the 15 ESD programmes implemented or funded by State Capital Stuttgart itself. It can be assumed that even more children and young people have participated in ESD programmes implemented or funded by the city than is shown here. There are several reasons for this: Firstly, not all ESD programmes could be included in the indicator so far, as data collection is still ongoing. However, there are plans to expand the indicator to include additional ESD programmes in the future. Secondly, since the launch of the educational programmes and funding initiatives, not all relevant institutions have consistently maintained statistical records. There is a notable lack of data for the years 2012 and 2013, for instance. Thirdly, the ESD programmes run or funded by the city represent only a fraction of all ESD activities in Stuttgart: The statistics do not include the wide range of ESD programmes run by educators, teachers and educational specialists, as well as by various associations, initiatives and institutions in Stuttgart and the surrounding region.

The statistics include the following educational opportunities and subsidies offered by State Capital Stuttgart:

Environmental Protection Office

Environmental consulting and nature conservation (environmental education)

- Environmental theatre (since 2010)
- School garden consulting (statistic since 2011)
- Environmental field trips (since 2011)
- "Klimaheld:in" (Climate hero) (since 2013)

Heat management and energy concepts for municipal properties

- LESS – Lucrative energy savings in schools (since 2010)

Urban climatology

- Lectures on urban climate and climate change on advanced geography course (since 2018)

Office of Parks, Cemeteries and Forestry

Forest education

- Forest education programmes (statistic since 2019)

Schools Administration Office

All-day school and after-school care

- Promotion of time in nature in all-day schools (since 2021)

Structural building management

- School garden budget (statistic since 2019)

School transport

- School weeks at Waldheim (statistic since 2014)

Stuttgart Partnership for Education Department

- ESD model project "Stuttgart preparatory classes discover nature" (since 2022)

Urban Planning and Housing Office

- Promotion of urban gardens (since 2015)

Municipal Utilities

- Energy project for primary schools: "Electricity and heat from the power of the sun" and "Solar" (since 2013)
- Energy project for nursery schools: "Electricity from the power of the sun" (since 2022)

Municipal Sewage Management

- Sewage treatment plant tours

Calculation

Educational programmes for sustainable development (ESD):

Annual number of preschool children, schoolchildren (primary and secondary schools and special educational and counselling centres) participating in ESD programmes that were promoted or offered by the municipality

/

Total annual number of preschool children, school pupils (in primary and secondary schools and special educational and counselling centres)

* 100



Educational programmes for sustainable development

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Children and young people should be encouraged to develop sustainable thinking and behaviour from a very early age. The UNESCO concept of "Education for Sustainable Development" (ESD) teaches these values and skills. The earlier young people understand the impact of their actions on the environment, the more engaged and conscious they will be in addressing the challenges of today's world. The ESD concept provides a guiding framework. ESD programmes are extremely diverse. At the core of the concept is an emphasis on taking action. Educational programmes should not only serve to pass on information, but also motivate and encourage people to take action themselves.

Climate change and sustainability are important concerns for many children and young people in Stuttgart. They explore and practice forward-thinking attitudes and behaviours across various locations in the city, actively contributing to a more sustainable Stuttgart. Even the youngest children in daycare discover nature on their trips out. In all-day primary schools, children have the opportunity to cook seasonal lunches using produce from the school garden. Young people clean up the neighbourhood during litter collection campaigns and draw attention to the waste of resources. The educational programmes offered by State Capital Stuttgart support this commitment.

Education for sustainable development (ESD) is a cross-departmental task for State Capital Stuttgart, one that involves numerous offices, departments and municipal enterprises. In 2020, the municipal ESD network was established to enhance cross-departmental collaboration and engagement with the urban community in the education for sustainable development field (see practical example 10).

The commitment of State Capital Stuttgart to ESD aligns with the ESD implementation goals of the Federal Ministry of Education and Research (National Action Plan 2017), the guiding principle of "Education for Sustainable Development (ESD)" in the education plan of the state of Baden-Württemberg and UNESCO (ESD Roadmap 2021). In this way, State Capital Stuttgart is also contributing to the achievement of the 17 United Nations Sustainable Development Goals in the field of education.



Indicator 4-11:
Media collection of the Stuttgart City Library

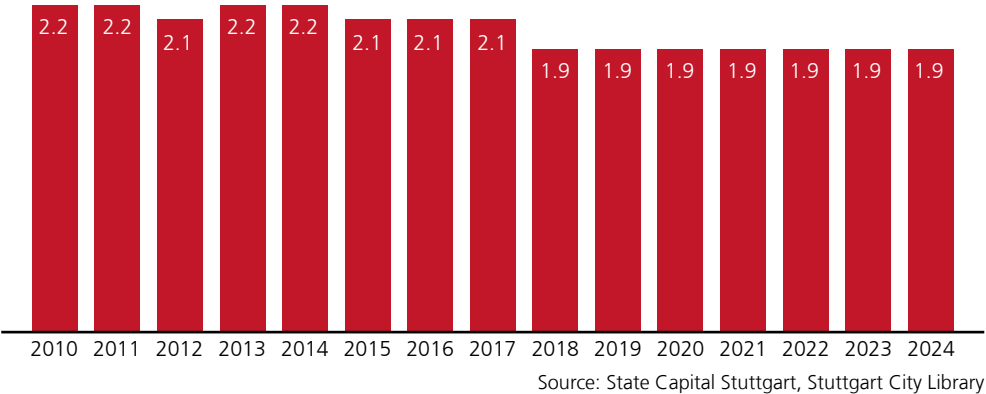


Figure 49:
Media collection of Stuttgart City Library (in number of media / resident)

Stuttgart City Library comprises the Central Library at Mailänder Platz, 18 district libraries, the mobile library and the eLibrary, with a total of over 1.1 million physical and digital media as well as access to various online databases and streaming services. Between 2010 and 2023, the value decreased from around 2.2 media per capita to around 1.9.

In 2022, over 5.3 million items were loaned out. This corresponds to 8.7 loans per person. The figure was slightly less in 2023.



This indicator is used to measure SDG target 4.7:
"Educational programmes for sustainable development and global citizenship"

Classification / Definition

Public libraries are an important pillar of cultural education. Their task is to provide free access to information, education and culture for all people, regardless of income, status, age, gender or origin. Libraries offer all kinds of media to support the acquisition of reading, media and information literacy.⁸³ The indicator describes the number of books and media per capita in Stuttgart's city library, including branches and mobile libraries. Since 2015, the figures also include the digital offerings of the eLibrary.

Since 2023, this indicator has replaced the "Loans from the library of Stuttgart" indicator.

There is no specific SDG to safeguard and develop culture. The indicator is therefore assigned to target 4.7. The focus is on ensuring that all learners, regardless of demographics, can acquire the knowledge and skills necessary for sustainable development. Public access for all to municipal libraries and their media collections is a key factor here.

Calculation

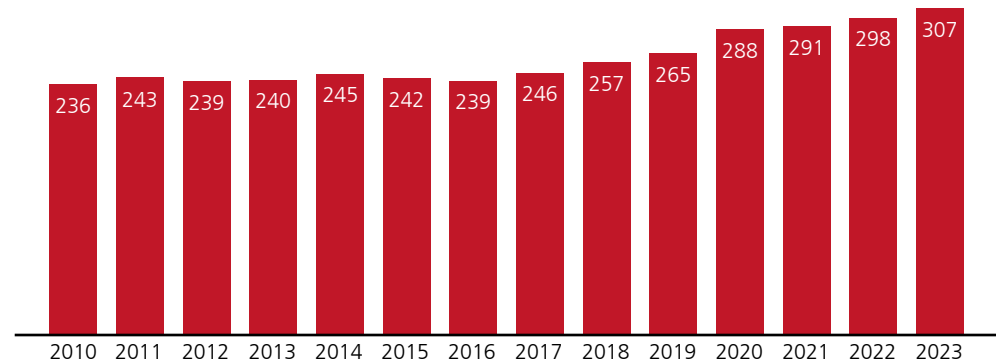
Media collection of the Stuttgart City Library:

Number of media
/
Number of residents



Indicator 4-12: Culture budget

Figure 50:
Culture budget per capita
(in euro)



Source: State Capital Stuttgart, Office of Cultural Affairs

Between 2010 and 2017, culture budget in State Capital Stuttgart remained stable at around 240 euro per capita. It has been rising steadily ever since. In 2023, the culture budget was around €307 per capita.

The profit and loss budget shows the culture budget (planned budget for 2023: 185.5 million euro) of State Capital Stuttgart, which is largely managed by the Office of Cultural Affairs (169.5 million euro). The profit and loss budget also shows the municipal subsidy for the coordination units/departments of the Office of Cultural Affairs (net resource requirement) in the period under review and the budget available to them.



This indicator is used to measure SDG target 4.7:

"Educational programmes for sustainable development and global citizenship"

Classification / Definition

The culture budget includes expenditure by the Office of Cultural Affairs and other municipal offices in the cultural sector. These are calculated based on the number of residents and indicate the level of funding available for culture in the municipal budget.

There is no specific SDG for preserving and developing culture. The indicator is therefore assigned to target 4.7, which emphasises public access to education for sustainable development for all.

Calculation

Culture budget per capita:

Culture budget in euro
/
Number of residents



Participation in cultural events in Stuttgart

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In the 2023 Stuttgart survey, over 70 percent of respondents said they were satisfied or very satisfied with the city's cultural institutions and events. With 72 out of a possible 100 points, satisfaction was relatively high compared to other areas of life, but remained slightly below the highest score of 76 points achieved in previous years.⁸⁴ Despite the overall positive assessment, a survey conducted in spring 2023 revealed ongoing barriers to attending cultural events: Almost 18 percent of Stuttgart residents aged 16 and over did not attend any cultural events. The main reasons for this were a lack of financial resources and free time (34% in each case), followed by insufficient information (30%), health issues (24%), as well as language barriers and problems finding companions (10% in each case). In addition, many would like to see more initiatives in their neighbourhood (20%) and more suitable opening hours (15%). Around 30 percent felt that the existing cultural events did not align with their interests. On a positive note, programmes such as the Bonuscard + Kultur are already improving access for many people and are seeing increasing use.⁸⁵

Correlation with other SDGs

Education, in its broadest sense, has a central influence on both individual life trajectories and economic development. Career prospects, earning potential and life opportunities are closely linked to an individual's educational achievement and access to social capital. Accordingly, education is key to the social sustainability dimension (see also SDG 1, No Poverty). Poverty is often a consequence of inadequate education, which makes it difficult to access the labour market. The fight against poverty is a futile one without investing in education.

By the same token, the economy is reliant on a skilled workforce and therefore on a good educational system that turns out qualified school leavers. The economic sustainability dimension (in particular SDG 8 "Decent work and economic growth" and SDG 9 "Industry, innovation and infrastructure") is therefore closely linked to education. Education also imparts knowledge about the ecological, economic and social consequences of one's own actions (SDG 12 "Sustainable consumption and production").

An adequate level of education helps to impart knowledge about healthy eating, sustainable agriculture (SDG 2) and food handling (SDG 12). In urban contexts in particular, educational programmes can be established to prevent food waste and promote regional and seasonal diets in order to achieve both environmental and health benefits (SDG 3). Implementing nutrition education in schools is a key strategy for addressing malnutrition and obesity in the long term.

Given their profound influence on the course of a person's life, inequalities and disadvantages in education deserve special attention. This also applies to health issues and gender inequalities (SDG 5) and issues of inclusion and integration (SDG 10 "Reduced inequalities"). Educational equity also includes access to cultural education and lifelong learning.

Education for sustainability empowers individuals to influence sustainability themselves and live in harmony with sustainable principles. Knowledge about the links between the environment and mankind affects almost all SDGs and also has an



impact on future action in almost all local and regional areas (e.g. health (SDG 3), consumption, waste (SDG 12), water and energy consumption (SDGs 6 and 7) or mobility and urban development (SDG 11)), as well as global issues (fair trade (SDG 12), climate change (SDG 13) and the protection of the oceans and biodiversity (SDGs 14 and 15)). Empowering pupils to recognise these correlations and effects of their actions lays the foundations for the development of future generations. Sustainability is now included in school programmes and often forms part of extra-curricular activities.

Education is also a key factor in strengthening the rule of law, democracy and a peaceful society (SDG 16). The higher the level of education of a population, the more willing and able people are to participate actively in political processes. This means that the governance⁸⁶ dimension of sustainability, i.e. the participation of different actors in decision-making processes and their implementation, is also dependent on education, as increasing levels of education are associated with a greater willingness and self-assessed competence to participate in politics. Its comprehensive links to all dimensions of sustainability make education a key factor. The further development of education in line with the 2030 Agenda requires cooperation between various actors, including schools, universities, businesses and civil society organisations. Global partnerships (SDG 17) also enable the exchange of best practices and contribute to the development of innovative educational concepts.

Potential conflicts of interest in the area of environmental sustainability (SDG 6, SDG 13, SDG 14, SDG 15) arise in the construction and expansion of educational infrastructure and facilities. The increasing expansion of digital education, such as the provision of end devices and digital infrastructure, also leads to increased consumption of resources and higher waste generation. In this context, it is especially important to ensure that production and construction methods are environmentally sound, climate-friendly, and resource-efficient, while also minimising consumption to reduce potential negative impacts.

The transition to digital education can exacerbate existing social inequalities, as highlighted in SDG 10, especially if financially disadvantaged families do not have access to devices or stable internet connections. Measures to provide appropriate resources could alleviate this conflict.

Economically speaking, it is important not to overlook the costs of establishing and expanding educational infrastructure.

The following indicators are also directly relevant to SDG 4 "Quality Education":

- SDG 2:** "Children with overweight"
- SDG 3:** "Children with conspicuous screening of gross motor skills"
- SDG 3:** "Promotion of physical activity in nursery schools"
- SDG 3:** "Vaccination coverage"
- SDG 3:** "Perception of loneliness"
- SDG 3:** "Dental health in children"
- SDG 11:** "Transport means for getting to work (including walking)"
- SDG 15:** "Biodiversity"
- SDG 16:** "Registered users at 'Stuttgart – meine Stadt' [Stuttgart – my city]"
- SDG 16:** "Stuttgart participatory budgeting"
- SDG 16:** "Participation of adolescents"



Practical example 9: Library education work

Context

At the end of the 1990s, Stuttgart City Library decided to focus its children's library activities more on the morning. Through its focus on events for nurseries and schools, the city library plays a crucial role in fostering educational and social equality. In groups, all children and young people – regardless of their social or economic background – have the opportunity to get to know what the library has to offer and use it for their individual learning journey.

As libraries become increasingly anchored in school education and curricula as extracurricular educational partners, there has been a system-wide rise in demand for media literacy education, reinforcing the earlier decision to shift library educational activities to the morning hours. Alongside events, the city library offers teachers and educators a free special-purpose library card, allowing them to borrow themed media boxes tailored to their institutions on current topics from the curriculum.

Description / Implementation

The newly established "Library Education" department was created in 2022 in response to continuing demand. This term encompasses the educational and outreach activities of libraries, taking into account pedagogical and didactic principles as well as the constantly changing media realities of children and young people. This includes, for example, teaching information literacy and promoting reading – both key skills for equal opportunities and participation in our society.

Quality education – SDG 4

The concept of education in the City Library's library education programmes goes beyond school learning: Library education supports children and young people in making the best use of the diverse resources and services offered by a library. Educational measures can encourage visitors to strengthen

their information and media literacy and become more creative to promoting lifelong learning. Last but not least, library education programmes help to establish libraries as vibrant places of learning and underline the importance of education and participation in society.

Reduced inequalities – SDG 10

By offering free media and educational services through media boxes and event formats, the city library provides children and young people with access to resources they might otherwise be unable to afford. This helps to ensure that financially disadvantaged people also have the same access to education and cultural events. The city library also offers cultural events and leisure activities, often in cooperation with mobile youth work, which are accessible to everyone, regardless of income. Through these initiatives, the city library effectively reduces social inequalities by creating an inclusive space where everyone is welcome and has equal opportunities for personal development. By offering a wide range of services close to home, the city library promotes the integration and inclusion of structurally disadvantaged children and young people and thus actively contributes to the creation of a fairer and more equal society.

Peace, Justice and Strong Institutions – SDG 16

By helping children and young people learn to read and write, seek out information, distinguish facts from opinions and ultimately develop ideas to actively participate in social life, the city library's educational services also support the strengthening of democracy.

Using the media collection helps reduce educational disparities and provides all children and young people with equal opportunities.



Partnerships for the Goals - SDG 17

Cooperation agreements are established with schools with a view to reaching as many children and young people in Stuttgart as possible. Under such agreements, elementary schools undertake to visit the city (district) library at least once a year with each class. In addition, the library education team, in collaboration with the Schools Administration Office, offers training courses on proven concepts that teachers and educational specialists can implement as part of all-day supervision at schools.

Experience / Results

Around 25 years after the decision to focus more on children's library work in the mornings, the city library, as the most important extracurricular educational partner, contributes to the sustainable development of language, reading and media skills with around 1800 events for Stuttgart's daycare centres and schools every year. All stages of an educational biography are taken into account.

In 2023, Stuttgart City Library reached 180 daycare centres and 136 primary and secondary schools with its educational library services in the city library at Mailänder Platz, the 18 district libraries and the mobile library. The educational programmes range from picture book shows and coding with BeeBots for toddlers, exit games and internet driving licences for primary school children to research training and Power Point karaoke for secondary school children. The programmes are generally developed and implemented by the staff of the city library.

The library education team plays a special role by assuming responsibility for the conceptual planning and coordination of event programmes for children and young people, within the framework of municipal cultural and extracurricular educational work across the entire city library system. The team is also responsible for the conceptual development of new methods and series of events for library education work. These can be implemented in all institutions in the form of multiplier training courses for employees, trainees and students of the city library. To complete the transfer of knowledge to the district libraries and ensure its quality, practical experiences are regularly shared and discussed in the plenary sessions of Stuttgart's children's and youth librarians. Events are jointly reviewed and, if necessary, adapted to reflect the current living environments of children and young people.

In addition to the educational library services, 30 pre-packed media boxes have been purchased from foundation funds in recent years alongside the individually compiled media boxes for daycare centres and schools. The contents of the boxes are adapted to the latest curriculum, with a wide range of topics from insects and the climate to diversity and children's rights.

Division / Office / Public Undertaking

Office of Cultural Affairs in the General Administration,
Culture and Legal Affairs Division



Practical example 10:

From environmental education to educational programmes for sustainable development: The municipal ESD network in Stuttgart



Context

Given the importance of teaching children and young people to think and act sustainably from an early age, the UNESCO concept of "Educational programmes for Sustainable Development" (ESD) promotes these values and skills. With this in mind, children and young people in Stuttgart should be given the opportunity to practice sustainable thinking and actions in various settings and contribute to building a sustainable Stuttgart. To support this, the municipal ESD network was founded in 2020 to foster these approaches through cross-departmental and cross-agency collaboration, professional guidance, and public relations efforts.

Description / Implementation

ESD is a cross-sectional municipal task. 2020 saw the launch of the municipal ESD network, in which numerous offices, departments and municipal enterprises of State Capital Stuttgart are involved. The cross-departmental cooperation serves to expand existing programmes and funding, adapt them to the initial situation of elementary school and daycare centres and develop new formats. The network members can pool measures and requirements and develop coordinated strategies.

In 2022/23, a collaborative dialogue process took place to develop starting points for the further development of the ESD network. Over 50 ESD stakeholders from administration and civil society took part in three events. The process was also accompanied by a specially established core group involving additional departments.

Experience / Results

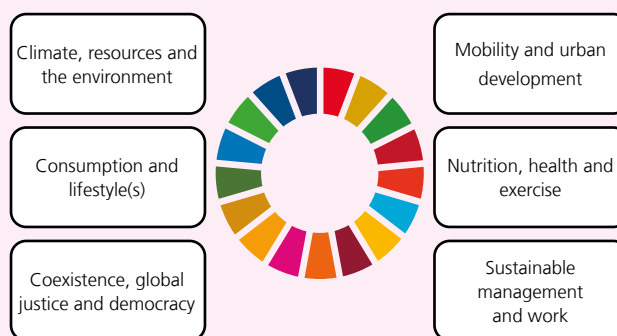
The internal administrative network is a good example of interdepartmental and agile cooperation. It ensures streamlined communication within the administration, helping to implement measures and overcome challenges. Selected results of the collaborative dialogue process include:

1. *Expanding the content and structural framework of the municipal ESD network*

Through the new "Sustainability in urban areas" educational approach, the previous focus on environmental education is being expanded to include other sustainability topics. These are based on the 17 sustainability goals of the United Nations (e.g. nutrition education, circular economy, waste education, etc.). Six topic areas developed in the collaborative dialogue process provide a suitable framework (see Figure 51).

Figure 51:

Fields of action for the "Sustainability in urban areas" educational approach



The next step was to structurally integrate further relevant administrative units into the municipal ESD network through this expansion of content. The expanded administrative network kicked off with the first internal city ESD forum in November 2024.

2. *Stronger networking between administration and urban society*

In Stuttgart's urban community, numerous extracurricular partners have been actively involved for many years in daycare centres, schools, and youth work. They possess considerable expertise in introducing children and young people to a wide range of sustainability topics. Fostering transparency and strengthening cooperation will effectively consolidate and advance existing initiatives, while identifying any gaps and new target groups.

**Division / Office / Public Undertaking**

Stuttgart Partnership for Education in the Youth and Education Division (overall coordination)

- Environmental Protection Office in the Urban Planning, Housing and Environment Division
- Urban Planning and Housing Office in the Urban Planning, Housing and Environment Division
- Office of Parks, Cemeteries and Forestry in the Engineering Division
- Department for International Relations in the Administrative Coordination, Communication and International Relations Division
- Department for Children's Affairs in the Mayor's Office
- Schools Administration Office in the Youth and Education Division
- Youth Welfare Office in the Youth and Education Division (as of: 2024)

Further reading / links

<https://www.stuttgart.de/leben/bildung/bildung-fuer-nachhaltige-entwicklung/>
(Last access on 26.05.2025)



Practical example 11:

Educational and cultural programme of the city library

Context

At the heart of the library's diverse educational and cultural programme – which serves children as young as one and a half and continues to engage young people, adults, and senior citizens – is its media collection. With its educational programmes and events, the city library encourages creativity, participation, community, education, mutual understanding and the opportunity to actively participate across generations through a collaborative dialogue process. It sees the educational and cultural programme as a further access route to information and knowledge in order to cater to different types of learners. As an extracurricular educational and cultural institution, the city library constantly adapts its programme to social needs and developments, in line with developments in the book and media collection. To this end, it develops new formats and series and networks with other institutions. In doing so, it is guided by the 2030 Agenda.

Description / Implementation
SDG 4 – Quality Education

Promoting reading is at the heart of the city library's programme agenda. Finger games, stories and poems promote early language development, even among the "tiny tots between the bookshelves". Reading aloud for all age groups is staged: as a theatre or cinema show, with professional actors and actresses, special equipment such as a "Kamishibai" or as a radio play reading with live drawings by comic artists. Trained reading mentors from the Leseohren e. V. association read to a small number of children in small groups and engage in one-to-one conversations with them. The "Buchkinder und Buchteens Stuttgart" gatherings serve as a literary workshop nurturing the next generation of authors. Meetings and discussions with authors offer unique insights into the creation of literature for all age groups. Shared reading sessions – such as the inclusive reading club Lea Leseklub or the discussion group Shared Reading – are guided and facilitated by specially trained moderators. Shared experiences help break down barriers to culture and education, promoting equal opportunities.

Digital developments are another key focus of the programme. Digital participation and digital literacy are promoted in lectures, workshops and consultations. In the "Digital at an advanced age" series with the City of Stuttgart's specialist department for digital participation, volunteers advise senior citizens on how to use smartphones and PCs in almost all of the city library's facilities. The Chaos Computer Club holds a monthly lecture series on technical potentials, artificial intelligence, data protection and free software. The High Performance Computing Centre and the International Centre for Culture and Technology Research shed light on current technical developments and their impact on society in scientific lectures and panel discussions. Even children learn how to program robots or their own games in workshops.

SDG 5 – Gender Equality

The "FEM01" series is dedicated to feminism in the digital world and takes a critical look at patriarchal structures that are not only found in everyday life, but also determine digital communication and are even reflected in algorithms.

SDG 10 – Reduced Inequalities

With diversity against inequalities: In the "I'll build you a reading bridge" series, children hear stories in their native language. At many events, "building bridges" creates experiences that transcend language barriers and promotes togetherness. Authors from France, Italy, Hungary, Slovakia, Turkey and many other countries are regular guests at the city library and reflect the diverse urban society.

Together with the Forum of Cultures, the German-Turkish Forum (DTF), the foreign cultural institutes and the consulates, the City Library organises cultural highlights as well as lectures on social issues, such as the series "Immigration in Germany", which focuses on integration policy issues.



Readings and library tours in easy language, along with reading groups organised in collaboration with the Association for the Blind and Visually Impaired and Kubus e. V., help ensure access to literature. Children's books are read aloud in German sign language at "Leseaugen aufgeklappt" (reading eyes wide open).

SDG 11 and 13 – Sustainable Cities and Climate Action

The Stuttgart seed libraries promote biodiversity by swapping seeds, and in the library gardens, children and young people are taught how to create and maintain raised beds, among other things. Clothes and plant swap parties, lectures and workshops on solar technology, zero waste and ecological gardening help participants to make their lives and surroundings more sustainable.

The library strengthens civil society by providing space and infrastructure for self-organised groups such as the Wikipedia groups, Transparency International, No Spy e. V. or the 70599Lebenswert initiative. They can share their content and find other members to work together towards goals such as environmental protection, freedom of information, data protection, digital and cultural participation.

In addition to the unique experience, the city library creates audio and video recordings of many of the events. This means that the content of readings, lectures, panel discussions and talks remains available free of charge via the library catalogue and the event archive.

Experience / Results

The content described above is just a small selection from the programme of well over 4,000 events held annually by the city library, which includes 20 institutions throughout the city. All literary formats create special moments from which the participants emerge "strengthened by literature". Engaging with other cultures, lifestyles and experiences increases self-confidence and empathy, regardless of age and educational background.

Experience shows that this comprehensive and sustainable range of events helps counteract growing loneliness, promotes democratic engagement, and offers valuable impulses for a stable urban society. It ensures educational equality, well-being and cultural togetherness in the city.

Division / Office / Public Undertaking

Office of Cultural Affairs in the General Administration,
Culture and Legal Affairs Division

Further reading / links

Programme of Stuttgart City Library:
<https://veranstaltungen-stadtbibliothek-stuttgart.de/>
(Last access on 24.10.2024)

Audio archive "Podcasts" from events at the City Library:
<https://veranstaltungen-stadtbibliothek-stuttgart.de/podcast>
(Last access on 24.10.2024)





SDG 5 Gender Equality

"Achieve gender equality and empower all women and girls"

Relevant targets of SDG 5 for German local municipalities include, but are not limited to, ending discrimination against women and girls, as well as violence against women and girls, recognising unpaid care and domestic work, ensuring women's inclusion through management roles, ensuring access to sexual and reproductive health and broadly promoting gender equality.



Overview of the relevant targets

The following targets of SDG 5 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Appendix II.



5.1 End discrimination against women and girls



5.4 Appreciation of unpaid care and promotion of split domestic responsibilities

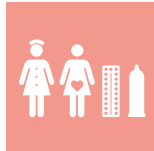


5.5 Inclusion through management roles and decision-making processes

The following relevant targets have not yet been represented by indicators:



5.2 End all forms of violence against and exploitation of women and girls



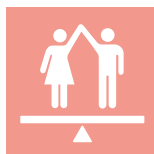
5.6 Universal access to reproductive health and rights



5.a Equal rights to economic resources, property rights and financial services



5.b Promotion of women's empowerment through technology



5.c Adoption and expansion of political measures and enforceable legislation on gender equality

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Indicator 5-1: Relation of employment rates

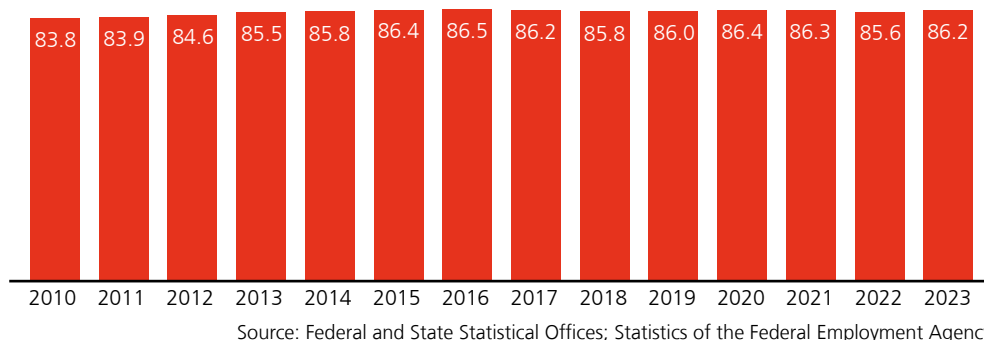


Figure 52:
Employment rate of women
relative to men (in percent)

The relation of employment rates between women and men remained more or less constant over the period under review, standing at between 83.8 and 86.5 percent. The employment rate for women remained consistently lower than that for men. The steady relation between women's and men's employment rates is the result of a continuous yet parallel increase in employment rates for both genders. The pattern of unequal employment rates remains unchanged. More and more employees retire at over 65 years of age. This is partly due to the raising of the retirement age to 67 years for those born in or after 1947.⁸⁷



This indicator is used to measure SDG target 5.1:
"End discrimination against women and girls"

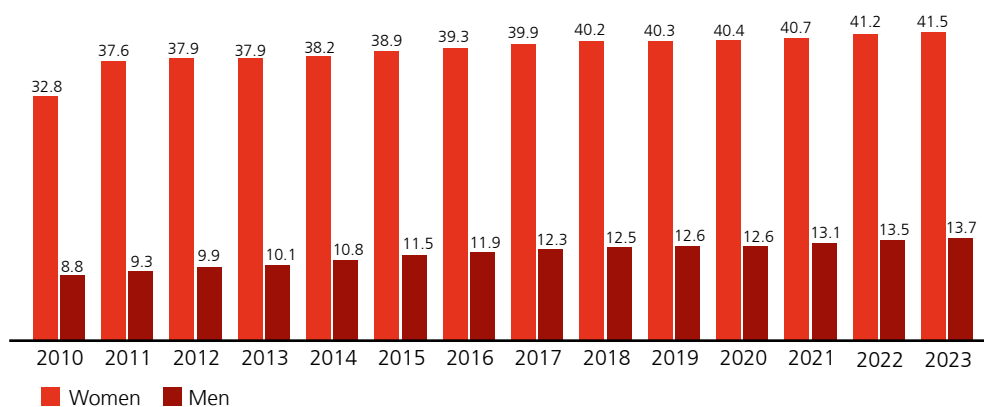


Figure 53:
Part-time employment rates of
women and men (in percent)

Women are not only employed less frequently than men but also more likely to work part-time. In the period under review, the part-time rate for women increased from 32.8 percent in 2010 to 41.5 percent in 2023. The figure also increased for men, from almost nine percent in 2010 to 13.7 percent in 2023. However, this development does not change the fact that the number of women in part-time work is more than three times higher than that of men.



Classification / Definition

Education and employment are crucial to individual opportunities in life. Therefore, in addition to educational opportunities already discussed under SDG 4 from a gender perspective, gainful employment deserves particular attention. Employment not only provides income, but also contributes to social recognition and creates greater independence.

The value of the indicator reflects the employment rate of women relative to that of men. A value of 100 represents equal employment rates between women and men. Values below 100 indicate a lower employment rate among women compared to men.

The indicator, then, captures the overall employment situation. However, it does not account for the quality of employment (see the following indicators) or the extent to which voluntary non-participation in employment contributes to the differences.

While the employment rate includes all forms of jobs subject to social security contributions, the proportion of part-time workers differs significantly between women and men. Therefore, the analysis is extended to include the part-time employment rates of women and men.

In the calculation, employees of all age groups subject to social security contributions (ssc) were taken into account and not only persons under 65, since pension eligibility has been raised and considerably more people are working beyond the age of 65.

Calculation

Employment rates of women relative to men:

$$\frac{\text{Number of women subject to ssc at place of residence}}{\text{Total number of women}}$$

$$\frac{\text{Number of men subject to ssc at place of residence}}{\text{Total number of men}}$$

* 100

Part-time employment rate for women:

$$\frac{\text{Number of women in part-time employment subject to ssc at place of residence}}{\text{Total number of women subject to ssc at place of residence}}$$

Total number of women subject to ssc at place of residence

* 100

Part-time employment rate for men:

$$\frac{\text{Number of men in part-time employment subject to ssc at place of residence}}{\text{Total number of men subject to ssc at place of residence}}$$

Total number of men subject to ssc at place of residence

* 100

Indicator 5-2:

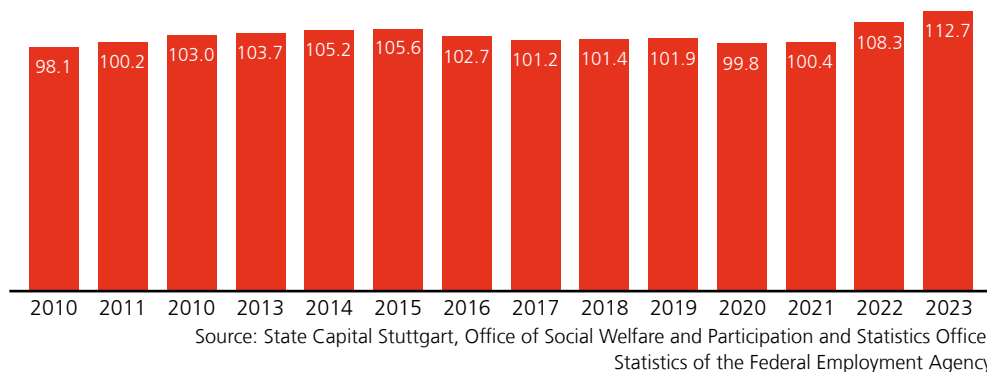
Relative poverty among women

Figure 54:
Relative poverty among women
(in percent of poverty rate
among men)

Poverty is more widespread among women than among men. During the period under review, the values were above 100 in all years except 2010 and 2020, indicating that the poverty rate among women was higher than that of men in those years. After peaking in the mid-2010s at up to 105.6 percent, the rate reached a new high of 112.7 percent in 2023. One reason for the increased poverty risk among women is that they make up the majority of single-parent households. As described under Indicator 1-5, single parents are particularly affected by poverty.

In 2022 and 2023, the increase was partly attributable to female refugees from Ukraine. The slight decline in the relative poverty rate among women from 2015 to 2016 is also linked to refugee migration. Since the majority of refugees arriving during this period were male – and more likely to be affected by poverty – the ratio fell accordingly.



This indicator is used to measure SDG target 5.1:
"End discrimination against women and girls"

Classification / Definition

The issue of poverty was already addressed under SDG 1. However, poverty does not affect genders equally. This difference is highlighted by the indicator, which compares the extent to which women are affected relative to men.

The "Relative Poverty Among Women" indicator shows the proportion of women receiving benefits under SGB II or SGB XII in comparison to the proportion of men receiving these same benefits. The indicator value is 100 when the proportion of women receiving these benefits among all women is exactly the same as the proportion of men receiving these benefits among all men. A value above 100 indicates that a higher proportion of women receive benefits under SGB II or SGB XII compared to men, meaning that women are more affected by poverty than men.

Calculation

Relative poverty among women:

$$\frac{\text{Number of women entitled to benefits pursuant to SGB II and SGB XII}}{\text{Total number of women 15 years and older}}$$

/

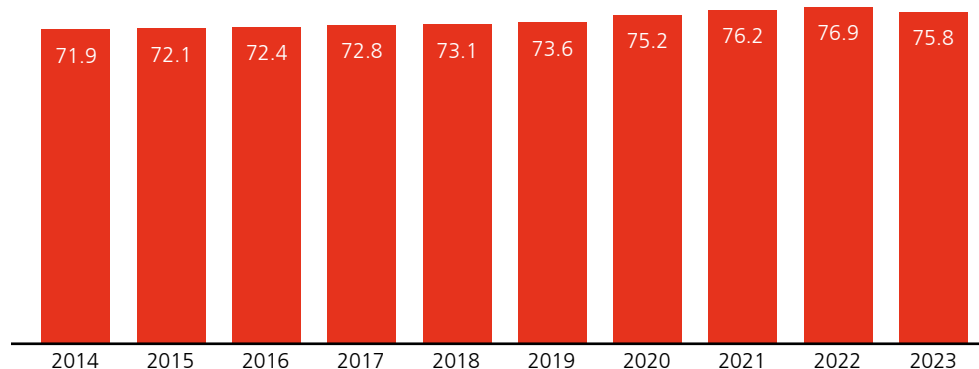
$$\frac{\text{Number of men entitled to benefits pursuant to SGB II and SGB XII}}{\text{Total number of men 15 years and older}}$$

* 100



Indicator 5-3: Pay gap between women and men

Figure 55:
Ratio of median incomes of
women to men (in percent)



Source: Statistics of the Federal Employment Agency

The ratio of women's median income to men's median income rose steadily between 2014 and 2022, from around 72% to just under 77% in 2022, before falling slightly by around one percentage point in 2023. This indicator highlights the significant income disparities between men and women, as the median income of employed women in 2023 amounted to only about 76 percent of the median income of their male colleagues.

The federal government is aiming to reduce the gender pay gap to ten percent by 2030.⁸⁸ Looking at the results of the unadjusted Gender Pay Gap (GPG) at the state level, Baden-Württemberg showed one of the highest differences in median income between women and men in 2023, at around 22 percent. In contrast, the income gap in Brandenburg, for example, was only four percent. In Thuringia, Saxony-Anhalt and Mecklenburg-Western Pomerania, the figure was well below ten percent. However, this is often due to the fact that wage levels in these federal states are generally significantly lower than in Stuttgart, and that men in cities such as Brandenburg earn less on average, which in turn leads to a particularly low gender pay gap there.⁸⁹



This indicator is used to measure SDG target 5.1:
"End discrimination against women and girls"

Classification / Definition

This indicator was introduced in 2023. It compares the median income of women in full-time employment and subject to social security contributions (ssc) with the median income of men in full-time employment, thereby showing the unadjusted gender pay gap. This makes income disparities between women and men visible at local community level. On the one hand, income disparities arise from career choice and work experience, both of which are included in the unadjusted gender pay gap. In addition, temporary career breaks for family reasons also have a negative impact on the level of the median income. It should also be noted that the indicator calculation only considers full-time employees. Since around 40 percent of employed women work part-time, the assumption is that the gender pay gap would be even higher if part-time

employees were also included in the calculation. Despite performing work of equal value and the existing non-discrimination principle, women are often paid less under the same conditions.⁹⁰

Calculation

Pay gap between women and men:

Median income of women subject to ssc
in full-time employment

/

Median income of men subject to ssc
in full-time employment

* 100

Gender pay gap in Stuttgart

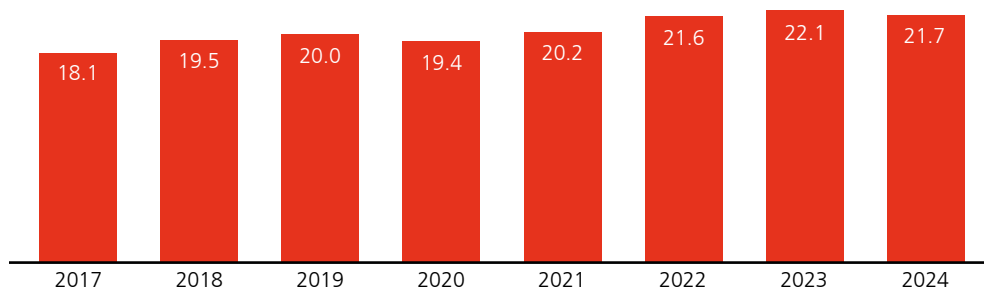
i

People who work in Stuttgart earn some of the highest salaries in the country: with a median gross salary of 4,750 euros (2021), the city ranks fourth in Germany. Men earn a median of 5,291 euros, while women earn just 4,032 euros – an unadjusted gender pay gap of 24 percent, significantly above the state average of 17 percent. Even after adjustment, a pay gap of 14 percent remains. This difference is explained by Stuttgart's industry structure: well-paying sectors such as manufacturing (median: 6,503 euros) and financial services (5,949 euros) are dominated by men. Women more often work in lower-paying sectors such as public administration or education. Although women in Stuttgart earn above-average salaries, they benefit less frequently from top-tier earnings.

To reduce gender inequalities and improve work-family balance, expanded childcare services and a review of company pay structures are seen as important measures – also with a view to securing the skilled labour supply.⁹¹

Indicator 5-4:

Proportion of fathers benefitting from parental allowance



Source: Federal and State Statistical Offices

Figure 56:
Proportion of fathers
benefitting from parental
allowance (in percent)

The proportion of fathers reflects the average proportion of men in Stuttgart who received parental benefits in one year. Since 2017, the proportion of fathers has steadily increased with slight fluctuations and has stood at a steady 22 percent since 2022. In 2024, among all parents receiving benefits, there were on average 1,329 fathers. The majority, however, were mothers, with an average of 4,806 benefit recipients per quarter. Nationwide, the proportion of fathers receiving parental allowance in 2022 was 26.1 percent; the figure for Baden-Württemberg was 28.3 percent.⁹²

The indicator takes into account that women's duration of receiving parental allowance is significantly longer than men's. Nationwide, the average planned duration of parental allowance receipt for women in 2022 was 14.6 months.⁹³ For men, the average duration was 3.6 months. In Stuttgart, the average duration of parental allowance receipt in 2023 was 14.1 months for mothers and 3.8 months for fathers.⁹⁴



According to the parental allowance statistics from the Federal Statistical Office, the proportion of children whose fathers received parental allowance nationwide in 2021 was 46.2 percent. Unlike the "Proportion of fathers benefitting from parental allowance" indicator, this measure does not consider the duration of parental leave but rather the proportion of children in a birth cohort whose fathers received parental allowance at all.⁹⁵ The German federal government aims to increase the proportion of fathers receiving parental allowance to 65 percent by 2030.



This indicator is used to measure SDG target 5.4:

Appreciation of unpaid care and promotion of split domestic responsibilities

Classification / Definition

This indicator was introduced in 2023. It represents the proportion of fathers benefitting from parental allowance relative to all eligible recipients. The proportion of fathers is an important indicator for estimating the extent to which fathers are involved in childcare and whether this involvement increases over time.

Parental allowance is primarily intended to compensate for income loss that occurs when parents take time off to care for their child after birth. It also aims to support families in sharing childcare responsibilities more equally and to improve the compatibility of family and career. The introduction of ElterngeldPlus [parental benefit plus] has partly succeeded in increasing fathers' uptake of parental leave and further advancing the social shift away from traditional gender roles.

There are various reasons why women still account for the majority of parental allowance recipients. Besides personal and social attitudes, economic conditions also play a role.

Calculation

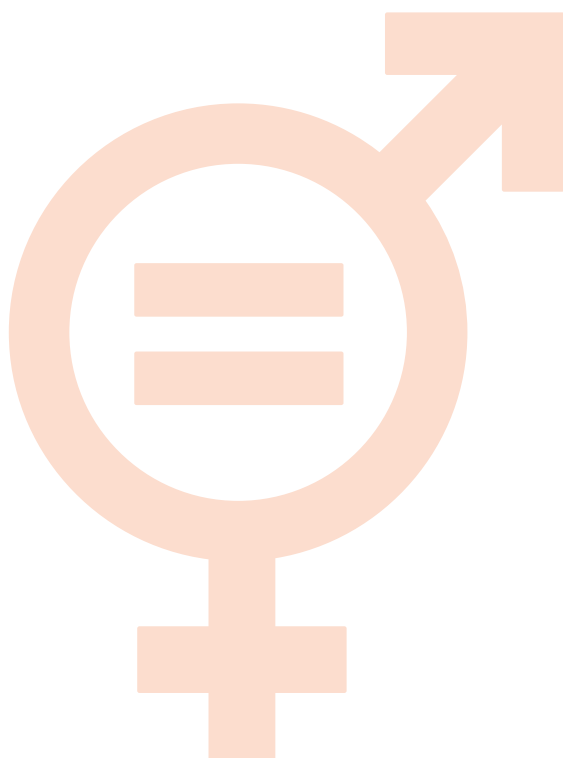
Proportion of fathers benefitting from parental allowance:

Number of fathers receiving parental allowance

/

Total number of persons receiving parental allowance

* 100



Indicator 5-5: Women in the Stuttgart Municipal Council

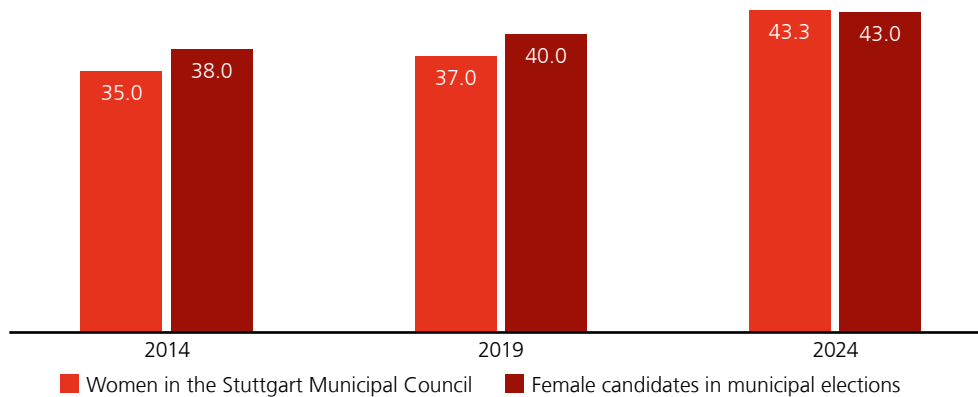


Figure 57:
Percentage of women in the
Stuttgart Municipal Council
(in percent)

Source: State Capital Stuttgart, General Administration, Culture and Legal Affairs Division

The percentage of women in Stuttgart's Municipal Council increased from around 35 to 43 percent between the 2014 and 2024 municipal elections. In the 2004 and 2009 elections, these proportions were approximately 40 and 43 percent, respectively. In 2024, the figure of 43.3 percent was slightly up on the previous high from 2009. This means that in 2024, new record highs were reached both for the proportion of female candidates running in the council elections and for the proportion of women ultimately elected to the council.

Similar to the proportion of women in the Stuttgart Municipal Council, the proportion of female candidates also increased from the 2014 to the 2024 election. In 2004 and 2009, the proportion of female council members was still higher than that of female candidates, while in 2014 and 2019 it was lower. In 2024, the proportion of female council members (43.3 percent) was slightly higher than that of female candidates (43.0 percent). With the exception of 2014, the proportion of female candidates in local elections has generally increased since 2004.



This indicator is used to measure SDG target 5.5:
"Inclusion through management roles and decision-making processes"

Classification / Definition

The proportion of women in the Stuttgart Municipal Council reflects the representation of women in local politics. Representing bodies are generally expected to reflect the demographic composition of the population in terms of composition. The proportion of women is just one of many important aspects that is directly addressed in the sustainability target.

The proportion of women in the Municipal Council is determined by two factors: the nomination of female candidates by parties and electoral alliances on the one hand and the voting decisions on the other.

Stuttgart's Municipal Council is elected every five years. Since parties and electoral alliances act autonomously in nominating candidates, no direct influence can be exerted, for example, on the gender balance of candidate lists. Legal requirements (e.g., gender quotas) are difficult to implement, among other reasons due to the General Equal Treatment Act.

Calculation

Women in the Stuttgart Municipal Council:

$$\frac{\text{Number of women with a seat in the Municipal Council}}{\text{Seats in the Municipal Council in total}} \times 100$$

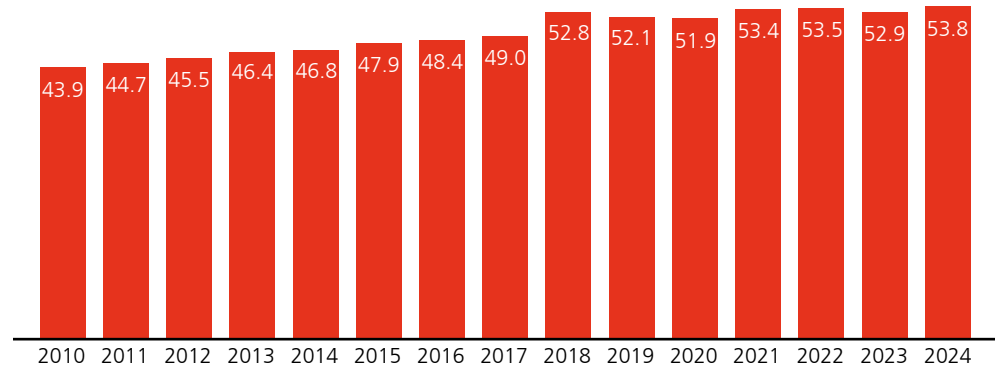
Proportion of female candidates in municipal elections:

$$\frac{\text{Number of female candidates in municipal elections}}{\text{Female and male candidates in total}} \times 100$$



Indicator 5-6: Women in municipal management positions

Figure 58:
Women in management
positions at State Capital
Stuttgart (in percent)



Source: State Capital Stuttgart, Office of Administrative Services and Human Resources (HR report)

The proportion of women in municipal management positions developed positively over the survey period, increasing from around 44 percent in 2010 to a new high of 53.8 percent in 2024. This positive trend also applied to the higher management levels (such as deputy mayors, heads of office and department). However, the proportion of women at these levels remained comparatively lower. In 2024, it was approximately 22 percent at management level 1 (particularly deputy mayors and heads of division, concerning a total of only 9 managers), around 32 percent at level 2 (particularly heads of office, managing directors and district leaders), and about 34 percent at level 3 (especially department heads).⁹⁶ When interpreting the data, it should be noted that the overall proportion of women among all employees is higher, so an increased proportion of women in management positions is to be expected. In the administration of State Capital Stuttgart (excluding the city's hospital), the proportion of employed women has remained consistently high since 2015 – in 2024, it stood at 63 percent.⁹⁷

According to the Federal Government's policy decision on the German Sustainability Strategy, equal participation of women and men in management positions within the public sector is to be achieved by the end of 2025.⁹⁸



This indicator is used to measure SDG target 5.5:
"Inclusion through management roles and decision-making processes"

Classification / Definition

The indicator describes the proportion of management positions in the core administration of State Capital Stuttgart (excluding the city's hospital) that are held by women. The figures indicate the extent to which gender parity has been achieved.

Promoting equal opportunities for women and men in the labour market is a key sociopolitical objective. Over the past ten years, although there have been nationwide improvements in women's employment rates, this progress has not been equally reflected in the proportion of women in management positions.

Calculation

Women in municipal management positions:

Number of women in municipal management positions

/

Number of employees in municipal
management positions in total

* 100



Correlation with other SDGs

Gender equality across various stages of life is shaped by long-term sociocultural and political developments. There is a close correlation with SDG 1 "No Poverty" and SDG 10 "Reduced Inequalities".

Since women often still play a key role in ensuring healthy family nutrition, gender equality is directly linked to the prevention of malnutrition (SDG 2) in early childhood and to associated health outcomes (SDG 3). Moreover, specific structural conditions can influence gender equality in the short and medium term. In particular, childcare availability (SDG 4 "Quality Education") enables women to return to the workforce and contributes to higher female employment rates. There is a positive correlation between the employment rate ratio of women to men and the availability of care for children under age 3.⁹⁹ In Stuttgart, the expansion of childcare services for children under 3 years old (SDG 4) likely played a role in maintaining a relatively stable female-to-male employment ratio, despite overall rising employment levels.

The design of safe and inclusive public spaces (SDG 11) is also a key factor in promoting gender equality. Women in urban areas are often more affected by insecurity, harassment, or gender-based violence (SDG 16). Measures such as improved street lighting, gender-sensitive urban planning and the expansion of public transport systems can help enable equal participation of women in urban life.

Women's participation in economic growth (SDG 8) is also of central importance. As shown in this section, women still work part-time more often than men and perform more unpaid caregiving work at home, which impacts their retirement income and increases the risk of old-age poverty (SDG 1). There is also a significant disparity in female entrepreneurship compared to male entrepreneurship (SDG 9: Industry, Innovation and Infrastructure).

Gender equality is reflected in a wide range of other aspects as well: For example, the digitalisation of cities and the option of working remotely improve the work-life balance, especially for women (SDG 16). Ultimately, reducing inequalities (SDG 10) is the most effective way to promote gender equality and to empower both women and children. In addition, strengthening the rights of LSBTTIQ individuals is another important aspect that must be taken into account, although it is not yet explicitly addressed in any specific target.

The following indicators are also directly relevant to SDG 5 "Gender Equality":

- SDG 1:** "Poverty among single parents"
- SDG 2:** "Children with overweight (at school enrolment examination)"
- SDG 4:** "Childcare"
- SDG 9:** "Start-ups"
- SDG 16:** "Digital municipality"
- SDG 16:** "Mobile working"
- SDG 16:** "Crimes"
- SDG 16:** "Violent deaths"
- SDG 16:** "Domestic violence against children and adolescents"

5 GENDER
EQUALITY

Practical example 12: Equal Opportunities for LGBTIQ+ – Queer in old age

Context

In old age, memories and reflections on one's life often take up more space and gain importance. Many queer people are unable to live their relationships and identities freely and openly. These experiences have a profound impact on their personal life paths. Even today, many lesbian, gay, bisexual, trans*, intersex, non-binary and queer older adults avoid or conceal their sexual orientation or gender identity when dealing with health, care services and social services. This comes from fear of rejection and discrimination.

Description / Implementation

The municipal working group LSBTIQ+ Stuttgart¹⁰⁰ has the task of raising awareness for the specific needs of queer¹⁰¹ people across different stages of life and finding solutions. A dedicated subgroup within the working group focuses on the topic "Queer in Old Age", where various organisations exchange ideas and experiences.

Experience / Results

This long-standing cooperation has resulted in the development of workshop programmes for nursing schools to raise awareness of the needs of queer care recipients.

As the first joint pilot project, three CSD party kits were handed over to care facilities of the leben&wohnen (living&housing) Public Undertaking during the 2024 CSD culture weeks. The idea behind: since many queer people in old age can no longer attend the CSD Pride themselves, the Pride comes to them in the form of a party kit with decoration materials. The vivid party kit is a symbol of celebrating openness and tolerance even in old age.

2025 saw the publication of "Queer in Old Age – Stuttgart Nursing Homes on the Way to Queer-Sensitive Care". This brochure contains specific recommendations for action for Stuttgart nursing facilities on how queer-sensitive care in old age can be implemented.

Division / Office / Public Undertaking

Equal Opportunities Department,
"leben&wohnen" (living&housing) Public Undertaking,
Citizen Service for Living in Old Age,
Frauenberatungs- und Therapiezentrum Fetz e.V.,
Weissenburg e. V. – LGBTQIA+ Stuttgart,
Stuttgart PRIDE,
Gruppe Lesben 50plus (social/support group for lesbians aged 50 and older) and treffpunkt 50plus
(social gathering point for people aged 50 and older)

Further reading / links

<https://www.stuttgart.de/lbttiq#queer-im-alter>
(Last access on 13.12.2024)



Practical example 13:

"Wasenboje" and "Nachtboje" – Safety of Girls* and Women* in Public Spaces

Context

Some people do not feel safe in public spaces, for example, after dark or at large-scale events. This includes in particular girls and women who are affected by gender-based violence, as well as vulnerable groups such as queer people who experience structural disadvantage and discrimination. This feeling of insecurity influences individual behaviour and can, for instance, restrict participation in social and cultural life. The Nachtboje and Wasenboje projects offer effective solutions.

Description / Implementation

Nachtboje

In certain situations, some people feel uncomfortable or unsafe when they are out and about at night. This could be the route from one club to another or the walk home. In such moments, an open door can be helpful. The Nachtboje project pinpoints facilities that offer spontaneous, low-threshold support at night.

Places that are open at night – such as snack bars, kiosks, restaurants and bars, hotels or cinemas – can get involved as Nachtboje locations. Participating establishments are marked with a neon sticker and can be found online on a city map.

The project promotes respectful and attentive coexistence in public spaces at night. By securing the support of night-time businesses, a network of many Nachtboje locations is gradually being established in Stuttgart, making civil society engagement visible at night.

Wasenboje

Twice a year, up to three million people celebrate the Frühlingsfest ("Spring Festival") and the Cannstatter Volksfest on the Wasen in Stuttgart. Situations that make visitors feel uncomfortable can sometimes occur: suddenly, the group is missing, the phone is out of battery and the way home is unclear. Especially girls* and women* repeatedly experience critical situations involving sexual verbal and physical assaults.

The Wasenboje is a safer space – a sanctuary for girls* and women*. This safer space gives them time to breathe, charge their phones and receive assistance in getting home safely, for example. In cases of harassment, threats or sexual assault, the Wasenboje is a sanctuary with qualified and trained female professionals on hand.

Experience / Results

- The Bojen have already provided immediate help and support in various critical situations.
- The widespread media attention makes it possible to publicly and effectively address issues such as sexism and gender-based violence.
- Other local authorities (across Europe) and institutions/facilities/festivals have given positive feedback and shown interest in the concepts and their implementation.
- At the UEFA Men's Football European Championship 2024, the concept of a safer space was realised by "Fanboje".

Division / Office / Public Undertaking

Nachtboje:

Equal Opportunities Department

Wasenboje:

Partnership for Safety and Security - Community Crime Prevention staff unit in the Public Safety, Order and Sport Division and Equal Opportunities Department

Further links

Email: wasenboje@stuttgart.de
www.nachtboje.stuttgart.de and
www.wasenboje.stuttgart.de
 (Last access on 24.10.2024)



Further practical examples at: www.stuttgart.de/lebenswertes-stuttgart



SDG 6 **Clean Water and Sanitation**

"Ensure availability and sustainable management of water and sanitation for all"

Relevant SDG 6 targets for German municipalities include, but are not limited to, improving water quality, implementing integrated water management and protecting or restoring water-related ecosystems, access to clean drinking water, the efficient use of water in all sectors as well as helping developing countries expand capacities for water supply and sanitation and involving local communities in partnerships in the Global South.

Overview of the relevant targets

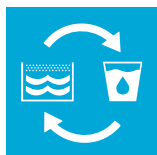
The following targets of SDG 6 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Appendix II.



6.2 Access to sanitary facilities for all



6.3 Improve water quality, wastewater treatment and safe reuse



6.4 Increase water use efficiency and ensure supply of freshwater



6.6 Protection and restoration of water-related ecosystems

The following relevant targets have not yet been represented by indicators:



6.1 Safe and affordable freshwater



6.5 Implementation of an integrated management of water resources



6.a Bolster support for developing countries in water supply and sanitation

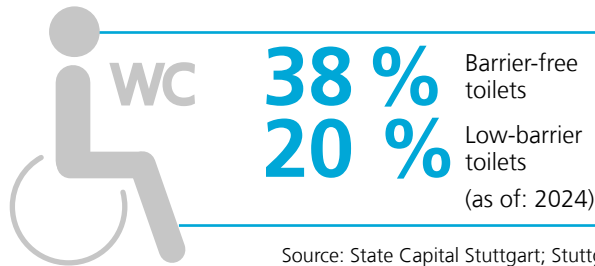


6.b Support local involvement in the management of water supply and sanitation

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Indicator 6-1:
Barrier-free or low-barrier sanitary facilities



Source: State Capital Stuttgart; Stuttgart Waste Management

Of the 74 public toilet facilities for which the Stuttgart Waste Management (AWS) is responsible, around 38% were barrier-free in 2024 (before the replacement campaign) and around 20% were low-barrier. All of these facilities are free to use and can be opened with a Euro key.



This indicator is used to measure SDG target 6.2:
"Access to sanitary facilities for all"

According to AWS, the aim is to replace the 30 or so existing column toilet facilities with modern, self-cleaning, accessible and free toilet facilities by 2026. The replacement process has already begun, with the first new toilet facilities now open to the public. There are also plans to expand the range by seven to eight facilities. These will either replace old, inaccessible facilities or improve the range of public toilets in the city. The aim of the State Capital is to convert almost all public toilet facilities to be barrier-free or at least low-barrier.

In addition, State Capital Stuttgart and AWS are currently identifying new potential sites for accessible toilets. In two of the existing toilet facilities, "toilets for all" cubicles equipped with lifters and a changing bench can be accessed only by the disabled. They can also be used by people with multiple and severe physical disabilities and are designed to ensure hygienic and accessible use. At present, another three locations are planned.¹⁰²

Classification / Definition

This indicator was introduced in 2023. The indicator indicates the proportion of barrier-free or low-barrier sanitary facilities in Stuttgart in relation to all public sanitary facilities.

A Euro key is required to open some toilets. This is a standardised key that gives people with physical disabilities free access to certain sanitary facilities. The key, which grants access to over 12,000 toilets across Europe, is issued exclusively to individuals who require accessible sanitary facilities, helping to protect them from vandalism and misuse.¹⁰³

You can find a map with the barrier-free and low-barrier sanitary facilities in Stuttgart here:

www.toiletten-fuer-alle-bw.de/standorte.php



Calculation

Barrier-free or low-barrier sanitary facilities:

$$\frac{\text{Number of barrier-free public sanitary facilities}}{\text{Total number of public sanitary facilities}} \times 100$$
$$\frac{\text{Number of low-barrier public sanitary facilities}}{\text{Total number of public sanitary facilities}} \times 100$$

Indicator 6-2: Wastewater treatment



Source: State Capital Stuttgart, Civil Engineering Office with
Public Undertaking Municipal Sewage Management (SES)

All wastewater entering the sewage treatment plants undergoes denitrification and phosphorus elimination. The highest quality level has been achieved in Stuttgart for many years. The proportion of of wastewater treated wastewater is therefore consistently 100 percent.



This indicator is used to measure SDG target 6.3:
"Improvement of water quality, wastewater treatment and safe reuse"

Classification / Definition

Wastewater refers to water contaminated by domestic, commercial or industrial use. Inadequate wastewater treatment can lead to harmful substances being discharged into watercourses and significantly increase their nutrient content. This nutrient surplus is broken down by bacteria. The process consumes oxygen, which leads to fish kill and an increase in algae growth. In order to ensure the safe use of water bodies and the sustainable reintroduction of wastewater into water bodies, local authorities must treat it appropriately.

Calculation

Wastewater treatment:

$$\frac{\text{Volume of wastewater treated by denitrification and phosphorus elimination}}{\text{Total wastewater volume}} \times 100$$



Indicator 6-3: Consumption of drinking water

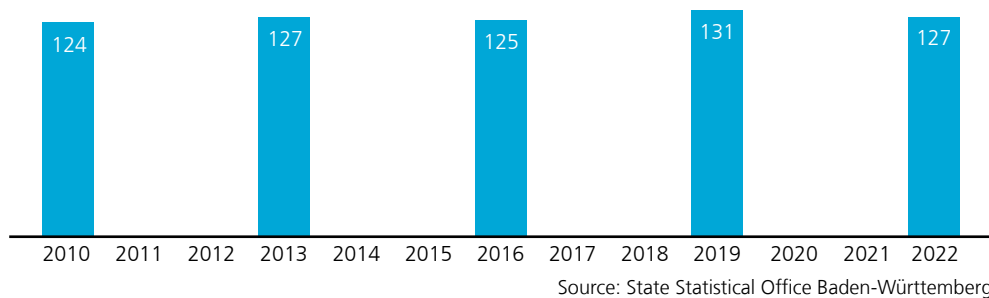


Figure 59:
Consumption of drinking water
(in litre per capita / day)

The average daily drinking water consumption in private households and small businesses in State Capital Stuttgart was initially stable at around 125 litres per capita after declining before 2010. The figure for 2019 indicates a slight increase in water consumption, which could be due to the increasingly hot and dry summers.¹⁰⁴ However, the figure of 127 litres capita per day in 2022 indicates that the long-term downward trend has not been entirely reversed. This is due in part to more economical household practices, less water consumption by appliances (e.g. washing machines, dishwashers) and an increasing awareness of sustainable water consumption.¹⁰⁵



This indicator is used to measure SDG target 6.4:
"Increase water usage efficiency and ensure the supply of freshwater"

Classification / Definition

Drinking water is a crucial resource and as such must be used sparingly. Drinking water consumption is influenced by both private households and commercial enterprises. While industrial drinking water consumption is recorded separately, it is not possible to distinguish between private households and small businesses. Although the figure is determined every three years, the data become available only some time after drinking water consumption has been recorded. The indicator shows the average daily per capita drinking water consumption by private households and small businesses.

The "Consumption of drinking water" indicator reflects the efficiency of water use and is therefore linked to SDG 6, which calls for improved water-use efficiency and the safeguarding of freshwater supplies. However, the reference to SDG 12 in terms of sustainable production and consumption continues to apply. The indicator was assigned to this in previous Voluntary Local Reviews (VLR).

Calculation

Consumption of drinking water:

Annual consumption of drinking water
(private households and small businesses)

/

Number of residents

* days per year

Drinking water prices increased

i

Drinking water prices in Stuttgart were increased by 7.5 percent in 2024, following an increase of 9.8 percent in 2023. The price increases are due in particular to higher procurement costs as well as structural and infrastructural challenges in the water supply. EnBW, responsible for the regional water supply, highlights the need for investments in maintaining and modernising the network, as well as in water treatment. Despite the downward trend in drinking water consumption in Stuttgart in recent years, prices have continued to rise. This is due in part to higher fixed costs being incurred regardless of consumption, along with increasing demands for water quality and supply security. Despite the cost trend, the quality of Stuttgart's drinking water remains high and the supply is still secure.

Given the continuing rise in prices, conserving drinking water is advisable both from an ecological and an economic perspective.¹⁰⁶

Indicator 6-4: Quality of running water



89 %

of watercourses quality class II
or better (as of: 2010)

Source: State Capital Stuttgart, Environmental Protection Office

Determining the quality classes of watercourses takes time, and the exercise is carried out at irregular intervals. Data are available for the years 1994 and 2010.

While in 1994 only 55 percent of the watercourse kilometres in State Capital Stuttgart fell into water quality class II or better, this figure had risen to 89 percent by 2010. This value has remained constant since then. Over the past two decades, wastewater pollution in Stuttgart's streams has been significantly reduced. This improvement is primarily the result of the systematic expansion of rainwater treatment facilities. During rainfall, these plants retain substantial pollution loads within the sewer network, directing them to the city's sewage treatment plants for targeted processing. However, recent state-wide surveys indicate a concerning trend: According to the 2024 Environmental Data Report, only six percent of watercourses in Baden-Württemberg are in good ecological condition. The environmental portal classifies the ecological status and potential of surface water bodies in the Stuttgart region as "unsatisfactory".¹⁰⁷

If wastewater treatment plants have been constructed or other measures implemented on a section that could affect water quality, a reassessment of the water quality is recommended after at least five years. After 15 years, the water quality assessments should be thoroughly repeated. This update of the 2010 water quality mapping, supplemented by the development of a comprehensive area-wide water quality map, has been underway since autumn 2024 and is scheduled for completion by the end of 2025. Publication is planned for the beginning of 2026. The methodology is based on the requirements of the Water Framework Directive and takes into account the effects of climate change.¹⁰⁸



This indicator is used to measure SDG target 6.6:
"Protection and restoration of water-related ecosystems"



Classification / Definition

Watercourses are of great importance as natural (water) habitats. Pollutants are introduced into watercourses through the discharge of wastewater and rainwater from paved areas. Easily degradable organic substances, in particular, lower the oxygen content of watercourses, significantly impairing their quality as habitats for aquatic life and plants. The improvement of running water quality is closely linked to improved wastewater treatment.

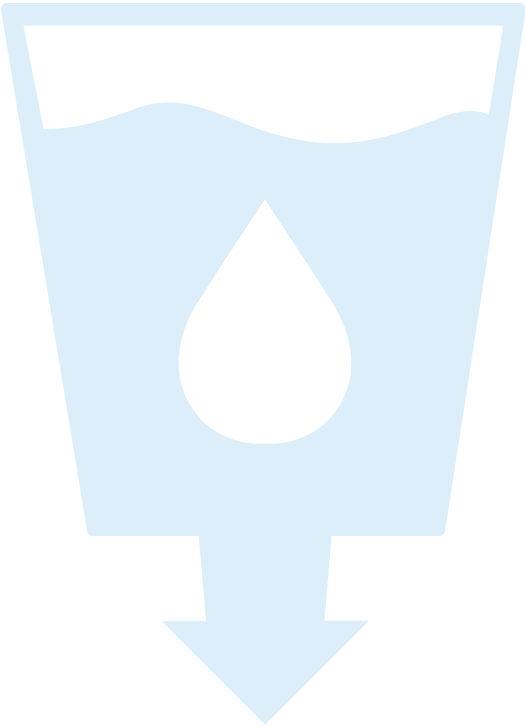
The macrozoobenthos (small aquatic invertebrates such as caddis fly larvae, isopods, snails, etc.) found in a watercourse provide insights into pollution levels caused by wastewater discharges and their oxygen-depleting effects. The water quality is classified on the basis of the species found and their weighted composition. The 2010 water quality mapping was assessed according to DIN standard 38410 (saprobic index).

The current mapping is being evaluated in compliance with the requirements of the Water Framework Directive. Three 5-stage assessment modules for "saprobic", "general degradation" and "acidification" are calculated from the biological data and summarised in the ecological status class. The "Quality of running water" indicator shows the proportion of watercourse kilometres in quality class II or higher.

Calculation

Quality of running water:

$$\frac{\text{Watercourses with at least quality class II in km}}{\text{Total watercourses in km}} \times 100$$





Correlation with other SDGs

Water is an essential prerequisite for increasing agricultural productivity and for sustainable agriculture (SDG 2). Unsustainable farming methods in turn have a direct impact on drinking water and the quality of watercourses due to residues from agriculture, for example in the form of pesticides and fertilisers. In areas with intensive agriculture, the production of drinking water therefore becomes more expensive and requires greater energy consumption, which can also lead to conflicts of interest with SDG 7 ("Affordable and clean energy").

The construction and expansion of infrastructure (see targets in SDG 4, SDG 7, SDG 9, SDG 11) generally have an impact on the availability of clean water, firstly through the generation of wastewater and secondly through water consumption in the construction process itself, but also in the production of materials and goods.

Opportunities to adapt to climate change are also offered by so-called "blue infrastructure", which refers to openly visible water surfaces and elements as well as water elements that are invisible at first glance. For example, water elements in city centres can play a part in lowering the temperature in the city, making it cooler when temperatures are high.¹⁰⁹ Therefore, protecting and creating blue infrastructure (ponds, lakes and canals) as evaporation and filtration areas are important components for climate change adaptation in cities (SDG 13, SDG 11).

The high quality of wastewater treatment in Stuttgart and access to clean drinking water is also crucial to human health (SDG 3). Accessibility to public sanitary facilities for all is directly related to "Sustainable cities and communities" (SDG 11) and, in terms of accessibility, also to various indicators of SDG 10 ("Reduced inequalities") and SDG 11.

Consumption and production drive industrial demand for water. Cleaner production processes reduce water consumption and pollutant emissions (SDG 12).

Climate change has a significant impact on the availability of water (SDG 13). Insufficient rainfall leads to droughts, which in turn affect human health (SDG 3), the environment (SDG 14 and SDG 15), but also agricultural production (SDG 2). This in turn has an adverse effect on employment and economic growth (SDG 8) as well as on supply chains (SDG 12), as many transports are handled via inland waterways.

Water bodies are directly linked to the surrounding ecosystems (SDG 15). Intact riparian vegetation and renaturation projects not only contribute to improving water quality, they also promote biodiversity and the resilience of landscapes to climate impacts (SDG 13).

The connection between the rivers and the oceans is also directly linked to SDG 14 ("Life below Water"): For example, the Neckar flows into the Rhine, which eventually flows into the North Sea.

The following indicators are also directly relevant to SDG 6 "Clean Water and Sanitation":

- SDG 2:** "Organic farming"
- SDG 3:** "Infant mortality"
- SDG 10:** "Low-barrier housing"
- SDG 11:** "Accessibility of public transport"
- SDG 12:** "Environmental protection investments in the manufacturing sector"
- SDG 15:** "Renaturation measures of watercourses"



Practical example 14:

Reduction of emissions in wastewater treatment plant operations of SES (Municipal Sewage Management)



Context

The 17th Federal Immission Control Ordinance (17th BImSchV) sets strict emission limits for the operation of fluidised bed furnaces and contains regulations and specifications that must be followed during the construction, design, and operation of permit-based incineration plants where waste, such as sewage sludge, is thermally treated. In addition, the Closed Substance Cycle Waste Management Act (KrWG) and the Sewage Sludge Ordinance (AbfKlärV) apply and oblige the operator to regularly examine the incineration process for certain pollutants. The analyses include heavy metals, organic halogen compounds, the total nitrogen, ammonium and phosphorus content, the dry residue as well as the organic substance and the pH value.

Description / Implementation

Sewage sludge incineration at the main Mühlhausen sewage treatment plant currently consists of two fluidised bed furnaces, the WSO 3 plant from 2007 and the WSO 2 plant from 1990, which serves as a reserve. These furnaces offer the advantage of excellent heat transfer from the hot bed material to the pre-dried sewage sludge, ensuring "clean combustion" and "complete burnout". Energy is also released during wastewater treatment, which can be used directly in the form of electricity and heat. The new energy management system also enables more efficient control, utilisation, and optimisation of this energy flow.

Experience / Results

In 2024, a total of 87,560 tons of sewage sludge were incinerated in WSO 3 over an operating period of 6324 hours. All pollutants are well below the applicable limit values. Sulphur dioxide and mercury emissions can be as much as 99 percent below. The main priority here is to prevent harmful effects on the environment. The incineration plant operator must take all necessary precautions during the delivery and acceptance of sewage sludge to prevent contamination of the air, soil, or groundwater. To comply with the mandated emission limits, Stuttgart's sewage sludge incineration plant employs an advanced flue gas cleaning system.

Division / Office / Public Undertaking

Civil Engineering Office, Municipal Sewage Management in the Engineering Division



Further practical examples at: www.stuttgart.de/lebenswertes-stuttgart



SDG 7

Affordable and Clean Energy

"Ensure access to affordable, reliable, sustainable and modern energy for all"

Relevant SDG 7 targets for German municipalities include, but are not limited to, general access to affordable, reliable and modern energy services, as well as increasing the proportion of renewable energy in the energy mix, enhancing energy efficiency, international cooperation in the field of clean energy and expanding the infrastructure.





Overview of the relevant targets

The following targets of SDG 7 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Appendix II.



7.2 Increase the proportion of renewable energy in the global energy mix



7.3 Double the increase rate of energy efficiency



7.a Promote access to research and technologies, as well as investments

The following relevant targets have not yet been represented by indicators:



7.1 Universal access to modern energy



7.b Expand and improve energy services for developing countries

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Indicator 7-1:

Proportion of renewable energy in final energy consumption

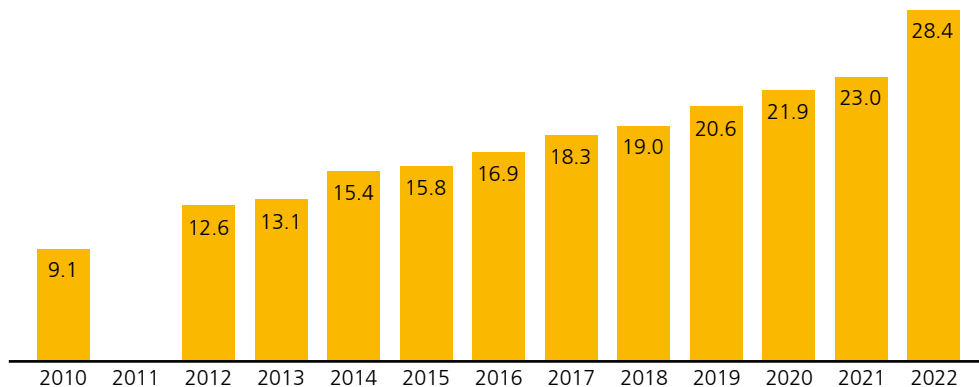


Figure 60:
Proportion of renewable energy
in gross final energy consumption
(in percent)

Source: State Capital Stuttgart, Environmental Protection Office

The proportion of renewable energies in the final energy consumption of State Capital Stuttgart has increased continuously over the period under review.¹¹⁰ The increase between 2010 and 2012 was partly due to the establishment of Stadtwerke Stuttgart (Stuttgart Municipal Utilities) and the conversion of the city's electricity procurement to 100 percent green electricity. From 2021 to 2022, the increase was particularly high at over five percentage points and amounted to 28.4% in 2022. This significant increase can also be explained by the fact that the final energy consumption of the city as a whole fell overall from 2021 to 2022. There is no energy balance for 2011.

The German government's goal is to increase the proportion of renewable energies in gross final energy consumption to 30 percent by 2030 and 45 percent by 2040.



This indicator is used to measure SDG target 7.2:

"Increase the proportion of renewable energy in the global energy mix"

Classification / Definition

Energy production and energy consumption are key issues for sustainable development, as they are currently responsible for a significant proportion of global greenhouse gas emissions. In terms of energy generation, the "energy transition" in Germany aims to significantly reduce the use of fossil fuels. A further step in the "energy transition", the phase-out of nuclear energy, was implemented in April 2023. Renewable energies are of paramount importance for reducing greenhouse gas emissions. These include wind, solar, hydro and bioenergy as well as ambient heat.

Renewable energies are often characterised by decentralised provision, meaning that, unlike in the past, energy is increasingly produced by distributed facilities located across and within numerous municipalities. Municipalities can actively support the expansion of renewable energies and thus contribute to increasing the proportion of renewable energies in the local energy mix. However, this contribution can only be made

while maintaining a secure energy supply. All electricity and heat consumption from renewable energies is recorded. This means that, in addition to renewable electricity and heat generation in the urban area, factors such as the purchase of green electricity, the renewable proportion of the German electricity mix, Stadtwerke Stuttgart's investments in renewable energy plants, and the renewable proportion of district heating are also taken into account. Consideration is also given to the proportion of renewable fuels in transportation within the Stuttgart region.

Calculation

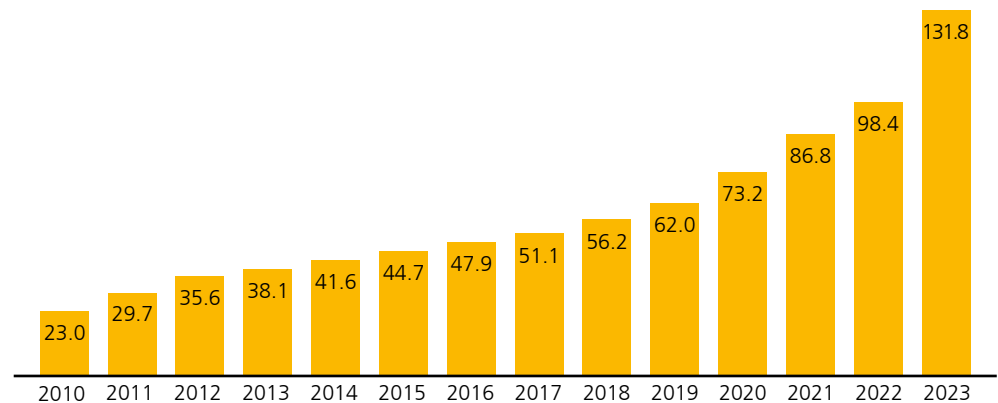
Proportion of renewable energies in final energy consumption:

$$\frac{\text{Energy supply from renewable resources}}{\text{Gross final energy consumption (climate-adjusted)}} \times 100$$



Indicator 7-2: Power from photovoltaics

Figure 61:
Power from photovoltaics
(in W per capita)



Source: State Capital Stuttgart, Environmental Protection Office and Statistics Office

The output of photovoltaic systems (PV systems) installed in Stuttgart has increased almost sixfold since 2010. In 2023, the installed capacity per capita was 131.8 watts. With its solar offensive, State Capital Stuttgart is promoting the expansion of photovoltaic use with subsidies of up to 450 euro per kWp.¹¹¹ It is also promoting the installation of photovoltaic systems on municipal properties.

The expansion of PV systems accelerated significantly from 2022 to 2023 in particular. This is partly due to increased subsidies and tax incentives, but also to the geopolitical situation and the resulting rise in energy costs.



This indicator is used to measure SDG target 7.2:

"Increase the proportion of renewable energy in the global energy mix"

Classification / Definition

The indicator describes the average per capita installed capacity of photovoltaic systems in Stuttgart. This installed capacity indicates how much electricity these systems could theoretically produce.

Calculation

Power from photovoltaics:

Installed photovoltaic power
/
Number of residents



Indicator 7-3:

Production of renewable energy in the city area

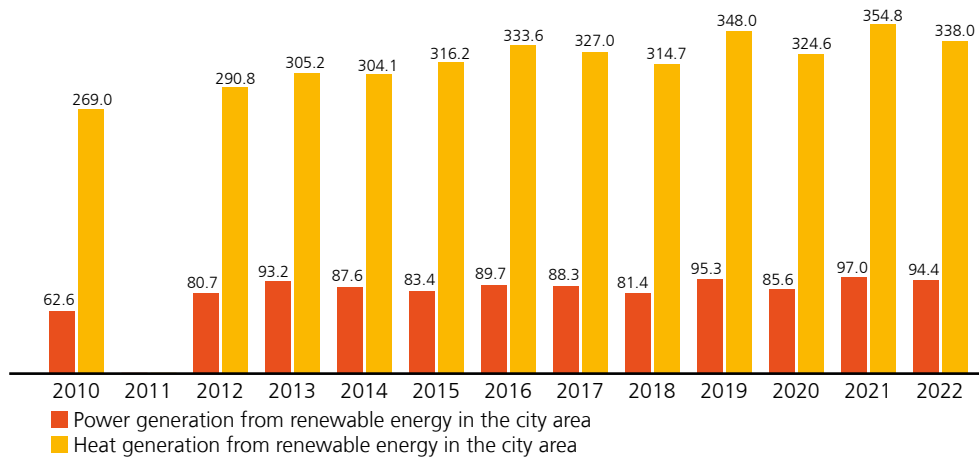


Figure 62:

Heat and power generation from renewable energies in the urban area (in GWh)

Power generation from renewable energies has increased from around 63 GWh in 2010 to around 94 GWh in 2022, although there were annual fluctuations in the large plants for generating power from sewage gas. For photovoltaics, only the amount fed into the electricity grid was recorded in these statistics. Since 2012, the value has fluctuated between 80.7 and 97 GWh and reached its highest level to date in 2021. The expansion of photovoltaic systems has recently increased significantly (see indicator 7-2), but is not very visible in these data due to the high proportion of self-consumed electricity.¹¹²

There are also indications that heat generation will increase over the next decade: While around 270 GWh was generated from renewable energies in the urban area in 2010, the figure for 2022 was 338 GWh. The German government has set itself the goal of achieving climate-neutral heating by 2045.¹¹³



This indicator is used to measure SDG target 7.2:

"Increase the proportion of renewable energy in the global energy mix"

Classification / Definition

The decentralised generation of energy, especially renewable energy, can be a municipal contribution to a more sustainable energy supply. It reduces energy transportation losses, makes the municipality more resilient to energy supply disruptions and is often economically viable.

The "Production of renewable energy in the city area" indicator reflects the local, sustainable energy supply and takes into account both electricity and heat generation.

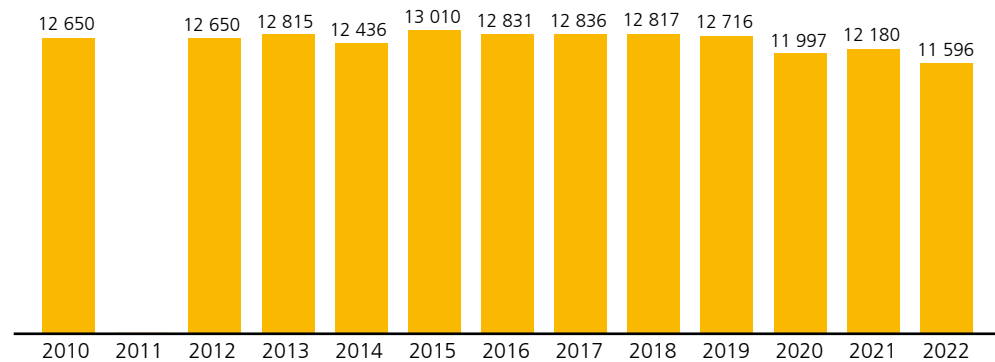
Calculation

Production of renewable energy in the city area:

Annual heat and electricity generation from renewable energies in the city area (GWh/a)



Indicator 7-4: Energy consumption



Source: State Capital Stuttgart, Environmental Protection Office

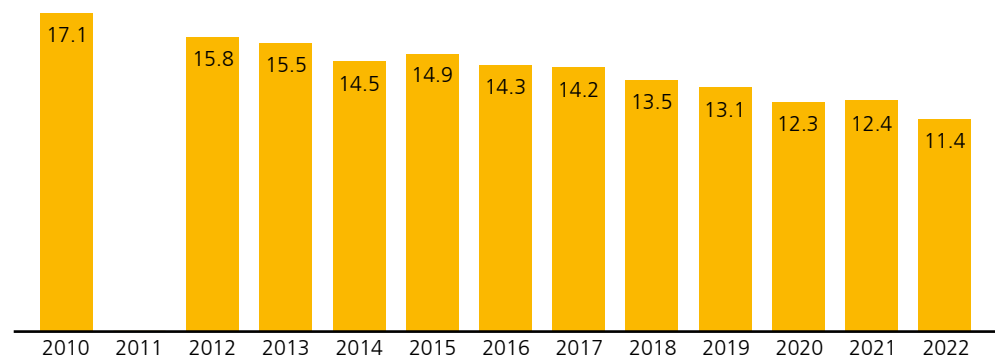
Figure 63:
Final energy consumption by
the city as a whole (in GWh/a)

The final energy consumption of the city as a whole averaged 12,545 GWh/a between 2010 and 2021. In 2022, the value stood at 11,596 GWh/a, representing an 18.9% decrease compared to the 1990 level of 14,300 GWh/a.

Following a decade of stagnant development, the COVID-19 pandemic triggered a marked decline in energy consumption in 2020 and 2021. The figure for 2022 shows that consumption remained at a lower level. One reason for this is that industry in particular has reduced its energy consumption due to the rise in energy costs (especially as a result of the Russian war of aggression against Ukraine).¹¹⁴



This indicator is used to measure SDG target 7.3:
"Double the rate of increase in energy efficiency"



Source: State Capital Stuttgart, Environmental Protection Office and Statistics Office

Figure 64:
Final energy consumption by
trade, commerce, services and
industry (in MWh/ssc)

Final energy consumption in trade, commerce, services and industry fell significantly from 17.1 to 11.4 MWh per capita of employees subject to social security contributions (ssc) in the period from 2010 to 2022. The reasons for the decline in consumption figures since 2019 align with those previously outlined for the overall reduction in final energy consumption across the city.

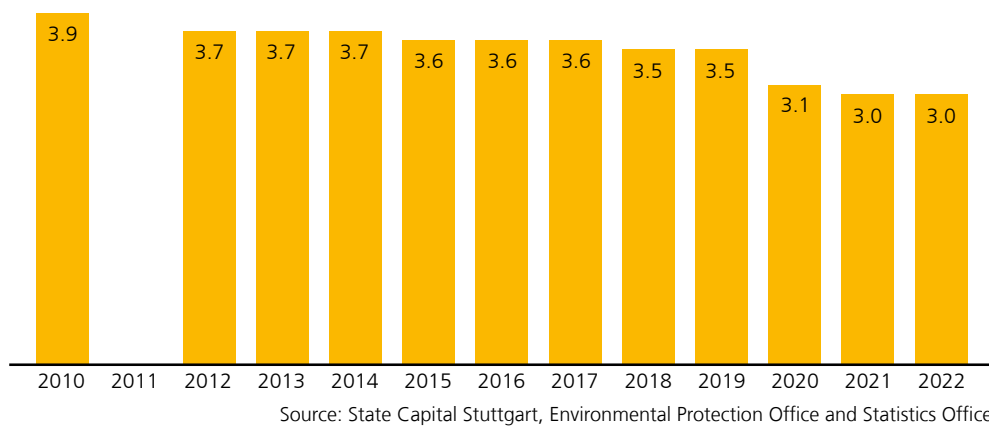


Figure 65:
Final energy consumption
in the transport sector
(in MWh per capita)

Final energy consumption in the transport sector per capita and year remained largely stable between 2012 and 2019 and dropped sharply only in 2020. Over the entire period under review, per capita consumption decreased from 3.9 MWh in 2010 to 3.0 MWh in 2022. This decline is attributable not only to a reduction in the number of residents but also to a significant decrease in recorded traffic volumes.¹¹⁵ The drop of 0.4 MWh per capita in 2020 compared to 2019 is due to the COVID-19 pandemic and the reduction in traffic this caused. However, final energy consumption in the transport sector has remained relatively constant in recent years and was still at a lower level in 2022 than before the pandemic.

While relative final energy consumption has decreased in the business and transport sectors, the trend is not as evident in private households.¹¹⁶

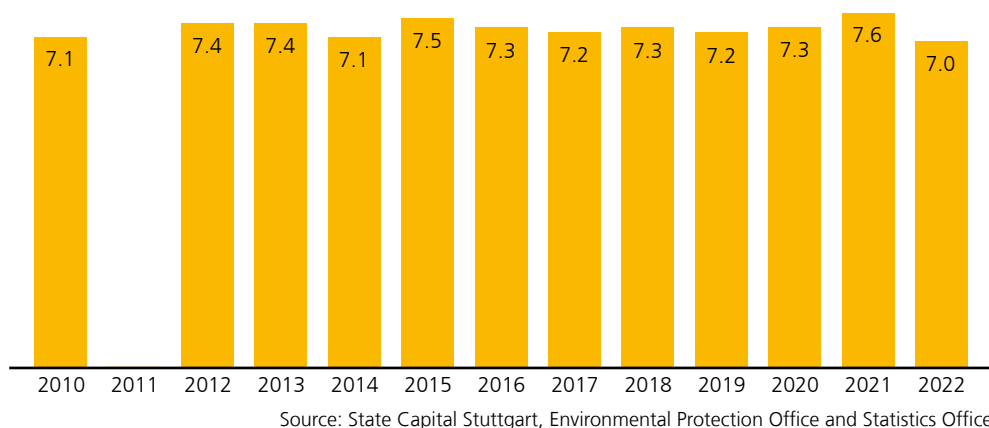


Figure 66:
Final energy consumption
by private households
(in MWh per capita)

The final energy consumption of private households per capita in Stuttgart is subject to annual fluctuations. After the peak value of 7.6 MWh per capita was reached in 2021, the value fell sharply again in 2022 – to 7.0 MWh per capita. Gains in energy efficiency of building envelopes, heating technologies, and end-use appliances are partly offset by increases in per capita living space and the growing use of electronic devices. This cancelled out efficiency gains from increased consumption. The slight increase in energy consumption in 2020 and especially 2021 compared to previous years can be attributed to the effects of the COVID-19 pandemic, as people have spent more time at home and energy consumption has risen as a result. The fact that consumption in 2022 fell to a lower level than before the pandemic can be linked in part to increased energy costs (caused in particular by the Russian war of aggression against Ukraine) and the associated savings measures by private households (see info box on the motives for saving energy in Stuttgart).

Energy saving incentives in Stuttgart

i

A key issue in the winter of 2022/23 was the concern about an energy shortage. At the time, the German government called for various measures to save energy in order to prevent an impending energy and gas shortage. Gas consumption in particular was to be reduced.

A survey conducted in Stuttgart in spring 2023 indicates that many households have made energy saving a habit. 95 percent of those surveyed stated that they had consciously saved energy in 2022. The most common measure was to reduce the room temperature (81%), followed by electricity-saving measures such as the use of LED lamps (60%).

Around half reduced their hot water consumption and 40 percent avoided travelling by car. Household appliance usage was also more consciously managed, while new, energy-efficient appliances were purchased less frequently.

For 80 percent, the main reason for saving energy was the rise in energy costs, while 60 percent cited environmental and climate protection. For 40 percent, avoiding an energy and gas emergency was the key reason. Overall, it is clear that a more conscious use of energy continues to be the case.¹¹⁷

Classification / Definition

Energy is a vital resource. In addition to sustainable energy generation, reducing energy consumption is therefore a key sustainability goal. The potentials to influence energy consumption – whether through savings or improved efficiency – are varied and involve numerous stakeholders, ranging from private individuals to large organisations. Politicians can intervene at various levels. Municipalities can also work towards reducing energy consumption through a variety of specific measures. These include targeted energy management of municipal properties, funding programmes or energy efficiency networks.

The "Final energy consumption" indicator shows the extent to which energy is actually consumed. On one hand, energy consumption is presented as a total for the city as a whole. On the other, the specific development of energy consumption is presented separately for trade, commerce, services and industry, transport, as well as private households.

The indicator relates final energy consumption to the number of users. In the case of final energy consumption in trade, commerce, services and industry, this is the number of employees subject to social security contributions (ssc); in the case of transport and private households, it is the number of residents.

Calculation

Final energy consumption by the city as a whole:

Final energy consumption for the city as a whole
(climate-adjusted)

Final energy consumption by trade, commerce,
services and industry:

Final energy consumption for trade, commerce,
services and industry (climate-adjusted)

/

Number of employees subject to social
security contributions

Final energy consumption in the transport sector:

Final energy consumption in the transport sector
(climate-adjusted)

/

Number of residents

Final energy consumption by private households:

Final energy consumption by private households
(climate-adjusted)

/

Number of residents



Indicator 7-5: Energy productivity

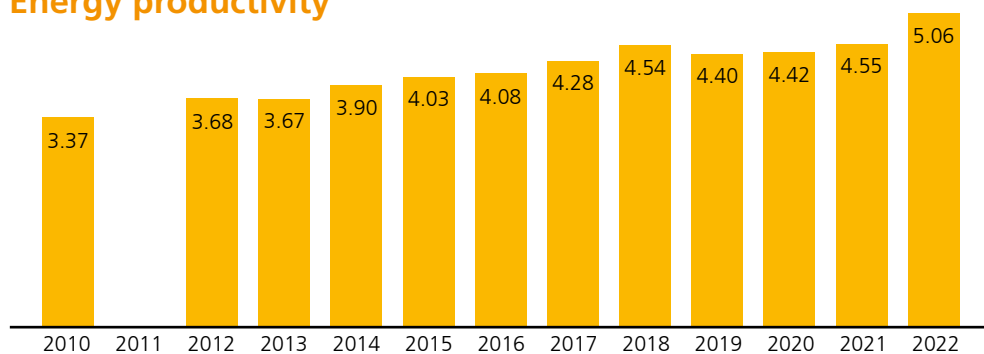


Figure 67:
Energy productivity
(in million euro/MWh)

Source: State Capital Stuttgart, Environmental Protection Office

Energy productivity more than doubled between 1995 and 2012. It also continued to increase after 2012. In 2022 in particular, there was a significant increase and a new record value. Economic growth did not lead to proportional growth in final energy consumption. Rather, a reduction in final energy consumption in the city as a whole was offset by an increase in gross domestic product.¹¹⁸



This indicator is used to measure SDG target 7.3:
"Double the rate of increase in energy efficiency"

Classification / Definition

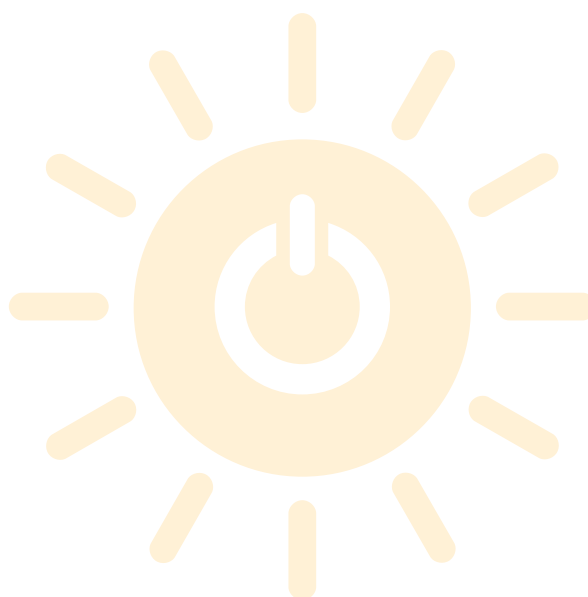
Energy productivity relates energy consumption to economic productivity. To conserve resources, the German government aims to increase final energy productivity – that is, the value added per unit of final energy consumed – by 2.1 percent annually.¹¹⁹

Calculation

Energy productivity:

$$\frac{\text{Gross Domestic Product (GDP)}}{\text{Final energy consumption by the city as a whole}}$$

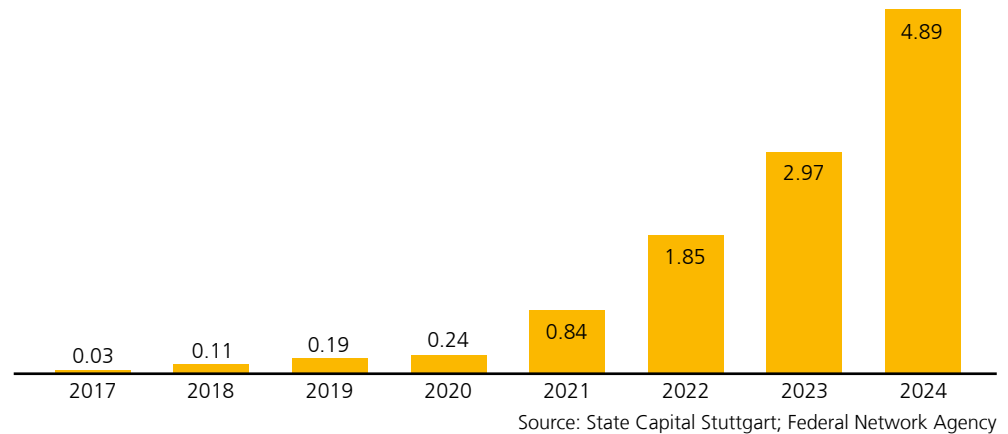
The indicator shows the extent to which energy is used efficiently. It supplements energy production and consumption indicators by measuring efficiency in use.





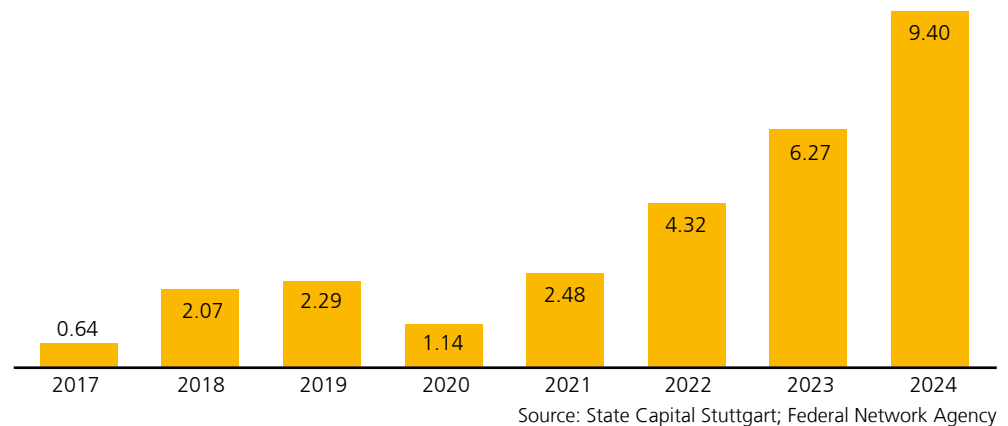
Indicator 7-6: Charging station infrastructure

Figure 68:
Publicly accessible standard and
fast charging points starting at
3.7 kW per 1000 residents
(in numbers)



The number of publicly accessible charging points for electric vehicles in State Capital Stuttgart has risen continuously since 2017. While there were still 0.24 charging points per 1,000 residents in 2020, this figure rose sharply from 2021 – to just under three charging points in 2023 and 4.89 charging points in 2024.

Figure 69:
Publicly accessible standard and
fast charging points starting at
3.7 kW per 100 electric vehicles
(in numbers)



At the same time, the number of registered electric vehicles (according to EMOG, i.e. battery electric vehicles and plug-in hybrids) has risen. There were periods when the number of electric vehicles grew faster than the charging infrastructure. This explains the fluctuations in the observation period. In 2023 and 2024, the expansion of charging infrastructure exceeded the growth in registered vehicles. In 2024, around nine charging points were available for every 100 electric cars in Stuttgart.

According to the German Association of the Automotive Industry, the expansion of the charging network infrastructure in Stuttgart was particularly dynamic compared to the rest of Germany. In terms of the speed of expansion between 2023 and 2024, Stuttgart was in the top group with Berlin and Frankfurt.¹²⁰



This indicator is used to measure SDG target 7.a:

"Promote access to research and technologies, as well as investments in clean energy and infrastructure".



Charging infrastructure for electric mobility in Stuttgart



The Stuttgart 2023 survey reveals mixed opinions regarding the current state of the charging infrastructure in Stuttgart. It suggests that 10 percent of respondents are satisfied or very satisfied. 13 percent answered "partly satisfied", 14 percent were dissatisfied and 9 percent very dissatisfied. The exact reason for the dissatisfaction remains unclear. It is important to note that over half of the respondents (54%) declined to answer.¹²¹

An owner survey from 2022 shows a need for action to expand private charging points: At the time, only 9 percent of residential buildings in Stuttgart had their own charging station. While the proportion of single-family homes was 13 percent, it was only 6 percent in apartment buildings – mainly due to technical and legal hurdles to retrofitting. The integration of charging infrastructure with photovoltaic systems, found in only 3 percent of buildings, was even less common.

In order to promote the switch to electromobility, State Capital Stuttgart is specifically supporting the installation of private charging points, particularly in combination with photovoltaics. In addition, the further expansion of publicly accessible charging facilities remains a key challenge.¹²²

Classification / Definition

This indicator shows the number of publicly accessible standard and fast charging points in Stuttgart per 100 electric or hybrid cars on the one hand and the number of charging points per 1000 inhabitants on the other. All data analyses are based on the information provided by the operators of publicly accessible charging points as part of the notification procedure in accordance with Section 5 of the Charging Point Ordinance. All publicly accessible charging points with a charging capacity of more than 3.7 kW that have been put into operation since the ordinance came into force on 17 March 2016 must be reported to the Federal Network Agency. Fast charging points with a charging capacity of more than 22 kW are fully covered. Information on older standard charging points and charging points with a charging capacity of up to 3.7 kW is based on voluntary reports from the operators. The data on the number of charging points represents the stock as of 1 January of the respective year.

Calculation

Charging station infrastructure per 1000 residents:

$$\frac{\text{Number of publicly accessible standard and fast charging points starting at 3.7 kW}}{\text{Number of residents}} \times 1000$$

Charging station infrastructure per 100 electric cars:

$$\frac{\text{Number of publicly accessible standard and fast charging points starting at 3.7 kW}}{\text{Number of cars with electric drive (Inc. plug-in hybrids)}} \times 100$$



Correlation with other SDGs

The objective of a clean energy supply has far-reaching consequences for other SDGs. The link between access to affordable energy and SDG 1 "No Poverty" is particularly evident in view of rising energy costs. Keeping water and air clean (SDG 3 "Good Health and Well-Being" and SDG 6 "Clean Water and Sanitation") and Climate Action (SDG 13) are closely linked to energy production and use. However, energy also plays a decisive role in a productive and stable economy (SDG 8 "Decent Work and Economic Growth").

Responsible consumption and production patterns (SDG 12) and the structure of cities and municipalities (SDG 11) are also factors that contribute to developments in the energy sector, as can be seen in the area of the mobility transition. For Stuttgart, a city with a high vehicle density, electromobility is an important approach to sustainably reducing CO₂ emissions. The expansion of charging infrastructure is crucial and must be planned in conjunction with renewable energy sources. In addition, the promotion of public transport and cycling infrastructure (SDG 11) could further reduce dependence on private transport. The field of energy-efficient building refurbishment (SDG 11) also presents key opportunities: Old buildings often consume a disproportionate amount of energy for heating and cooling. Promoting insulation, modern heating systems (such as heat pumps), and intelligent building technologies directly enhances energy efficiency.

There is a potential target conflict with SDG 2 "Zero Hunger" and SDG 15 "Life on Land", as increased energy production from biomass and the expansion of renewable energies, for example through the installation of solar parks or wind turbines, contend directly with the protection of natural habitats and the use of land for growing food.

Energy production and consumption serve as a pivot point between numerous SDGs, which can either reinforce or conflict with one another. One key here is the decoupling of economic growth (SDG 8) and energy consumption, i.e. an increase in energy productivity, which is on the horizon for Stuttgart.

The following indicators are also directly relevant to SDG 7 "Affordable and Clean Energy":

- SDG 3:** "Air quality"
- SDG 6:** "Quality of running water"
- SDG 11:** "Completed residential buildings with renewable energy"
- SDG 11:** "Passenger cars with electric drive"
- SDG 12:** "Environmental protection investments in the manufacturing sector"
- SDG 13:** "Greenhouse gas emissions"



Practical example 15: Municipal heating planning



Context

Stuttgart aims to be climate-neutral by 2035. The municipal heating plan provides the compass for a climate-neutral heating supply. This was adopted by the municipal council in December 2023. As the only municipality obligated by the Baden-Württemberg Climate Protection Act, Stuttgart has devised its own municipal heating plan.

Description / Implementation

The municipal heating plan was devised under the leadership of the Energy Department within the Environmental Protection Office. This required close co-operation with Stuttgart's municipal utilities. Citizens, building cooperatives, municipal offices and municipal enterprises, EnBW and other companies were also involved.

The municipal heating plan shows the long-term strategy for a climate-neutral heat supply in Stuttgart and is regularly updated and further developed. Firstly, it maps the current state of the heat supply and offers pathways for reducing energy consumption through refurbishment and the use of renewable energies and waste heat. From this, the target scenario for achieving climate neutrality by 2035 is developed with annual interim steps. Finally, a strategy for realising this target scenario is outlined. The municipal heating plan is divided into four parts: inventory analysis, potential analysis, target scenario and municipal heat transition strategy with catalogue of measures.

Experience / Results

In the target scenario of the municipal heating plan, a basic distinction is made between two climate-neutral supply models: grid-connected heat supply via a heating network and individual heat supply, primarily via heat pumps. All areas were assessed and divided into those with an existing district heating supply, areas suitable for a heating network and individual supply areas.

The result shows nine existing heating networks that need to be transformed and consolidated into climate-neutral networks and expanded in six areas. 26 areas have been identified for the construction of new heating networks, 17 of which are already being analysed in depth. In addition, twelve areas face

special challenges due to their unique circumstances. However, they must also be connected to the heating network as individual supply is highly impractical in these locations. The 53 neighbourhood profiles show how the target scenario can be achieved. An individual supply is planned for all other areas. For these areas, possible options for individual supply were developed alongside supply profiles.

To achieve this target, it will be necessary to reduce energy consumption through building renovations in addition to converting heating systems. The calculations show that a saving of 34 percent can be achieved by 2035. Through the building renovation campaign and its funding programmes, State Capital Stuttgart supports building owners and residents in saving energy and transitioning to renewable energy sources.

Heat planning is a challenge for society as a whole that can only be successfully addressed through joint collaboration. For this reason, the results were clearly presented and also made publicly accessible in map form. In addition, the heat plan was presented at information events in all districts from March to July 2024 together with the Energy Advice Centre, the municipal utilities and EnBW as well as local initiatives. This gave citizens the opportunity to get actively involved and ask questions.

Division / Office / Public Undertaking

Environmental Protection Office in the
Urban Planning, Housing and Environment Division

Further reading / links

Report on municipal heat planning:
<https://www.stuttgart.de/waermewende>
(Last access on 08.11.2024)

Heat map in the digital city map:
<https://maps.stuttgart.de/waermeplanung/>
(Last access on 08.11.2024)

Support programmes for the energy transition:
<https://www.stuttgart.de/energie-angebote>
(Last access on 08.11.2024)



Further practical examples at: www.stuttgart.de/lebenswertes-stuttgart



SDG 8

Decent Work and Economic Growth

"Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all"

Relevant targets of SDG 8 for German municipalities are appropriate economic growth as well as increasing productivity and resource efficiency. SDG 8 also addresses the achievement of full employment and decent work. Priority is given to decreasing the proportion of young people without employment, formal education or vocational training.



Overview of the relevant targets

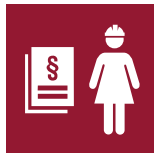
The following targets of SDG 8 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Annex II.



8.1 Sustainable economic growth



8.5 Full employment and decent work for all with equal pay



8.8 Safeguard workers' rights and foster a safe work environment



8.9 Promote positive and sustainable tourism

The following relevant targets have not yet been represented by indicators:



8.2 Diversity, innovation and modernisation for economic productivity



8.3 Promote strategies to increase employment opportunities and support expanding companies



8.4 Improve resource efficiency in consumption and production



8.6 Support for young people without a job, school qualifications or vocational training

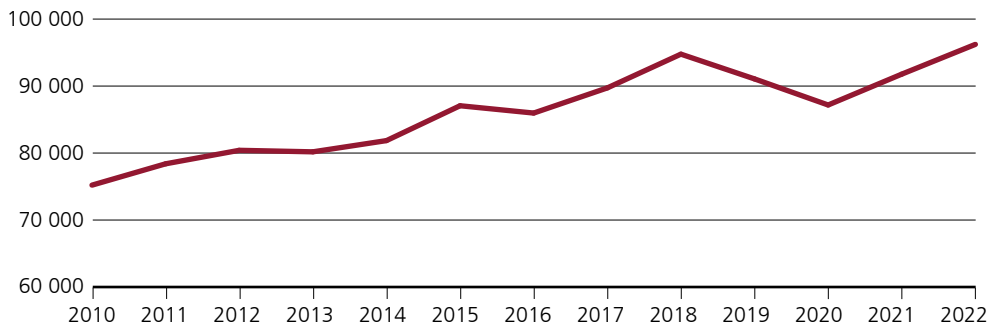


8.7 Substantially eradicate slavery, human trafficking, and child labour

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Indicator 8-1: Gross domestic product



Source: State Capital Stuttgart, Statistics Office; Federal and State Statistical Offices, Working group on "National Accounts of the Federal States"

Figure 70:
Gross domestic product
(in euro per capita)

The gross domestic product of State Capital Stuttgart fell sharply during the economic crisis from 2007 to 2009. In 2009, the city had a per capita gross domestic product of 66,130 euro. However, a swift recovery took hold in 2010. 2011 saw the figure rise to 78,452 euro, surpassing the 2007 level once again. By 2018, there had been a further increase to 94,778 euro per capita. The positive overall economic situation in Germany was also reflected in Stuttgart. Moreover, prior to 2018, Stuttgart had developed as a business hub with greater momentum than other comparable major German cities.¹²³ The deep recession, which caused gross domestic product to fall to 87,209 euro per capita in 2020, was triggered by the global COVID-19 pandemic.¹²⁴ However, the economy recovered in 2021, and in 2022, gross domestic product per capita stood at 96,234 euro.



This indicator is used to measure SDG target 8.1:
"Sustainable economic growth"

Classification / Definition

Economic productivity serves as the foundation for sustainable economic development. However, to fully guarantee the sustainability of this growth, ecological and social factors, along with long-term resource conservation, must also be considered. These elements are reflected in other SDG indicators, including combating poverty, education, gender equality, and environmental protection. Steady and adequate economic growth is also a key objective of the German government.¹²⁵ The gross domestic product serves as an indicator of the overall economic strength.

Gross domestic product is the total value of all final goods and services produced within a geographic area, less intermediate consumption, measured at current prices. The population figure used in the calculation is taken from the official population statistics of the Baden-Württemberg State Statistical Office.

Calculation

Gross domestic product:

$$\frac{\text{Gross domestic product}}{\text{Population}}$$



Stuttgart in the economic city ranking

i

Stuttgart ranked second among 72 major German cities in the 2024 city ranking published by Wirtschaftswoche magazine, improving its position by one spot compared to last year. The city even took first place in the economy subcategory. This ranking takes into account factors such as the labour market, economic development, quality of life, the property market and sustainability.¹²⁶

The Prognos City Ranking 2024, which measures 71 major German cities based on 28 indicators, puts Stuttgart in ninth place. The city performs especially well in the areas of employment and digitalisation, but lags behind in the ecology category.¹²⁷

These results are testimony to Stuttgart's strong economic position and its ongoing efforts to improve quality of life and sustainability.



Indicator 8-2: Unemployment

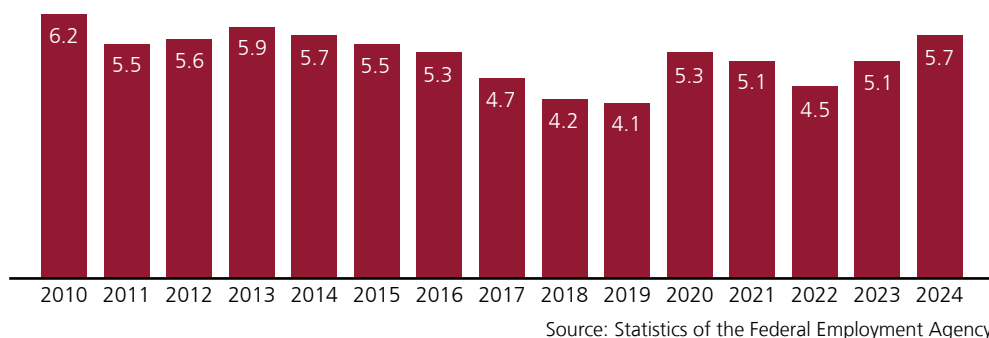


Figure 71:
Total unemployment rate
(in percent)

From 2010 to 2024, the unemployment rate fluctuated between 4.1 and 6.2 percent. The years 2012 to 2019 saw a steady decline, driven by positive labour market trends that led to a notable rise in employment (see indicator 8-4, "Employment rate"). However, in 2020, the unemployment rate rose again sharply to reach 5.3 percent as a result of the COVID-19 pandemic. In the years that followed, it dropped again but has been climbing since.¹²⁸

The causes of the increase since 2022 are complex and diverse and cannot be attributed to a single factor. Germany's labour market is now being negatively affected by major economic challenges, including rising energy costs linked to Russia's war of aggression against Ukraine.¹²⁹ In addition, the influx of refugees since 2022 has had a negative impact on unemployment statistics.¹³⁰ Apart from this, special regulations on short-time work benefits that expired in 2022/2023 are also likely to have had an adverse effect on unemployment.



This indicator is used to measure SDG target 8.5:
"Full employment and decent work for all with equal pay"

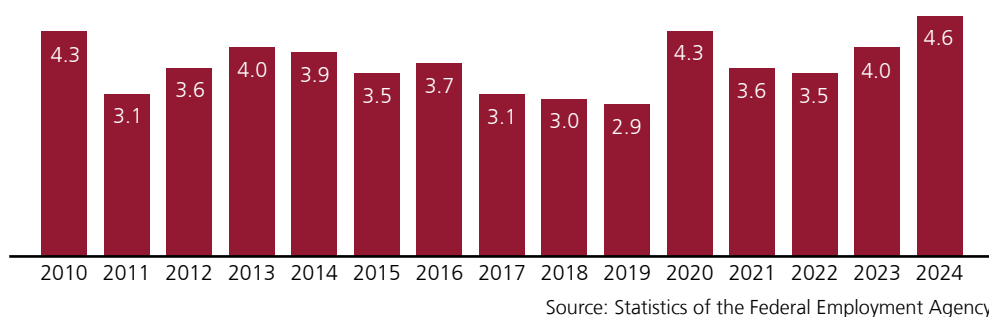


Figure 72:
Unemployment among
adolescents and young adults
("youth unemployment rate")
(in percent)

From 2013 to 2019, the unemployment rate among 25-year-olds fell almost continuously to 2.9 percent. The sharp rise in 2020, mirroring the unemployment rate as a whole, was triggered by the COVID-19 pandemic and the economic slowdown that followed. The increase in youth unemployment in 2023 and 2024 was caused by multiple factors, likely including a higher number of young refugees from Ukraine¹³¹ and the tense economic situation, partly resulting from Russia's war of aggression against Ukraine.¹³² In 2024, unemployment among teenagers and young adults stood at 4.6 per cent, reaching its highest level since 2010.



Opinions on unemployment

i

In the 2023 Stuttgart survey, only a small number of respondents identified unemployment as one of the city's most pressing problems at the time. Consequently, the general public did not consider the issue to be among the most urgent concerns. Instead, the most significant challenges were perceived to be in housing (high rents and a shortage of available accommodation) and in transport (excessive road traffic and insufficient parking).¹³³

Classification / Definition

Registered unemployed refers to individuals who

- who are temporarily not employed or who work less than 15 hours per week (deemed unemployed),
- are looking for employment subject to social security contributions, with a minimum of 15 working hours per week (personal efforts),
- are available for job placement efforts by the Employment Agency or Job Centre – that is, they are able, willing, and entitled to work (availability),
- live in the Federal Republic of Germany,
- are not under 15 and have not yet reached the age limit for retirement and
- have registered as unemployed in person with an Employment Agency.

The unemployment rate is calculated as the percentage of registered unemployed persons within the total civilian labour force (i.e. both employed + registered unemployed individuals). The civilian labour force comprises all employed civilian workers, including employees, the self-employed, and family members who help out. Dependent civilian workers include employees subject to social security contributions (including trainees), marginal part-time workers, individuals in employment opportunities under SGB II (additional expenditure model), civilian civil servants (excluding active service personnel), cross-border commuters, and the registered unemployed.

The unemployment rate includes only those individuals who have officially registered as unemployed. Persons who are not gainfully employed and would actually like to take up gainful employment but do not register with the Employment Agency are therefore not included. In particular, individuals who are not eligible for unemployment benefit (I) under SGB II have little incentive to register as unemployed. As a result, the number of registered unemployed persons is underestimated. This is especially true for people returning to work who, following a period without employment, are ineligible for unemployment benefits but are seeking to rejoin the labour market. This suggests that underreporting of unemployment is more prevalent among women than men. As of 2025, annual average values have replaced point-in-time data, which may lead to slight differences compared to figures in earlier reports.

Calculation

Total unemployment rate:

$$\frac{\text{Registered unemployed}}{\text{Total civilian labour force} + \text{Registered unemployed}} \times 100$$

Unemployment among adolescents and young adults:

$$\frac{\text{Registered unemployed people under 25}}{\text{Total civilian labour force under 25} + \text{Registered unemployed people under 25}} \times 100$$



Indicator 8-3: Long-term unemployment

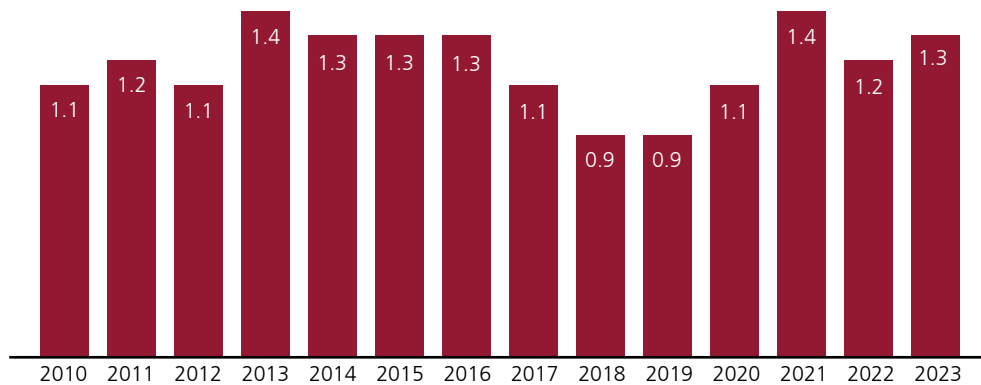


Figure 73:
Long-term unemployment
(in percent)

Source: Statistics of the Federal Employment Agency

Long-term unemployment rose sharply between 2012 and 2013, then stabilised at approximately 1.3 percent through 2016. Following a decline in long-term unemployment from 2016 to 2019, the rate increased again starting in 2020 (the first year of the COVID-19 pandemic), reaching 1.4 percent in 2021. In 2023, the figure stood at 1.3 percent.



This indicator is used to measure SDG target 8.5:
"Full employment and decent work for all with equal pay"

Classification / Definition

For those affected, unemployment becomes a significant problem if it persists over a prolonged period. Long-term unemployed people are those who have been continuously unemployed for more than one year. Similar to the definition of unemployment, the long-term unemployment rate compares the number of long-term unemployed individuals to both the civilian labour force and the registered unemployed. Annual averages are used to calculate long-term unemployment.

Calculation

Long-term unemployment:

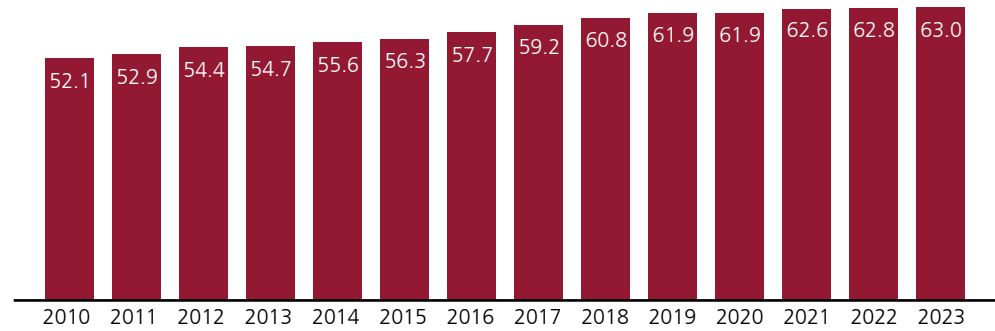
Registered unemployed persons who have
been unemployed for more than 1 year

Total civilian labour force
+
Registered unemployed
* 100



Indicator 8-4: Employment rate

Figure 74:
Employment rate (in percent)



Source: Federal and State Statistical Offices; Statistics of the Federal Employment Agency; State Capital Stuttgart, Statistics Office

In the period under review, since 2010 the employment rate rose steadily from 52.1 per cent to 63.0 per cent. The positive economic performance until 2023 was mirrored by an increase in employment. The increase in the employment rate slowed only in 2020 due to the COVID-19 pandemic. The upward trend continued in 2022, and by 2023 the rate had climbed to 63.0 percent.



This indicator is used to measure SDG target 8.5:
"Full employment and decent work for all with equal pay"

Classification / Definition

The employment rate indicates the percentage of people aged 15 to 64 who are employed out of the total population within this age group. Unlike the unemployment rate, which measures those who are jobless and actively seeking work, the employment rate reflects the degree to which individuals enter the labour market. Consequently, the employment rate is also affected by the prevalence of people staying at home for childcare and household duties, as well as those retiring before reaching the official retirement age. The German government has set a target employment rate of 78 percent by 2030.¹³⁴

The employment rate is defined as the proportion of employees subject to social security contributions relative to the working-age population. Accordingly, the employment rate includes only employees but self-employed individuals and family members who help out. Civil servants are also excluded from the calculation. As a result, the total number of people employed outside the household is consistently underestimated. Nonetheless, developments in this segment of the labour market have a major impact and are an important addition to the "unemployment" indicator. The values reflect the status as of 30 June of each year.

Calculation

Employment rate:

$$\frac{\text{Number of employees aged 15 to 64 subject to social security contributions, recorded at their place of residence}}{\text{Population (15-64 years of age)}} \times 100$$

Economic development outlook for the Stuttgart region

i

Expanding the focus from the State Capital to the Stuttgart region as a whole, the outlook for economic development is a cautious one. Significant risk factors for economic development include declining domestic demand, rising energy and labour costs, and a shortage of skilled workers. According to the Stuttgart region's economic survey, almost one in three companies is anticipating a downturn in business.¹³⁵ Since economic growth and employment are closely linked, this trend could negatively impact the employment rate in the medium term.

Indicator 8-5: "People increasing earnings"

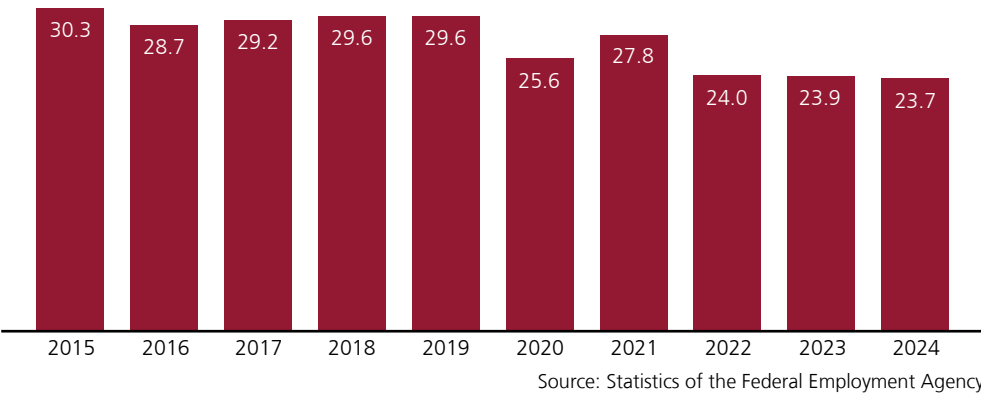


Figure 75:
Employed benefit recipients
("People increasing earnings")
(in percent)

In 2015, approximately 30 percent of benefit recipients capable of gainful employment increased earnings. An increasing proportion of people receiving unemployment benefit II (basic income support for job seekers) were employed, though often in low-paid jobs. From 2020 onward (with a slight uptick in 2021), the proportion fell to 23.7 percent by 2024. This decline is mainly attributed to a reduction in marginal employment.

In recent years, rising employment rates have also influenced the SGB II sector. While rising employment is generally considered a positive trend, the large proportion of benefit recipients who need extra support shows that many remain reliant on state aid even though they are working. This situation particularly affects women and benefit recipients without German citizenship.



This indicator is used to measure SDG target 8.5:
"Full employment and decent work for all with equal pay"

Classification / Definition

Not every job provides sufficient income. People on low incomes are entitled to basic income support for jobseekers (currently known as universal basic income, previously unemployment benefit II).¹³⁶ These people increasing earnings are therefore subject to social security contributions, are in marginal employment or self-employed and receive additional support from the state.

The "People increasing earnings" indicator compares the number of employed individuals eligible for universal basic income with the total number of individuals actually receiving universal basic income. This indicates the proportion of benefit recipients engaged in employment subject to social security contributions, marginal employment, or self-employment. This provides an insight into the magnitude of the low-wage sector, but also highlights the proportion of universal basic income recipients who maintain some connection to employment, albeit in low-paid positions.

The deadline for data collection is 31 December of each year, except in 2024, when the data refer to 1 June.

Calculation

"People increasing earnings":

Number of universal basic income recipients
who are in employment

/

Total number universal basic income recipients
who are capable of gainful employment

* 100



Indicator 8-6: Marginal employment

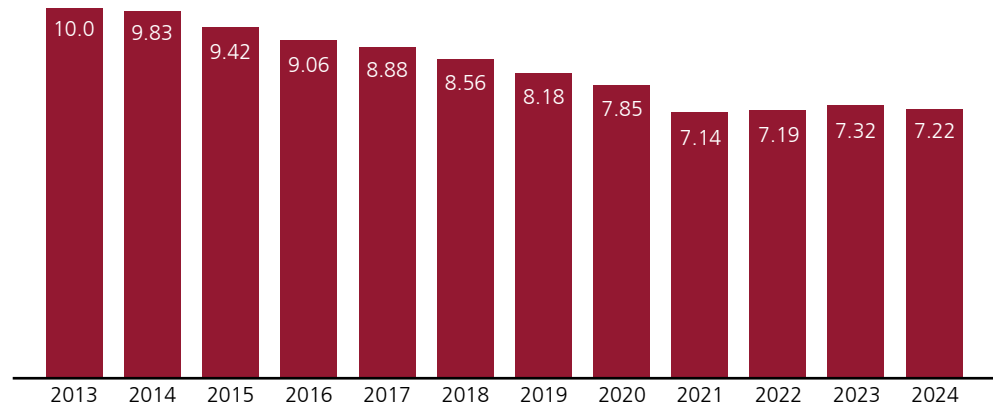


Figure 76:

Proportion of employees in marginal employment relative to the total number of employees (subject to social security contributions and in marginal employment) (in percent)

Source: Statistics of the Federal Employment Agency, State Statistical Office Baden-Württemberg

The proportion of people in marginal employment has dropped from 10.0 percent in 2013 to around 7 percent currently. In 2022 and 2023, the rate rose slightly again for the first time, to 7.32 percent. In the year that followed, the proportion of people in marginal employment fell to 7.22 percent. During the period under review, the marginal employment threshold was raised repeatedly. While still 450 euro in 2013, the amount has increased to 556 euro per month as of January 2025.¹³⁷



This indicator is used to measure SDG target 8.5:

"Full employment and decent work for all with equal pay"

Classification / Definition

This indicator shows the proportion of people in marginal employment relative to the total number of employees subject to social security contributions plus those in marginal employment only. Employment is considered marginal if the total remuneration does not exceed the defined marginal earnings threshold.

The marginal earnings threshold, which sets the income limit for marginal employment, is flexible and increases in step with the minimum wage. This ensures that employment of up to than ten hours per week at the minimum wage is classified as marginal employment.¹³⁸ The deadline for data collection is 30 June of each year.

Calculation

Marginal employment:

Number of employees in marginal employment only

/

Number of employees subject to social security contributions + employees in marginal employment only

*100



Indicator 8-7: Occupational safety

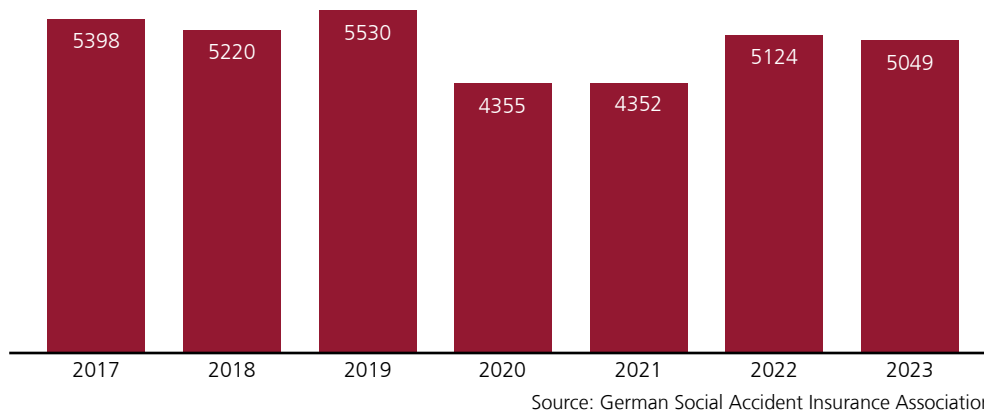


Figure 77:
Number of reportable
accidents at work
(number of cases)

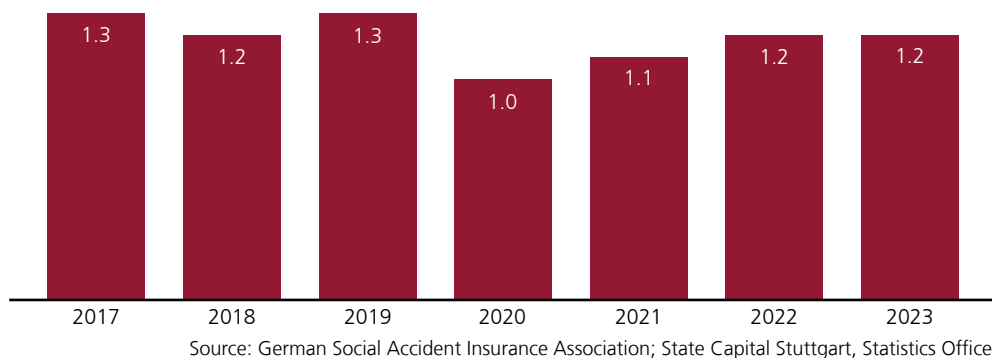


Figure 78:
Number of reportable accidents
at work (number of cases per
100 inhabitants aged between
15 and 64)

The number of reportable accidents at work (excluding commuting accidents) has been declining slightly since 2017. The German Social Accident Insurance Association (DGUV) reported approximately 5,000 accidents at work in State Capital Stuttgart in 2023. This corresponded to slightly more than one case per 100 inhabitants aged between 15 and 65. After a significant decline in reported cases in 2020 and 2021, which was attributable to the COVID-19 pandemic, the figures rose again slightly in 2022, but even after another decline in 2023, they remained at a lower level than before the pandemic. The umbrella organisation DGUV, whose accident insurance providers insured approximately 67.2 million people throughout Germany in 2023 under general accident insurance and school accident insurance against the consequences of accidents at work, on the way to and from work, at school and on the way to and from school, as well as occupational diseases, attributed the decline in accidents at work during the COVID-19 pandemic to the large number of employees on short-time work and the increase in the number of those working from home.¹³⁹ The fact that the phenomenon of working from home has outlasted the pandemic also explains why there were slightly fewer accidents at work per year after the pandemic than before. Fatal accidents at work fluctuated between zero and four cases per year.

Absences from work can cause serious disruption, especially in smaller companies. This is another reason why it is in a company's interest to prevent accidents at work and health hazards in the workplace.



This indicator is used to measure SDG target 8.8:
"Safeguard workers' rights and foster a safe work environment"



Classification / Definition

This indicator, introduced in 2025, represents the number of reportable accidents at work involving DGUV members. This includes members of commercial employers' liability insurance associations and public-sector accident insurance providers, i.e. also public-sector employees (excluding civil servants). This covers insurance groups that are 'typically' associated with occupational accidents: In particular, entrepreneurs, employees and family members working in the business. However, it does not include people insured by the SVLFG (agriculture, forestry and horticulture) and other groups of individuals such as blood donors, volunteers, schoolchildren, prisoners, persons undergoing rehabilitation and others.¹⁴⁰ Since this only represents a subset of all insured people, it can be assumed that the total number of accidents at work is slightly higher than shown here – however, the overall trend is well reflected in the data. As the accident location has only been recorded in accident reports since 2017, the time series shown above also begins in 2017.

Calculation

Accidents at work (total number of cases):

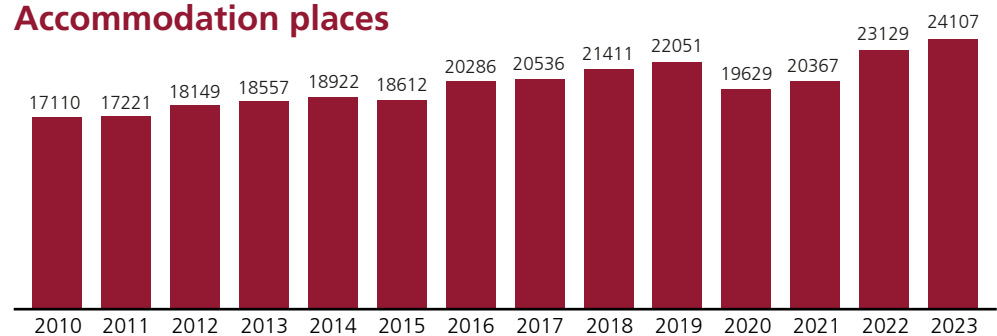
Number of reportable accidents at work reported by industrial employers' liability insurance associations and public accident insurance institutions.

Accidents at work (cases per 100 inhabitants aged between 15 and 64):

$$\frac{\text{Number of reportable accidents at work}}{\text{Population aged between 15 and 64}} \times 100$$

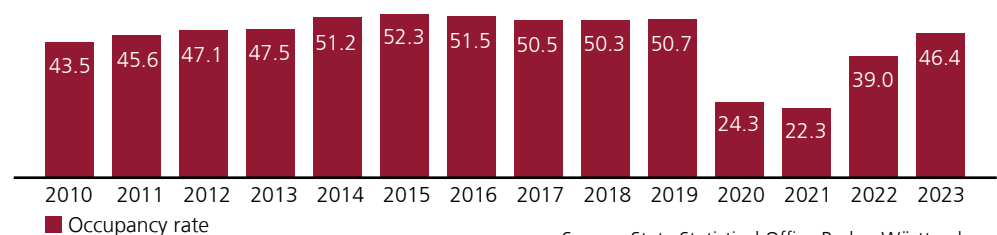
Indicator 8-8: Accommodation places

Figure 79:
Accommodation available in
Stuttgart (number of beds)



Source: State Statistical Office Baden-Württemberg

Figure 80:
Occupancy rate of
accommodation in
Stuttgart (in percent)



Source: State Statistical Office Baden-Württemberg



In 2023, Stuttgart's accommodation establishments offered more than 24,000 beds. The number of beds available rose by 29 per cent from 17,110 in 2010 to over 22,000 in 2019. With the exception of a slight decline in 2015, the increase was continuous. The opening of several larger hotels in 2022 and 2023 has recently led to new record highs.

In 2020 and 2021, the COVID-19 pandemic caused a significant decline in the figures, which was also reflected in the actual occupancy rate of accommodation facilities. As a result, 2021 and 2022 saw the lowest occupancy rates in the period under review, at 24.3 and 22.3 percent respectively. By 2023, occupancy had risen again to 46 percent, returning to a similar level to that seen before the pandemic.



This indicator is used to measure SDG target 8.9:
"Promote positive and sustainable tourism"

Sustainable tourism in Stuttgart



Promoting sustainable tourism is a key priority for the Stuttgart region. In recognition of this commitment, the region earned the "Sustainable Travel Destination" certification from TourCert in 2025. A number of (hotel) businesses, restaurants and larger-scale operations, such as Stuttgart Airport (GmbH), VfB Stuttgart (1893 AG) and Landesmesse Stuttgart (GmbH), were acknowledged for their contributions.¹⁴¹

Classification / Definition

This indicator, introduced in 2025, represents the number (annual average) of beds offered by accommodation facilities in Stuttgart. It includes establishments providing temporary accommodation (less than two months) for guests with ten or more beds, as well as campsites with ten or more pitches. Small businesses with fewer beds or pitches, holiday apartments and privately rented rooms (e.g. via Airbnb) are not included.

Tourism is an important economic factor that creates jobs directly in the hotel/accommodation and catering industries and indirectly in areas such as transport, retail and culture. Tourism can contribute to education and tolerance in society. However, tourism also has a negative impact on sustainability, primarily due to CO₂ emissions from travel to and from tourist destinations. Switching from air and car travel to more climate-friendly modes of transport such as rail, bus and bicycle, as well as longer stays, would reduce the negative impact on the climate. Good local public transport is an important prerequisite for this.¹⁴²

The "Accommodation places" indicator is used to measure SDG target 8.9, which aims to 'promote sustainable tourism with positive benefits'. While this indicator contributes to measuring the economic benefits of tourism, other factors must be taken into account for a comprehensive assessment of tourism sustainability.

Calculation

Accommodation places:

$$\frac{\text{Number of beds used}}{\text{Total number of beds offered}} \times 100$$



Correlation with other SDGs

While economic productivity itself is a key component of economic sustainability, it also directly impacts the social and environmental sustainability dimensions. For instance, decent work and full employment (SDG 8) contribute to poverty reduction, as shown in the related indicators (SDG 1, "No Poverty"). Conversely, an increase in economic activity can lead to rising environmental pollution and hence to negative impacts on water resources, the global climate, life on land and below water (SDG 6, SDG 13, SDG 14, SDG 15).

Infrastructure development and expansion (see targets in SDG 3, SDG 4, SDG 7, SDG 9, SDG 11) drive economic growth and employment, while also harming the environment and climate. Sustainable consumption and production, as formulated in SDG 12, are therefore crucial to sustainable economic growth. There is also a direct link between energy and economic growth. Economic growth often goes hand in hand with rising energy consumption. The sustainability and inclusivity of economic growth can be measured by indicators such as reducing greenhouse gas emissions and increasing the use of sustainable energy for all (SDG 7). Decoupling economic growth from environmental pollution is therefore of crucial importance.

In Stuttgart, recent economic growth has been accompanied by a reduction in greenhouse gas emissions (SDG 13) from the industrial and commercial sectors. This development is extremely positive at municipal level, but has to be assessed in

a broader context. The reduction in greenhouse gas emissions partly results from the relocation of high-emission industries to other regions and countries. Improved local conditions do not automatically translate into a better global outcome. That said, this limitation does not detract from Stuttgart's overall positive development regarding economic growth and emission reductions. The transition to a climate-neutral economy offers significant economic potential, notably in the realm of the circular economy. Implementing resource-saving and low-emission production practices (SDG 12) enables companies to boost environmental sustainability without sacrificing their competitive edge.

As a centre of innovation, Stuttgart benefits from close links between industry, academia and research. Digital expansion (SDG 9 "Industry, Innovation and Infrastructure") is especially driving opportunities for decent work and sustainable economic growth. While this can help enhance resource efficiency (SDG 12), it may also present new challenges such as job losses due to automation (SDG 8).

Promoting start-ups and small and medium-sized enterprises (SMEs) (SDG 9) can help reduce inequalities (SDG 10) by improving access to financing and markets for underrepresented groups such as women, migrants, and young entrepreneurs. A diverse economic sector, in turn, positively influences employment and drives innovation (SDG 9).



Promoting e-mobility, public transport and low-emission supply chains (SDG 11 and SDG 12) not only supports climate action (SDG 13), but also stimulates economic growth for local businesses and start-ups. At the same time, the transition to sustainable mobility requires high levels of investment, which must be brought into line with the principles of SDG 8 and SDG 12 (sustainable production).

The social sustainability dimension is closely linked to factors like unemployment and mental well-being, as highlighted in SDG 3. The target SDG 8 concerning equal access to education and reducing the proportion of young people without school qualifications, training and/or employment is also closely linked to SDG 4 ("Quality Education") and SDG 10 ("Reduced Inequalities"). Eliminating all forms of workplace discrimination to ensure decent work and full employment for all is directly linked to SDG 5 ("Gender Equality") and SDG 10 ("Reduced Inequalities"). The shortage of skilled workers can be eased by improving vocational training (SDG 4 "Quality Education") and by more effectively integrating young people with a migrant background or from disadvantaged backgrounds (SDG 10 "Reduced Inequalities").

The following indicators are also directly relevant to SDG 8 "Decent Work and Economic Growth":

- SDG 1:** "Poverty"
- SDG 3:** "Perception of loneliness"
- SDG 4:** "School leavers by school-leaving qualification"
- SDG 4:** "Students"
- SDG 4:** "Vocational qualifications"
- SDG 5:** "Relation of employment rates"
- SDG 6:** "Consumption of drinking water"
- SDG 7:** "Energy productivity"
- SDG 7:** "Energy consumption"
- SDG 9:** "Highly qualified people"
- SDG 9:** "Start-ups"
- SDG 11:** "Financial burden of housing costs"
- SDG 11:** "Proportion of social housing in the overall rental market"
- SDG 12:** "EMAS-certified sites"
- SDG 12:** "Amount of waste"
- SDG 12:** "Sustainable procurement"
- SDG 12:** "Environmental protection investments in the manufacturing sector"
- SDG 13:** "Greenhouse gas emissions"
- SDG 16:** "Digital municipality"
- SDG 16:** "Trade tax rate"



Practical example 16:

ility and AI: The Green AI Day of State Capital Stuttgart

Context

According to RegioClusterAgentur Baden-Württemberg, Stuttgart accounts for over 40 percent of all Green AI (Artificial Intelligence) projects, the highest share among all AI initiatives. Comparable regions achieve only around 15 to 21 percent. Stuttgart's funding for green AI amounts to approximately 47 million euro, nearly matching that of Berlin. A benchmark and potential analysis by the Economic Development Agency has also shown that there is great potential for ideas, development, applications and services in the field of green AI in Stuttgart and the surrounding area. The Green AI approach goes beyond resource savings – it also involves developing and promoting innovative AI business models with significant potential to address the ecological challenges of our time.

Green AI Day was launched in 2023 by the Economic Development Department of State Capital Stuttgart, in partnership with the Stuttgart Region Economic Development Corporation, to stimulate further research, networking, and collaboration. The goal is to raise awareness of the Green AI ecosystem and projects within the region.

Description / Implementation

This is the idea behind Green AI Day. It provides Stuttgart, as an AI hub, the opportunity to collaborate with regional, national, and international partners to concentrate on Green AI, exploring innovative ideas, research approaches, and specific challenges through practical applications and research-driven approaches. Green AI Day brings together leading scientists from the green AI industry with AI providers and users, creating opportunities for networking in an innovative setting.

The target groups are those with an interest in AI and stakeholders from established companies, start-ups, research institutions and cluster initiatives with links to green AI. Green AI

Day primarily focuses on fostering networking opportunities among these participants. The program also offers engaging content on green AI, including keynotes, panel discussions, start-up pitches, and themed breakout sessions.

Experience / Results

AI products and applications provide valuable opportunities to enhance the sustainability of business operations, create solutions for environmental challenges, and conserve finite resources. Numerous stakeholders from Stuttgart and the surrounding region are already actively involved, developing innovative approaches to implement Green AI in practice. Green AI Day takes place every autumn. Edition 3 will take place on 25 September 2025.

Division / Office / Public Undertaking

Economic Development Department in the Mayor's Office

Further reading / links

<https://www.newstuttgart.de/green-ai-day.html>



Further practical examples at: www.stuttgart.de/lebenswertes-stuttgart



SDG 9
**Industry, Innovation
and Infrastructure**

"Build resilient infrastructure,
promote inclusive and sustainable
industrialisation and foster
innovation"

Relevant SDG 9 targets for German municipalities include, but are not limited to, establishing a sustainable infrastructure, modernising all industries and infrastructures in terms of sustainability, expanding research and improving industrial technologies, international cooperation on sustainable infrastructure development, support for the development of indigenous technologies and industrial diversification and promoting universal access to information and communication technologies.



Overview of the relevant targets

The following targets of SDG 9 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Appendix II.



9.5 Improve research, expand industrial technologies and promote innovations



9.c Universal access to information and communication technology

The following relevant targets have not yet been represented by indicators:



9.1 Development of a sustainable, resilient and inclusive infrastructure



9.4 Modernisation of all industrial branches and infrastructures to ensure sustainability



9.a Facilitate the development of sustainable infrastructure in emerging economies



9.b Support local technology development and industrial transition

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Indicator 9-1: Start-ups

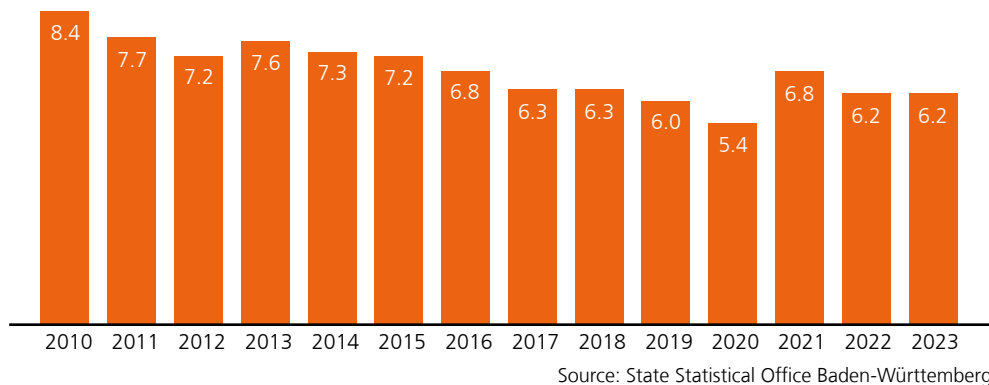


Figure 81:
Business start-ups (commercial enterprises – not individuals)
(figures in numbers / 1,000 residents)

Between 2010 and 2012, i.e. in the years following the economic crisis, the number of start-ups declined. After a brief recovery in 2013, this decline continued. In 2020, the figure fell again significantly to 5.4 start-ups per 1,000 inhabitants due to the uncertain economic situation caused by the COVID-19 pandemic. However, the decline predicted for 2021 did not materialise: Despite the pandemic, the number of start-ups rose to 6.8 in 2021 and fell again in the following two years to 6.2 start-ups in each year.



This indicator is used to measure SDG target 9.5:

"Improve research, expand industrial technologies and promote innovations"

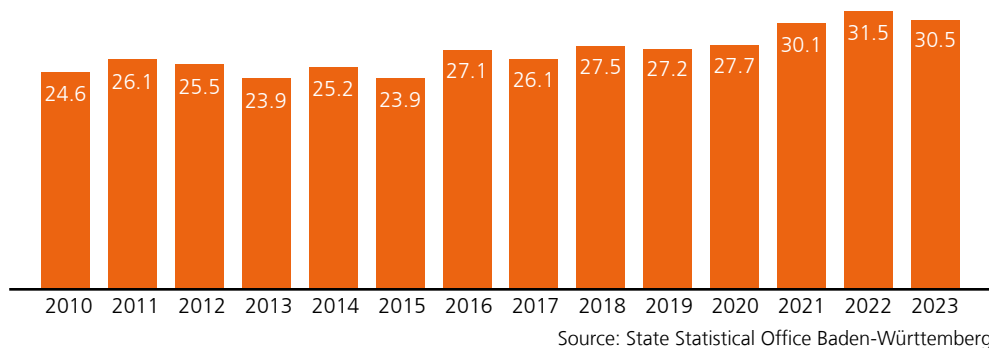


Figure 82:
Proportion of business start-ups by women as a percentage of all start-ups (figures in percent)

The proportion of female entrepreneurs among all start-ups remained at an average level of 25 percent until 2015. It fluctuated slightly without any clear trend. Between 2016 and 2020, the rate continued to fluctuate, though remained well above the previous year's figures, ranging between 26.1 and 27.7 percent. Since 2021, the proportion of female start-up founders has been slightly above 30 percent every year.



Why women start businesses less often



Just under a third of all business start-ups in Stuttgart are by women, while slightly more than two-thirds are by men. This very clear difference is mainly due to structural reasons. According to the magazine "Wirtschaftsdienst", women are more likely to work in sectors where there are fewer opportunities for starting a business. Added to this is the inadequate financial security of women after the birth of a child or the uncertainty of their old-age provision. For example, maternity protection does not apply to self-employed women, meaning that they do not receive maternity pay after the birth of a child. In addition, women are often excluded from subsidies, since these often only apply for "full time" start-ups or innovations in the MINT sector¹⁴³, but not for social innovations.¹⁴⁴

Classification / Definition

The establishment of new businesses creates jobs, promotes competition and contributes to economic growth. Technological and cultural change requires constant adaptation of the economic structure and, accordingly, the continuous establishment of new businesses.

The indicator "Start-ups" shows the frequency of new commercial enterprises per 1,000 residents. This is an accurate if rather crude description of the phenomenon, as the indicator includes both new innovative companies with high growth potential and small businesses such as a new hairdressing salon or a snack bar.

Women tend to start businesses less often than men. The proportion of female start-up founders shows how many women found commercial enterprises.

Calculation

Total start-ups (commercial enterprises):

$$\frac{\text{Number of commercial start-ups}}{\text{Population}} \times 1,000$$

Proportion of female start-up founders among all founders:

$$\frac{\text{Number of female start-up founders}}{\text{Total number of commercial start-ups}} \times 100$$



Indicator 9-2: Start-up volume

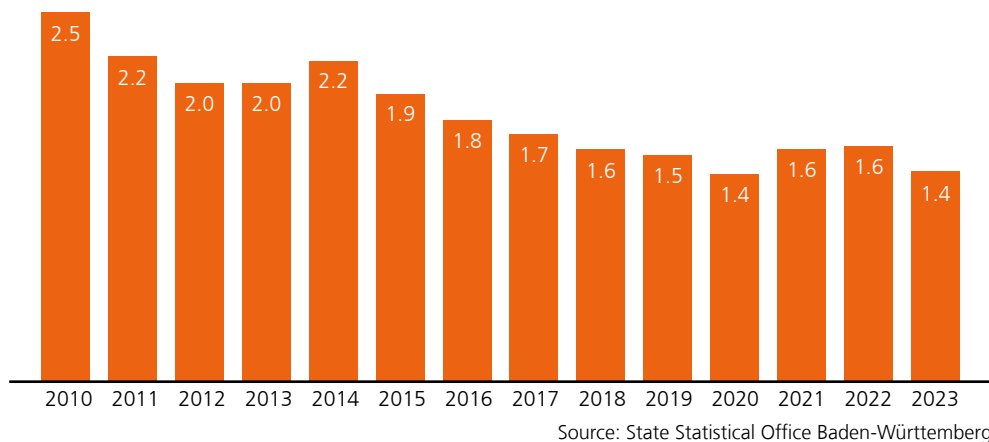


Figure 83:
Start-ups with genuine
economic activity
(in number/1,000 residents)

During the period under review, the number of start-ups with genuine economic activity, i.e. start-ups for the primary income, declined steadily. In 2010, there were approximately 2.5 start-ups per 1,000 inhabitants, and in 2023, only around 1.4 start-ups were recorded. In absolute terms, the number of start-ups with genuine economic activity fell from around 1,400 in 2010 to 867 in 2023. The overall decline over the years continued in the first year of the COVID-19 pandemic. In the second year of the pandemic, 2021, the number rose again for the first time since 2014, and there were even more start-ups with genuine economic activity than before the pandemic. However, the renewed decline to 1.4 start-ups in 2023 indicates that the start-up trend is continuing to decline or stabilising at a low level.



This indicator is used to measure SDG target 9.5:

"Improve research, expand industrial technologies and promote innovations"

Classification / Definition

The "Start-up volume" indicator was introduced in 2023 and measures the number of start-ups with genuine economic activity. A main or branch establishment is classified as a business start-up with presumed greater genuine economic activity if the enterprise is registered in the commercial register or if at least one person is employed full-time at the business location. In total, business start-ups with genuine economic activity in State Capital Stuttgart were categorised into 19 economic sectors to assign the enterprises according to their activities.¹⁴⁵

Calculation

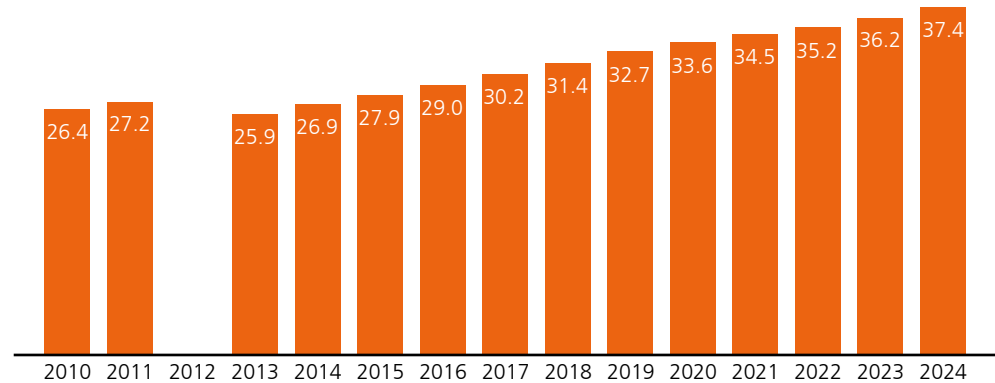
Start-up volume:

$$\frac{\text{Number of start-ups with genuine economic activity}}{\text{Population}} \times 1,000$$



Indicator 9-3: Highly qualified people

Figure 84:
Highly qualified people
(in percent)



Source: State Statistical Office Baden-Württemberg

The proportion of highly qualified people among employees subject to social security contributions (ssc) in State Capital Stuttgart has tended to increase. This applies both to the period up to 2011 and since 2013. No figures were reported for 2012 itself due to a change in statistical recording methods.¹⁴⁶ The latest data shows that almost 37 percent of employees subject to social security contributions in Stuttgart hold an academic qualification.



This indicator is used to measure SDG target 9.5:

"Improve research, expand industrial technologies and promote innovations"

Classification / Definition

Highly qualified people are particularly important for the economy because their skills and creativity contribute to an innovative business sector. Given the shortage of skilled workers and managers, the availability of highly qualified people is an important location factor. Highly qualified skilled workers are therefore an important basis for excellent research and the promotion of innovation (see target 9.5).

Highly qualified people can only be considered here in very general terms. Specific qualifications are relevant for the local economy and individual companies, although these do not necessarily have to be academic qualifications. Depending on the economic structure, these requirements can vary greatly.

The "Highly qualified people" indicator measures the proportion of employees subject to social security contributions (ssc) with an academic qualification out of all employees subject to social security contributions.

Calculation

Highly qualified people:

Number of employees with an academic vocational qualification at the place of work

/

Total number of employees subject to social security contributions at the place of work

* 100



Indicator 9-4: Innovation index

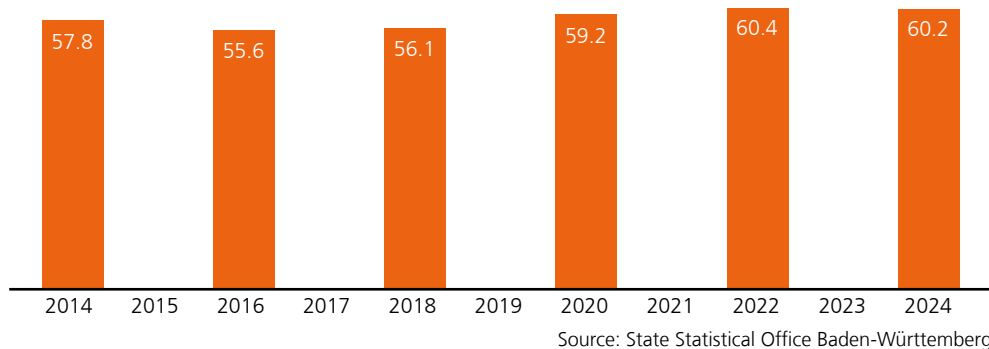


Figure 85:
Innovation index (in index points in the range 0 to 100)

The innovation index assesses the State Capital's innovative capacity using a key figure that incorporates six innovation indicators, such as expenditure on research and development. In recent years, the innovation index has remained largely stable. In 2022 and 2024, it reached new highs of around 60 index points. Compared to the other cities and districts in Baden-Württemberg, State Capital Stuttgart ranked third in 2024 behind Böblingen (1st) and the Lake Constance district (2nd).¹⁴⁷



This indicator is used to measure SDG target 9.5:
"Improve research, expand industrial technologies and promote innovations"

Classification / Definition

Innovative products and innovations in the service sector are crucial to the economic success of a national economy. In order to further promote these innovations, it is important to understand the region's capacity for innovation. The innovation index aims to make the innovative capacity and innovation potential more comparable at the level of different economic areas. This indicator combines several innovation indicators to provide a single key figure that is suitable for comparison and presentation.¹⁴⁸ This indicator was introduced in 2023.

This time series was calculated retrospectively and therefore differs from the values reported in the past. The innovation indices for 2014, 2016, 2018, 2022 and 2024 have therefore been recalculated. The innovation indicators for these years were standardised on the basis of the minimum-maximum values of the current 2024 indicator series, thus enabling intertemporal comparison of the values. The values determined for the index are therefore not comparable with calculations from previous years. Further information on the methodological adjustments can be found at the Baden-Württemberg State Statistical Office.¹⁴⁹

Calculation

Innovation index:

The index is calculated from the values of the following six standardised individual indicators.¹⁵⁰ Further information is available on the website of the Baden-Württemberg State Statistical Office.¹⁵¹

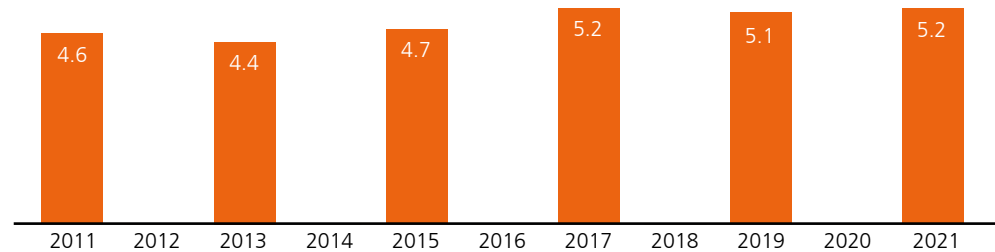
1. Total Research and Development (R&D) expenditure / nominal gross domestic product, calculation from August 2023
2. Total R&D personnel (in full-time equivalent, FTE) / Total number of employed persons (in FTE), calculation from August 2022
3. Total number of employees subject to social security contributions (ssc) in high-tech industrial sectors / total ssc
4. Employees subject to social security contributions in knowledge-based service industries / total employees subject to social security contributions
5. Start-ups in high-tech industries / population (aged 21 to under 60)
6. Published patent applications from business and academia / population (aged 21 to under 65)



Indicator 9-5: Research and development in the economy

Figure 86:

R&D employees in the economy working in Stuttgart (in percent of employees subject to social security contributions (ssc))



Source: State Statistical Office Baden-Württemberg, Association of German Academic Foundations – Academia Statistics

The proportion of employees subject to social security contributions working in research and development in the business sector fluctuated between 4.4 and 5.2 percent from 2011 to 2021. However, since 2017, the rate has stabilised at just over 5 percent, which is above the figures recorded before 2017.

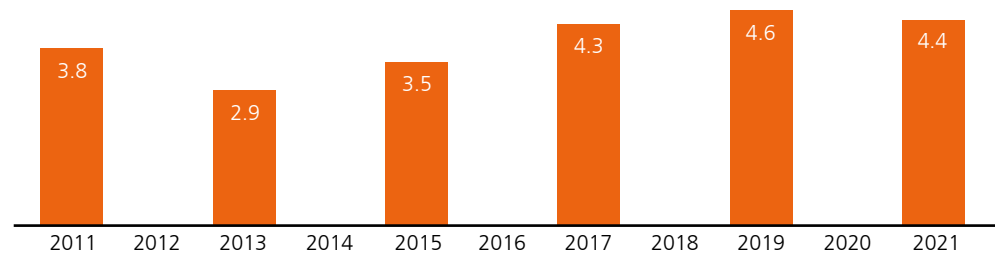


This indicator is used to measure SDG target 9.5:

"Improve research, expand industrial technologies and promote innovations"

Figure 87:

R&D expenditure of the economy in Stuttgart (in billions of euro)



Source: State Statistical Office Baden-Württemberg, Association of German Academic Foundations – Academia Statistics

Between 2017 and 2021, business expenditure on research and development (R&D) exceeded 4 billion euro. In 2019, it reached a peak of around 4.6 billion euro, while in 2021 it fell slightly again to 4.4 billion euro. Before 2017, the figures were consistently below 4 billion euro, reaching a low of 2.9 billion euro in 2013.



Classification / Definition

This indicator was introduced in 2023. It represents the expenditure and the number of personnel employed in research and development in the economy. Data for 2023 are not expected until the end of 2025.

The number of people employed in research and development in the economy is expressed in full-time equivalents and related to 100 employees subject to social security contributions.

Expenditure on research and development in the economy is measured in billions of euro. The high proportion of investments in this area is mainly due to the strong automotive industry in Stuttgart.¹⁵²

Calculation

R&D employees in the economy working in Stuttgart:

$$\frac{\text{R\&D employees in the economic sector of Stuttgart}}{\text{Number of employees subject to social security contributions}} \times 100$$

R&D expenditure of the economy in Stuttgart:

$$\text{Internal R\&D expenditure in the economic sector of Stuttgart in billions of euro}$$

Research and development expenditure during the COVID-19 pandemic

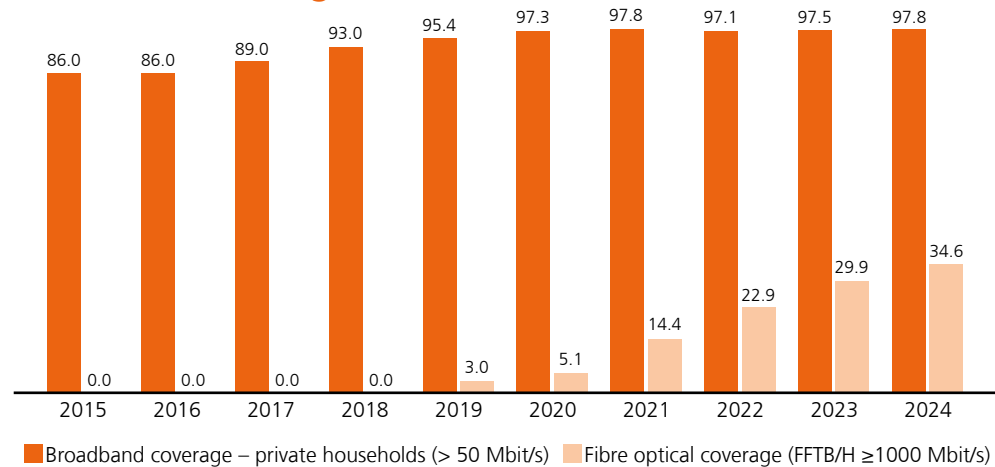


Although data for 2020 is unavailable due to the biennial survey cycle, information from the Association of German Academic Foundations indicates that companies in Germany conducted less research and development during the COVID-19 pandemic that year. However, certain sectors did benefit from the difficult situation. For example, the information and communication technology sector was able to increase its R&D expenditure, with programming activities often playing a key role. Companies in the medical and biotechnology sectors also performed well. Short-time working during the COVID-19 pandemic, on the other hand, led to a reduction in personnel costs, which in turn led to a reduction in R&D expenditure. Nevertheless, the number of researchers decreased very little in 2020.¹⁵³



Indicator 9-6: Broadband coverage

Figure 88:
Broadband and fibre optical
coverage for private households
(in percent)



Source: Bundesnetzagentur, Breitbandatlas; Gigabit Region Stuttgart GmbH

According to the Broadband Atlas, almost 98 percent of private households in Stuttgart had a broadband connection with at least 50 Mbit/s as of 30 June 2024. In 2015, the figure was still 86 percent and has risen significantly since then. The proportion of households with fibre optical connections has also increased since 2019. According to calculations by Gigabit Region Stuttgart GmbH, around 35 percent of all private households had a fibre optical connection in 2024 (as of 31 December 2024).

The Broadband Atlas states that 97.5 percent of the area around State Capital Stuttgart will also be covered by a 5G network by 2024.¹⁵⁴ In addition, 33.4 percent of companies will have a fibre optical connection. The goal of the federal government in office in January 2025 is for 50 percent of households and businesses nationwide to be connected to the network via fibre optics by the end of 2025.



This indicator is used to measure SDG target 9.c:
"Universal access to information and communication technology"

Classification / Definition

Broadband coverage for private households indicates the percentage of private households connected to the broadband network with a minimum speed of 50 Mbit/s. The reference date for data updates is December of each year, with the exception of 2021, when the data was already updated in July.

This indicator was supplemented in 2023 with information on fibre optical coverage. The data, which is provided voluntarily by the source and may therefore be incomplete, is updated at irregular intervals.

Calculation

Broadband coverage for private households:

Number of households with a broadband
connection > 50 Mbit/s

/

Total number of households

* 100

Fibre optical coverage for private households:

Number of households with a fibre optical connection
FFTB/H ≥ 1000 Mbit/s

/

Total number of households

* 100



Correlation with other SDGs

Innovation and infrastructure are key to ensuring a dynamic and successful economy in the long term (SDG 8: Decent Work and Economic Growth).

This calls for new commercial ventures and companies, but also creativity and expertise at the highest level. The availability of qualified skilled workers and managers, as well as female entrepreneurs, is therefore crucial. There is a direct link here to education (SDG 4).

Increased promotion of digitalisation and innovative technologies for infrastructure can also help to achieve the targets of SDG 10 "Reduced Inequalities" by facilitating access to services in disadvantaged areas (e.g. by setting up online consultation hours at GP practices – SDG 3 "Good Health and Well-Being").

The topic of infrastructure also includes housing, transport and urban planning, as listed in SDG 11. The sustainable use of resources such as building materials (SDG 12) helps to mitigate environmental impacts. Adaptation to climate change (SDG 13) also requires investment in a resilient infrastructure. The establishment and expansion of sustainable infrastructure also represents one or more explicit targets in SDG 2 ("Zero Hunger", here in particular sustainable agriculture), SDG 3 ("Good Health and Well-Being"), SDG 4 ("Quality Education"), SDG 7 ("Affordable and Clean Energy", here in particular energy infrastructure) and SDG 11 ("Sustainable Cities and Communities"), which highlights the direct link to SDG 9 ("Innovation and Infrastructure"). Measures should also be ecologically sustainable and planned and implemented in an energy- and resource-efficient manner in order to mitigate conflicts between objectives in the area of ecological sustainability (SDG 6, SDG 13, SDG 14, SDG 15). In addition, industrial production based on unsustainable practices can increase resource consumption and environmental pollution, which can only be reduced through innovative, sustainable production methods (such as green technology). The design of infrastructure also largely determines consumption and production patterns and is therefore linked to almost all of the SDG 12 targets.

The area of digitalisation is becoming increasingly important for SDG 9 and is also represented under SDG 16 with the additional "Digital communities" and "Mobile working" indicators. Digitalisation in industry (e.g. through Industry 4.0) contributes to increased efficiency and the creation of new, future-proof jobs. Artificial intelligence (AI) plays a key role in this by optimising automation, data analysis and decision-making, which increases innovation in industry while creating new opportunities for the development of sustainable production processes (SDG 12). AI can also contribute to solving

complex problems in areas such as energy efficiency (SDG 7), resource management (SDG 12) and healthcare (SDG 3) and is of enormous importance for future economic growth (e.g. through efficiency gains) (SDG 8). Innovation and research and development aimed at a more sustainable economy and more environmentally friendly processes in a wide range of areas will therefore be crucial for achieving the sustainability targets as a whole.

Promoting sustainable infrastructure can cause conflicts with short-term economic efficiency, as environmentally sustainable materials and construction methods initially incur higher costs, which could potentially hinder economic growth (SDG 8). In industry, it should also be borne in mind that innovations do not always have an immediate positive impact on the environment – they may initially lead to higher energy consumption or other negative effects.

The following indicators are also directly relevant to SDG 9 "Industry, Innovation and Infrastructure":

- SDG 2:** "Organic farming"
- SDG 3:** "Medical care"
- SDG 3:** "Primary care close to home – distance to the next GP practice"
- SDG 7:** "Energy productivity"
- SDG 7:** "Energy consumption"
- SDG 7:** "Charging station infrastructure"
- SDG 8:** "Accommodation places"
- SDG 8:** "Occupational safety"
- SDG 11:** "Transport means for getting to work (including walking)"
- SDG 11:** "Bicycle traffic"
- SDG 11:** "Cycle paths"
- SDG 11:** "Passenger cars with electric drive"
- SDG 11:** "Allocation of accommodation with municipal occupancy rights to households with urgent housing needs"
- SDG 12:** "EMAS-certified sites"
- SDG 12:** "Environmental protection investments in the manufacturing sector"
- SDG 12:** "Sustainable procurement"
- SDG 13:** "Greenhouse gas emissions"
- SDG 15:** "Soil index"
- SDG 15:** "Biodiversity"
- SDG 16:** "Digital municipality"
- SDG 16:** "Mobile working"



Practical example 17:

Sustainable and flexible: Modular buildings for housing refugees

Context

Around 10,000 refugees currently live in emergency and shared accommodation in Stuttgart. To create additional accommodation capacity, a local company was commissioned to produce residential modules that can be used sustainably and flexibly. Families, in particular, will find a place of refuge in the modular buildings, offering greater privacy as they settle in Stuttgart and pave the way to the future.

Description / Implementation

The modular buildings can be used for up to 30 years and can be flexibly dismantled and reassembled elsewhere. This makes them sustainable from an ecological and economic point of view, as both the costs and the "grey energy", i.e. all the resources required for a building, are designed for long-term use.

The modular buildings' living space of 40 m² for four people make them socially sustainable. This means families especially can enjoy more space and privacy than in housing with shared bathrooms and kitchens. When the modules are no longer needed to house refugees, they can be used for other purposes, such as student accommodation or staff housing. For people with limited mobility, there are individual accessible modules on the ground floor, provided that the location is suitable.

The residential modules are produced in Germany. When the modules leave the company's factory, they are almost complete inside and can be made ready for occupancy relatively quickly on site. The cladding is made of certified larch wood from southern Germany and the insulation is made of sustainable wood fibre. The roofs are planted with greenery on site, helping to cool the surrounding area and retain rainwater, thereby reducing the risk of flooding.

The modules can be flexibly positioned, keeping fresh air corridors clear and making good use of terraced terrain. The areas between the individual buildings are landscaped and equipped with seating.

In addition to the residential areas, the buildings will also house office and counselling modules. Independent welfare organisations advise and support refugees on site during all stages of their arrival and integration and act as a bridge to the local community.

Experience / Results

In July 2024, the first residents moved into the modular buildings in Plieningen and Hedelfingen, which offer space for a total of 280 refugees. Further locations are planned.

Division / Office / Public Undertaking

Office of Social Welfare and Participation in the Social Affairs, Health and Integration Division,
Stuttgarter Wohnungs- und Städtebaugesellschaft mbH (SWSG), Properties Office in the Economic Affairs, Finances and Public Undertakings Division
Refugee aid organisations

Further reading / links

<https://www.stuttgart.de/service/newsletter/fluechtlingsarbeit/flexibel-und-langlebig-die-neuen-modulbauten-der-stadt.php>
(Last access 22.07.2024)

GRDRs 503/2023

Further practical examples at: www.stuttgart.de/lebenswertes-stuttgart





SDG 10 Reduced Inequalities

"Reduce inequality within and among countries"

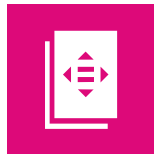
Relevant SDG 10 targets of SDG for German municipalities include, but are not limited to, empowering all people – irrespective of age, gender, disability, ethnicity, origin, religion, economic or other status – to determine their own destiny, as well as promoting their inclusion. There is also a focus on guaranteeing equal opportunities, especially in relation to migration and integration.

Overview of the relevant targets

The following targets of SDG 10 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Appendix II.



10.2 Promote social, economic and political inclusion of all people



10.4 A tax and social policy that promotes equality

The following relevant targets have not yet been represented by indicators:



10.3 Ensure equal opportunities and end discrimination



10.7 A responsible and well-controlled migration policy



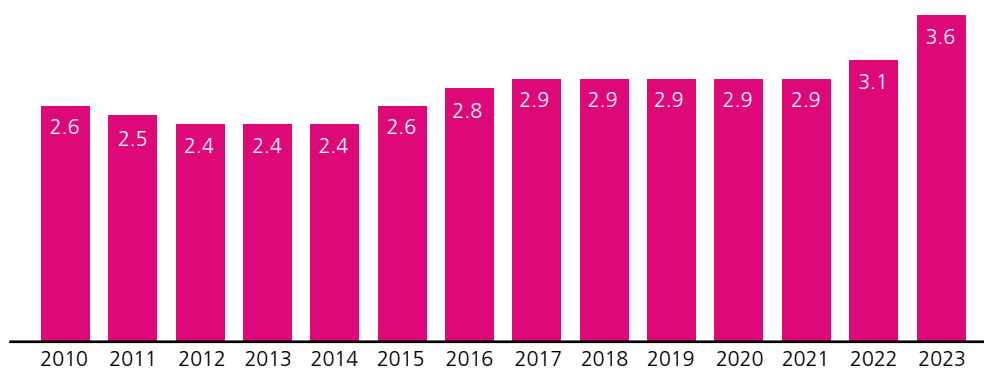
10.b Promote development aid and investment in the least developed countries

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Indicator 10-1:

Relative poverty rate among recipients of benefits without German citizenship



Source: Statistics of the Federal Employment Agency, State Statistical Office Baden-Württemberg

Figure 89:

Relative poverty rate among persons without German citizenship (as relation)

The poverty rate among people without German citizenship is much higher than among people with German citizenship. In 2010, the poverty rate among people without German citizenship who received benefits under SGB II, SGB XII or AsylbLG, was 2.6 times higher than for people with German citizenship. The relative poverty rate rose significantly between 2012 and 2017 and remained constant at 2.9 times that of German citizens until 2021. In 2022, it rose slightly to 3.1 times higher and in 2023 to 3.6 times higher. Between 2015 and 2017, the sharp rise in the number of people without German citizenship was due to the influx of refugees. The same applies to the increase in 2022, which can be linked to refugees from Ukraine.

The higher poverty rate among people without German citizenship is linked, in part, to their greater labour market risks and lower hourly wages, lack of recognition of professional qualifications and other vagaries of precarious employment.



This indicator is used to measure SDG target 10.2:

"Promote social, economic and political inclusion of all people"

Classification / Definition

Poverty impacts some segments of the population more severely than others. In addition to the poverty rates among children, adolescents and the elderly discussed under SDG 1, people without German citizenship are also more severely affected by poverty. The indicator compares the proportion of people without German citizenship who receive benefits under SGB II (those entitled to standard benefits), SGB XII (recipients of ongoing assistance for living expenses and basic security outside and in institutions, as well as under the Asylum Seekers Benefits Act) with the corresponding proportion of people with German citizenship.¹⁵⁵

Because the poverty rate among people without German citizenship is significantly higher than among people with German citizenship, the relative poverty rate among people without German citizenship is not expressed as a percentage, but as a multiple of the poverty rate among people with German citizenship. If the poverty rates for persons without German citizenship and persons with German citizenship were the same, the indicator would be 1. Values above 1 indicate how many times higher the poverty rate for persons without German citizenship is compared to that for persons with German citizenship.



The indicator also takes into account benefits under the Asylum Seekers Benefits Act (AsylbLG), which are paid to persons in asylum proceedings and to tolerated persons who do not receive benefits under SGB XII. The data reported include both basic security benefits and assistance with living expenses. The reference date for data collection on the number of persons entitled to benefits under the Asylum Seekers Benefits Act (AsylbLG) is 31 December of each year. The data on those entitled to benefits under SGB II and XII are annual averages. In terms of SGB II benefits, only those entitled to standard benefits and annual averages are taken into account, but not other persons in benefit communities.

Calculation

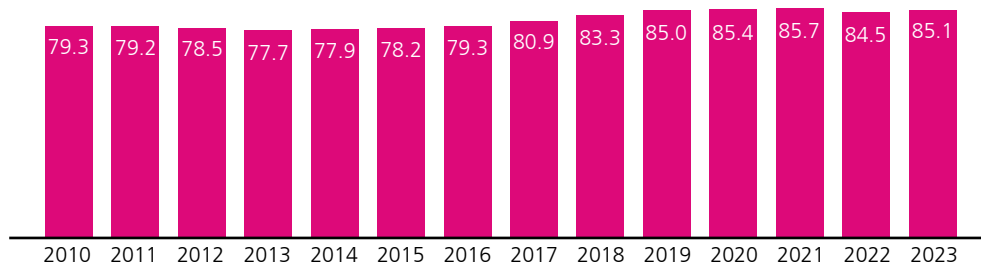
Relative poverty rate among people without German citizenship:

$$\frac{\text{Number of persons entitled to benefits under SGB II and SGB XII without German citizenship + benefit recipients under the Asylum Seekers Benefits Act (AsylbLG)}}{\text{Total number of people without German citizenship}}$$

$$\frac{\text{Number of persons entitled to benefits under SGB II and SGB XII with German citizenship}}{\text{Total number of people with German citizenship}}$$

Indicator 10-2:

Relative employment rate of people without German citizenship



Source: Federal and State Statistical Offices; Statistics of the Federal Employment Agency
State Capital Stuttgart, Statistics Office

Figure 90:

Ratio of the employment rate of people without German citizenship to the total employment rate (in percent)

The ratio of the employment rate of persons without German citizenship to the overall employment rate has generally been increasing since 2013. In 2023, the employment rate of people without German citizenship reached around 85 percent of the overall employment rate, showing that the increase in employment among foreigners was more pronounced than that among German citizens until 2021. The rise in the overall employment rate in Germany since 2010 (see indicator 8-4 Employment rate) is also largely attributable to the increase in employment among foreign citizens.



This indicator is used to measure SDG target 10.2:

"Promote social, economic and political inclusion of all people"

In a city like Stuttgart, home to people of more than 180 nations, integration is hugely important. The State Capital is playing a pioneering role in this area with measures such as the "Stuttgart Alliance for Integration" integration concept, its own department for integration policy, a Welcome Centre and the internationally renowned International Committee, which acts as a participatory body to represent the political interests of people with a migrant background.

Classification / Definition

Integration into the labour market is essential for people's economic situation, but also for their social integration. The indicator of integration into the labour market is the employment rate.

The employment rate depends on the opportunities available for finding a job. However, the number of households with only one or two working persons also plays a role. This depends on the possibility of finding a job, the economic necessity for both adults in a household to take up work, and the willingness to pursue gainful employment. The employment rate does not indicate the extent to which each of these factors influences the situation.

The relative employment rate of persons without German citizenship indicates how high the employment rate of persons without German citizenship is in relation to that of all employed persons. A value below 100 percent therefore means that the employment rate among persons without German citizenship is lower than among all employed persons, while a value

above 100 percent indicates a higher employment rate among persons without German citizenship. Looking ahead, the standard retirement age should be adjusted for this indicator, as more and more people are retiring after the age of 65.

Calculation

Relative employment rate of people without German citizenship:

Number of foreign employees subject to social security contributions (ssc) at the place of residence (15 to 64 years of age)

Total number of people without German citizenship (15 to 64 years of age)

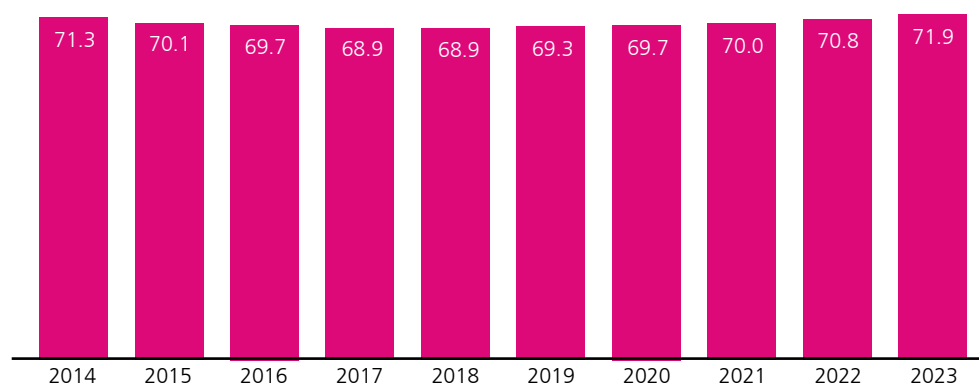
Total number of employees subject to social security contributions (15 to 64 years of age)

Population (15 to 64 years of age)

* 100

Indicator 10-3: Relation of the median salary according to citizenship

Figure 91:
Relation of the median salary
according to citizenship
(in percent)



Source: State Capital Stuttgart, Office of Social Welfare and Participation and Youth Welfare Office

The relation of the median salary of persons without German citizenship to the median salary of persons with German citizenship remained constant at around 70 percent between 2014 and 2023. Accordingly, there was a discrepancy in median salaries of around 30 percent throughout the entire observation period. In 2023, the median salary of German full-time employees subject to social security contributions in Stuttgart was 5,404 euro, while the median salary of persons without German citizenship was 3,885 euro.



This indicator is used to measure SDG target 10.2:

"Promote social, economic and political inclusion of all people"

Classification / Definition

This indicator was introduced in 2023. The median salary describes the average salary of all full-time employees subject to social security contributions. This indicator compares the average salary of persons without German citizenship with the average salary of persons with German citizenship. When comparing salaries a value of 100 percent would mean that the median salary of persons without German citizenship is the same as that of persons with German citizenship.

The indicator only takes full-time employees into account. The data comes from the Federal Employment Agency based on social security reports submitted by employers. Since wages and salaries for pension insurance are only reported up to the income threshold¹⁵⁶, the amount actually earned is not known for all employees. Data are collected on 31 December each year.¹⁵⁷

Calculation

Relation of the median salary according to citizenship:

Median salary of full-time employees subject to social security contributions without German citizenship

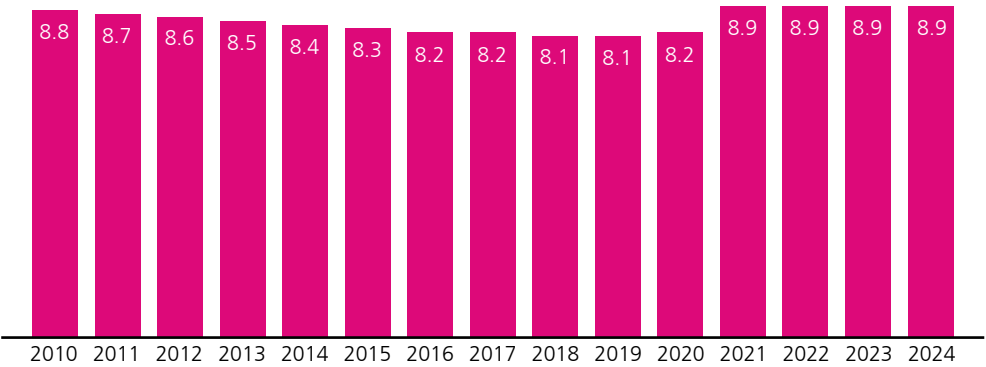
/

Median salary of full-time employees subject to social security contributions with German citizenship

* 100



Indicator 10-4:
Meeting points for citizens



Source: State Capital Stuttgart, Office of Social Welfare and Participation and Youth Welfare Office

Figure 92:
Meeting points for citizens
(figures in number per
100,000 inhabitants)

During the period under review from 2010 to 2019, the number of meeting points for citizens per 100,000 inhabitants decreased slightly from 8.8 to 8.1. However, from 2020 onwards, the number rose again, reaching a peak of 8.9 meeting points in 2021, where it remained until 2024. It should be noted that this figure is subject to fluctuations in Stuttgart's population. This rose until 2019, fell during the pandemic years of 2020 and 2021, rose slightly again in 2022 and 2023, and declined again slightly in 2024. In 2024, there were a total of 54 meeting points for citizens in Stuttgart.



This indicator is used to measure SDG target 10.2:
"Promote social, economic and political inclusion of all people"

In the 2020/2021 budget, the municipal council made important decisions regarding intergenerational meeting places in the neighbourhood: Based on the framework concept and the funding guidelines for community centres, the first two locations were selected, as outlined in GRDRs 304/2020 ("Community Centres – Decisions on Framework Concept, Space Allocation, Selection and Funding Criteria, and Two Locations"). In addition to the community centres, there will also continue to be "smaller versions" of intergenerational meeting places: meeting places for older people and neighbourhood and family centres.

Classification / Definition

Meeting points in neighbourhoods make an important contribution to social inclusion and opportunities for participation in society. This is particularly true for people who, for various reasons (e.g. limited financial resources and lack of mobility), are not otherwise closely integrated into society.

Calculation

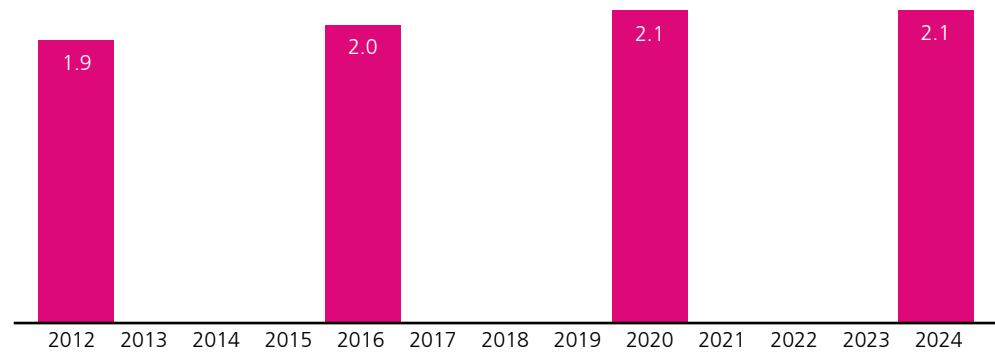
As meeting points for citizens, this category includes meeting points for older people, neighbourhood and family centres, and community centres, which are listed in relation to the total population. Community centres are not included in this list:

Meeting points for citizens:

$$\frac{\text{Number of meeting points for older people, community centres, neighbourhood and family centres}}{\text{Population} \times 100,000}$$

Indicator 10-5: Low-barrier housing

Figure 93:
Proportion of low-barrier
housing among all private
households in Stuttgart
(in percent)



Source: State Capital Stuttgart, Statistics Office (housing market surveys)

Due to demographic change, which is also noticeable in Stuttgart, the issue of barrier-free and age-appropriate living is becoming increasingly important. The proportion of low-barrier housing among all private households in Stuttgart remained relatively constant at around 2 percent between 2012 and 2024. However, the demand due to physical limitations would have been three times higher in 2024, affecting around 6 percent of all households in Stuttgart.¹⁵⁸ With a target value of at least 30 percent of low-barrier housing in new buildings, the increasing need could be satisfied in the foreseeable future. State Capital Stuttgart and the Stuttgart housing sector recognise this need and are committed to ensuring that this housing is adequately represented in new construction and renovation projects. For existing homes, you can check out the city's "Support programme for barrier-free and age-appropriate living."¹⁵⁹



This indicator is used to measure SDG target 10.2:

"Promote social, economic and political inclusion of all people"

Classification / Definition

The expression low-barrier housing is not clearly defined, but in the context of residential properties, it is often described using terms such as 'low threshold' or 'barrier-reduced'. This means, for example, that there is a lift, a floor-level shower or a stair lift. However, it can also mean that the thresholds between separate living spaces are very low and can be easily negotiated with a wheelchair. Nevertheless, there are still areas in the rooms or in the entrance area that are not wheelchair accessible and require assistance from others.¹⁶⁰

For the purpose of this indicator, low-barrier housing is defined as an apartment that meets the following criteria:

- (a) The apartment is accessible from the pavement without steps.
- (b) The doors have a minimum width of 80 cm.
- (c) The dwelling has a floor-level (threshold-free) shower or bathtub with door access.
- (d) The distance from the wall (e.g. including in the hallway) is at least 1.20 m.

- (e) The sanitary area potentially offers adequate turning space for a wheelchair (approx. 1.50 m diameter).
- (f) The kitchen area potentially offers adequate turning space for a wheelchair (approx. 1.50 m diameter).
- (g) The dwelling is on one level.¹⁶¹

The criteria and the data derived from them come from the housing market survey in 2020. State Capital Stuttgart conducts this survey every four years.

Calculation

Low-barrier housing:

Number of low-barrier dwellings in Stuttgart

/

Total number of private households

* 100



Indicator 10-6:

Income distribution (low, medium, high)

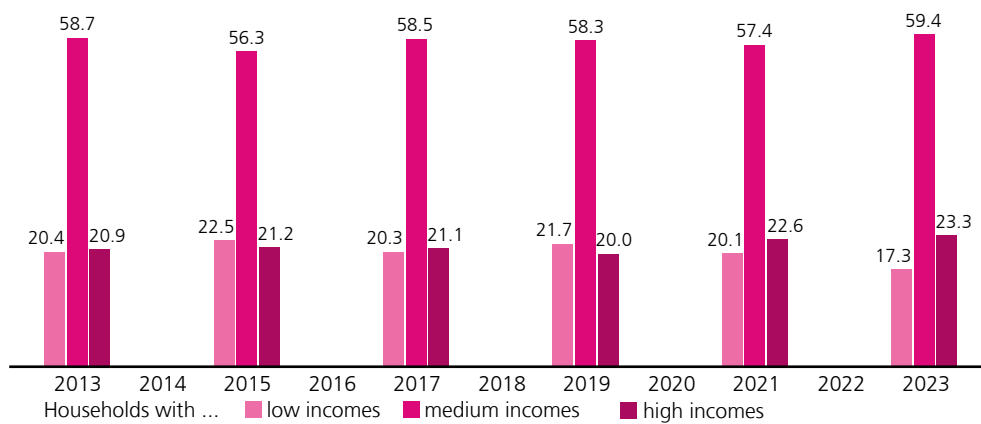


Figure 94:
Low, medium and high-income households (in percent)

Just over half of all households in Stuttgart had an average income (equivalent income between 60 and 150%). Between 2013 and 2023, their proportion fluctuated between 56.3 and 59.4 percent. The peak value of 59.4 percent was recorded in 2023. The proportion of low-income households (equivalent income below 60 percent) and the proportion of high-income households (equivalent income above 150 percent) has also remained relatively constant since 2013. The proportion of low-income households consistently ranged between 20.1 and 22.5 percent, with the exception of 2023, when it dropped slightly to 17.3 percent. At the same time, the proportion of high-income households also remained just above 20 percent but rose slightly in 2022 and 2023 – recently peaking at 23.3 percent.



This indicator is used to measure SDG target 10.4:

"Pursue tax and social policies that promote equality"

Classification / Definition

Income distribution provides information on the extent of income inequality in any society. High social inequality can lead to social tensions, but at the same time inequality can also be an incentive to perform better. The global sustainability targets tend to aim at reducing social inequality.

The calculation of the indicator has changed since previous reports. From the third Voluntary Local Review (VLR), income distribution is presented in three income classes (low, medium, high) based on equivalent income. The basis for calculating equivalent income is described in the indicator "At-risk-of-poverty rate" (see SDG 1).

However, the percentage proportions of low-income households differ slightly from the figures given in indicator 1-1, as different data sources are used. While the values for indicator 1-1 are based on the microcensus, data from citizen surveys and the Stuttgart survey are also used here. As middle and higher income groups are disproportionately represented in these surveys, the proportion of low incomes appears somewhat lower here than in indicator 1-1.

The changes in the proportions of households in the three income groups are relatively minor. Due to the data basis, it is possible that the shifts shown here may differ slightly from the actual figures due to random variations in data collection.



Calculation

Low-income households:

Number of households with an equivalent income
of less than 60 percent

/

Total number of households

* 100

Medium income households:

Number of households with an equivalent income
of between 60 and 150 percent

/

Total number of households

* 100

High-income households:

Number of households with an equivalent income
of more than 150 percent

/

Total number of households

* 100

Correlation with other SDGs

Reducing inequalities is often synonymous with pursuing other sustainability targets, particularly in the social dimension, but not only there.

Health burdens are distributed very unevenly across society. Equitable health care and access to health-promoting measures (SDG 3) are essential for reducing inequalities in health care, which improves the quality of life of disadvantaged groups in particular.

Education (SDG 4) and employment (SDG 8 "Decent work and economic growth" and SDG 9 "Industry, innovation and infrastructure") are often key to reducing inequalities. Access to high-quality education for all (including the integration of digital learning opportunities) can help to increase social mobility in the long term and thus reduce inequalities. In addition, numerous other factors, such as discrimination, including in the area of gender equality (SDG 5), lead to social inequalities, whereby the elimination of discrimination based on disability and ethnic origin, as formulated in SDG 10, is also important for a more inclusive society.

The following correlations with SDG 10 also exist, although the indicators are described in other sections: Poverty reduction (SDG 1) mainly concerns combating poverty among specific target groups. Gender inequality (SDG 5) is not discussed in detail in this section. Reducing inequality also involves improving access and participation opportunities for citizens from different backgrounds and ensuring that cities and communities are designed to be inclusive (SDG 11, Sustainable cities and communities, and SDG 16, Peace, justice and strong institutions). Inclusive urban planning that takes into account the needs of marginalised groups is crucial for reducing social inequalities and integrating disadvantaged groups into society. This also applies to inequalities between urban districts and neighbourhoods (as shown by some indicators using small-scale data). In some cases, there are significant differences in quality of life, infrastructure and opportunities depending on which neighbourhood people live in. A fair distribution of resources and access to services in all neighbourhoods is crucial to reducing these inequalities. This applies in particular to access to mobility, public transport, leisure facilities and safe housing. The target of "Sustainable Cities and Communities" (SDG 11) is therefore closely linked to social integration and the promotion of justice within cities.



Another important connection is with the ecological dimension. Ecological sustainability is also key to reducing inequalities in cities. Improving air quality (SDG 3), promoting environmentally friendly modes of transport (SDG 11) and access to green spaces and nature-based recreational areas (SDG 15 "Life on Land") directly contribute to the quality of life in disadvantaged neighbourhoods. These environmental measures not only have positive effects on health (SDG 3) and social justice (SDG 10), but can also lead to greater social integration by creating public spaces that are accessible to all. However, a target conflict arises when environmentally sustainable projects are implemented in more affluent areas. This could deepen existing social inequality if disadvantaged areas do not benefit sufficiently from such projects.

In addition, increasing urbanisation harbours potential for target conflicts, as the construction of infrastructure to promote the economy (SDG 9) can lead to gentrification, which could exacerbate social inequalities in cities. Measures to promote innovation and infrastructure must also take into account the needs and rights of disadvantaged residents in order to prevent further social drift.

In addition to inequalities within a society, SDG 10 also addresses inequality between societies in an international dimension (see SDG 17, "Global Partnerships for the Goals"). Global partnerships can help to share resources and knowledge in order to reduce social and economic inequalities between countries.

The following indicators are also directly relevant to SDG 10 "Reduced Inequalities":

- SDG 1:** "Receiving social minimum security benefits"
- SDG 1:** "Poverty among children, adolescents and young adults, the elderly and single parents"
- SDG 2:** "Children with overweight"
- SDG 3:** "Premature mortality"
- SDG 3:** "Infant mortality"
- SDG 3:** "Vaccination coverage"
- SDG 3:** "Perception of loneliness"
- SDG 3:** "Dental health in children"
- SDG 4:** "Vocational qualifications"
- SDG 4:** "Inclusively educated pupils"
- SDG 4:** "School leavers by school-leaving qualification"
- SDG 4:** "Students"
- SDG 5:** "Relation of employment rates"
- SDG 5:** "Relative poverty among women"
- SDG 5:** "Pay gap between men and women"
- SDG 8:** "Occupational safety"
- SDG 11:** "Financial burden of housing costs"
- SDG 11:** "Proportion of social housing in the overall rental market"



Practical example 18: Intercultural openness and alignment in public administration

Context

Germany is a country of immigration, and the State Capital Stuttgart is an international city that has been shaped by immigration for decades. Some 48.7 percent of its residents have a migration background, and 28.4 percent are foreign nationals (as of 31 December 2023). Intercultural competence and intercultural openness (IKÖ) in public administration are therefore essential in order to meet the needs of the population and to reflect the city's international character in the administration – at both the operational and management levels.

Intercultural openness is enshrined in the state government's Participation and Integration Act of 2015. Further foundations for implementation are the General Equal Treatment Act (AGG) of the federal government of 2006, the Diversity Charter signed by State Capital Stuttgart in 2007 and the Anti-Discrimination Declaration of State Capital Stuttgart signed by the Mayor and the General Staff Council in 2019.

State Capital Stuttgart has been actively working on the implementation of intercultural openness for years. For strategic integration planning with a focus on the intercultural orientation of the city administration, the Integration Policy Department of State Capital Stuttgart has created a dedicated position since October 2022 that serves as a cross-departmental function.

Description / Implementation

State Capital Stuttgart primarily pursues three strategic goals with its integration work:

- (1) promoting a diverse city administration,
- (2) eliminating internal and external discrimination,
- (3) encouraging participation in and creating access to regular services for all citizens.

The additional position created in 2022 will make it possible to develop concepts for anchoring migration-specific aspects in civil society through targeted measures. The position incumbent also offers internal administrative support to the General Administration, Culture and Legal Affairs Division by contributing to human resources policy, ensuring that migration-specific aspects receive greater attention. Previous and current intercultural openness measures are evaluated and recommendations for action are developed and discussed together with intra-urban experts based on examples of good practice. Additional goals include developing services within the municipal offices and public undertakings, as well as offering more training programmes in collaboration with migrant communities to enhance intercultural competence.

Experience / Results

The main tasks of this position include working with other municipal departments to develop the city administration's intercultural openness in a systematic, sustainable and professional manner. The following are two examples of key measures that the intercultural openness position has initiated to date:

- (1) The incumbent of the intercultural openness position is involved in the municipal anti-discrimination working group, which is tasked with implementing the 2019 anti-discrimination declaration of State Capital Stuttgart. Within this framework, she devised an event for employees on diversity and discrimination related to city administration and launched it in collaboration with the relevant departments. This format, entitled "Let's talk about diversity in municipal offices! Diversity in State Capital Stuttgart", was held in 2023 and 2024 and was attended by over 130 employees, who gave positive feedback. The event will continue as an established format.



(2) Intercultural openness means imparting skills and knowledge, but also critically examining structures and measures. The incumbent of the intercultural openness position is therefore currently working on planning and implementing a three-year, city-wide, diversity-driven change and qualification process. This pilot project, launched in collaboration with selected municipal offices, aims to develop the diversity skills of the employees and decision-makers involved and to encourage them to implement diversity-driven changes in the long term. After successful implementation and positive evaluation, this change process will be continued and rolled out across all offices.

Key success factors include sensitivity to this issue and the commitment of people at all management levels.

Division / Office / Public Undertaking

Integration Policies Department in the
Social Affairs, Health and Integration Division,
Office of Administrative Services and Human Resources in the
General Administration, Culture and Legal Affairs Division,
General Staff Council,
Equal Opportunities Department,
Commissioner for People with Disabilities in the
Social Affairs, Health and Integration Division

Further reading / links

The General Equal Treatment Act,
Participation and Integration Act:
<https://sozialministerium.baden-wuerttemberg.de/de/integration/partizipations-und-integrationsgesetz>
(Last access on 10.02.2025)

Diversity Charter:
<https://www.charta-der-vielfalt.de/>
(Last access on 10.02.2025)

Anti-discrimination declaration by State Capital Stuttgart:
<https://www.stuttgart.de/rathaus/verwaltung/leitlinien-der-landeshauptstadt.php>
(Last access on 10.02.2025)



Further practical examples at: www.stuttgart.de/lebenswertes-stuttgart



SDG 11

Sustainable Cities and Communities

"Make cities and human settlements inclusive, safe, resilient and sustainable"

Relevant SDG 11 targets for German municipalities include, but are not limited to, access to housing and basic public services, sustainable transport systems, sustainable urban planning, disaster management, reduction of environmental pollution and access to green spaces.



Overview of the relevant targets

The following targets of SDG 11 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Appendix II.



11.1 Safe and affordable housing



11.2 Affordable and sustainable transport systems



11.3 Inclusive and sustainable urbanisation



11.7 Ensure access to safe and inclusive green spaces and public spaces



11.b Implement policies and plans for inclusion, resource efficiency and disaster risk reduction

The following relevant targets have not yet been represented by indicators:



11.4 Protection of world heritage



11.5 Reduce the negative impacts of natural disasters



11.6 Minimise environmental pollution caused by cities



11.a Enhanced national and regional development planning



11.c Support for the least developed countries in sustainable and resilient construction

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Indicator 11-1: Asking rental rates

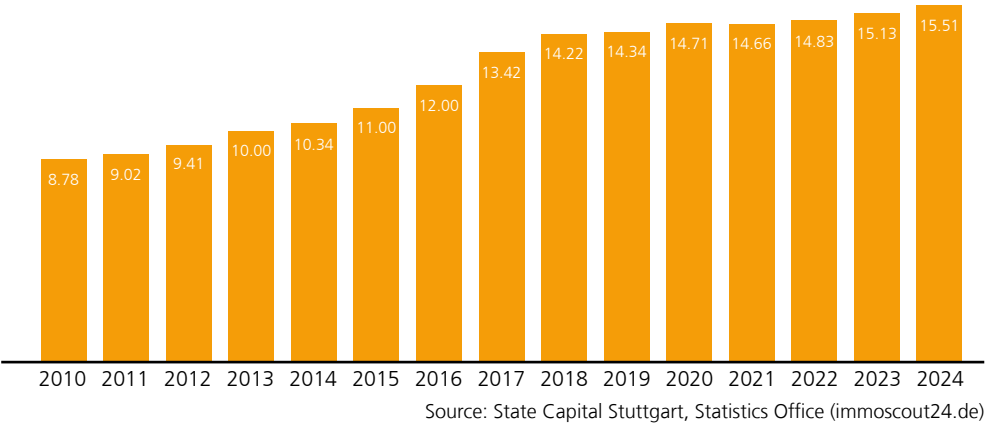


Figure 95:
Asking rental rates
(in euro / m²)

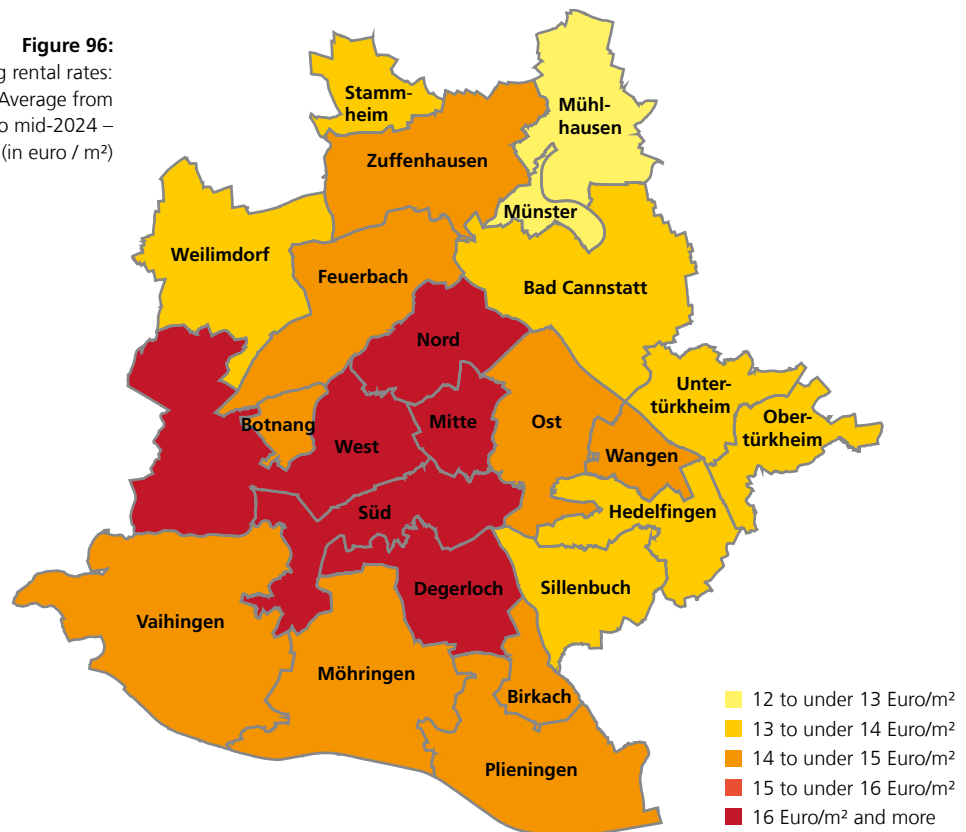
The "Asking rental rate" indicator can only provide an approximate picture of developments on the rental market. Nevertheless, the trend is clear: Rents for apartments advertised online in Stuttgart rose significantly during the period under review. In 2010, the average asking rent per square metre (net cold) in Stuttgart was less than 9 euro. In the years that followed, the rate increased sharply. In 2015 and 2016, the average asking rent was as much as between 11 and 12 per square metre, and since 2018 it has been above 14 per square metre. Asking rents rose by around 77 percent between 2010 and 2023. After remaining virtually unchanged between 2020 and 2022, asking rents rose again in 2023, reaching 15.51 euro per square metre in 2024.



This indicator is used to measure SDG target 11.1:
"Safe and affordable housing"

Stuttgart is one of the cities with the highest asking rents in Germany. After Munich, Frankfurt am Main, Düsseldorf and Berlin, the State Capital ranks fifth in the city ranking of the highest asking rents.¹⁶² The rents for apartments advertised online are significantly higher than the rents for existing tenancies. The local comparative rent in the rent index is based on tenancies on the free housing market concluded or modified within the last four years. The average rent per square metre in the State Capital was 11.15 euro in 2024. Compared to 2010 (7.22 euro), this represents an increase of 54 percent.

Figure 96:
Asking rental rates:
Average from
mid-2022 to mid-2024 –
city districts (in euro / m²)



Source: State Capital Stuttgart, Statistics Office (immoscout24.de)

The asking rents at district level highlight the high rents in the highly sought-after inner-city districts, where prices were 16 euro per square metre and above. In the outer districts, on the other hand, rents were lower, in some cases around 12 euro per square metre.

Classification / Definition

The availability of rental properties is crucial to ensuring access to secure and affordable housing. Home ownership is often not an option, especially for households with low and middle incomes. The average rent provides information on the rent for apartments advertised online according to size, using the arithmetic mean of the net cold rent per square metre. The indicator shows the development of rents as an overall average. It does not take into account that the price per square metre varies depending on the condition and location of the apartment. In addition, the rents for apartments that are not advertised online are excluded from the analysis.

Calculation

Asking rental rates:

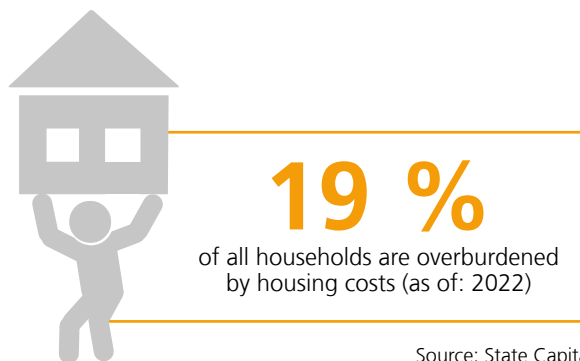
Asking rental rates (net, excluding utilities)
per m² for Initial renting and re-renting

Opinions on the housing market

High levels of dissatisfaction with the housing supply and the housing market were reflected in the Stuttgart Survey 2023, according to which 33 percent were dissatisfied and 30 percent were even very dissatisfied with the situation. However, this was less than in the last survey in 2021, when 36 percent said they were dissatisfied and 34 percent very dissatisfied. In addition, the Stuttgart survey shows that high rents and the low supply of housing have been perceived as key problems by citizens for years. At 71 points on the municipal barometer, high rents remained the number one urban problem from the citizens' perspective in 2023, as they have been for many years. Nevertheless, there was a slight improvement compared to 2021, when the figure was 86 points.¹⁶³



Indicator 11-2:
Financial burden of housing costs

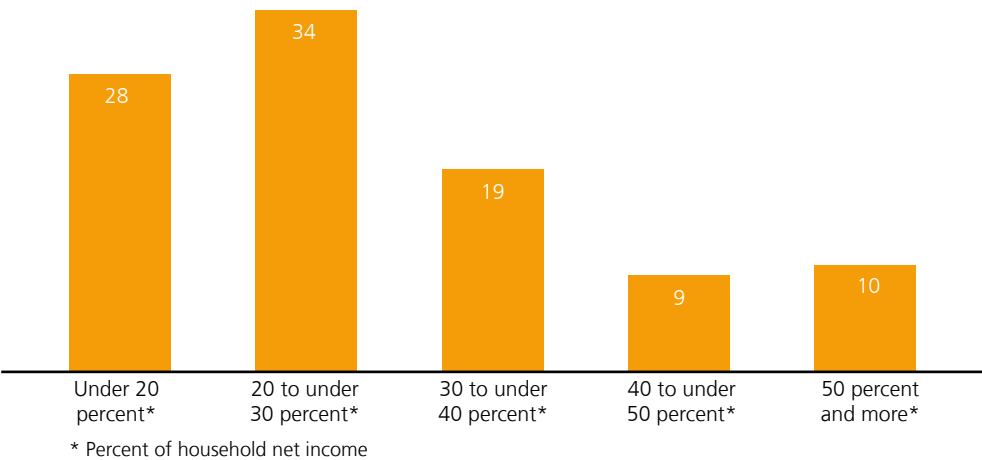


Source: State Capital Stuttgart, Statistics Office

Many tenants in Stuttgart are affected by high housing costs: Almost one in five rental households (19%) spent more than 40 percent of their net income on rent in 2022 and were therefore exposed to excessive costs. According to the federal government, the proportion of people living in households that spend more than 40 percent of their disposable income on housing costs is to be reduced to 13 percent by 2030.¹⁶⁴



This indicator is used to measure SDG target 11.1:
"Safe and affordable housing"



Source: State Capital Stuttgart, Statistics Office (Housing Market Report)

Figure 97:
Financial burden of housing
costs on rental households 2022
(in percent of rental households)

In Stuttgart, rental households spent an average of 30 percent of their net income on gross rent (basic rent and "cold" operating costs) in 2022. This means that the rental burden in Stuttgart remained virtually unchanged in 2022 compared to 2020. Although private households in Stuttgart are in a comparatively good financial position, many rental households have to spend a significant proportion of their income on housing costs.

However, around 62 percent of all rental households in Stuttgart spent less than 30 percent of their net income on gross rent excluding utilities in 2022. For 34 percent of all rental households, the figure was between 20 and 30 percent of net income, and for the remaining 28 percent, it was even below 20 percent.



Rental households with low incomes are particularly hard hit. Low earners with a net income of less than 1,300 euro per month had to spend an average of 55 percent of their household income on gross rent excluding utilities. More affluent households with a monthly income of at least 5,000 euro only had to spend an average of 18 percent of their net income on housing. An increased burden ratio can be observed above all in single-person households, single-parent households and households with no earned income. High housing costs are leading families in particular to move out of cities to the surrounding areas.

Classification / Definition

This indicator was introduced in 2025. It refers to the proportion of gross rent excluding heating costs in relation to net household income. In general, rents of up to 30 percent of net household income are still considered reasonable. According to the EU definition, households are considered to be under financial strain if they have to spend more than 40 percent of their disposable income on housing costs.

Calculation

Financial burden of housing costs:

Gross rent excluding utilities
(basic rent + "cold" operating costs)

/

Net household income

* 100

Proportion of households overburdened by housing costs:

Number of households with gross rent excluding utilities
(basic rent + "cold" operating costs)
> 40 % of net household income

/

Total number of rental households

* 100





Indicator 11-3:
Proportion of social housing in the overall rental market

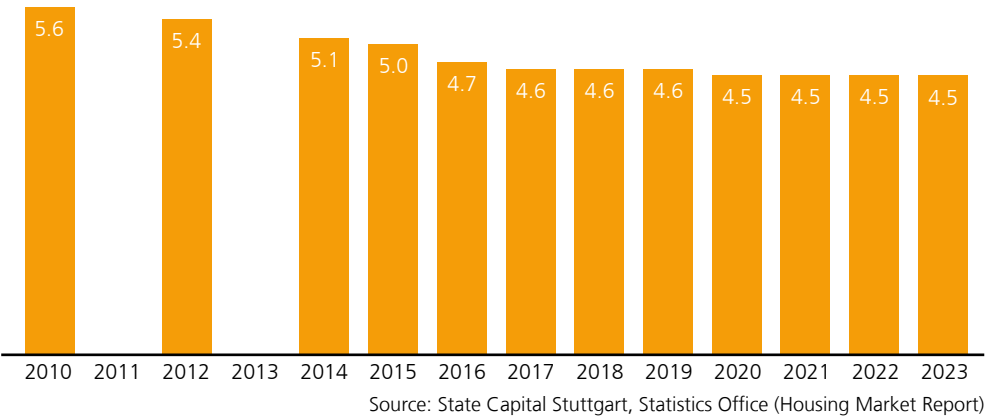


Figure 98:
Proportion of social housing
units in the overall rental market
(in percent)

As of 31 December 2023, there were 14,498 social housing units with rent and occupancy restrictions in Stuttgart. The Urban Planning and Housing Office had occupancy rights for 12,374 of these units. The proportion of social housing units fell steadily from 5.6 percent in 2010 to 4.5 percent in 2020. Between 2020 and 2023, the proportion of social housing units and municipal occupancy rights in the overall rental market stabilised at this level. According to the 2023 Housing Market Report, Stuttgart therefore had an average share of subsidised housing compared to other large cities in 2023.



This indicator is used to measure SDG target 11.1:
"Safe and affordable housing"

In 2023, a total of 304 new social housing units were occupied in subsidised rental housing construction. In 2024 and 2025, approximately 340 social housing units are expected to be occupied. Larger development areas in the city with a high proportion of subsidised housing will not be completed until the following years. These include the further construction phases at the Bürgerhospital in Stuttgart-Nord, the Neckar-Park in Stuttgart-Bad Cannstatt, the Quartier am Wiener Platz in Stuttgart-Feuerbach and the Böckinger Straße in Stuttgart-Zuffenhausen (Rot). Nevertheless, it will be a challenge to keep the number of social housing units stable over the next few years as rent and occupancy restrictions expire. The number of expiring occupancy restrictions cannot be compensated for by the construction of new subsidised rental apartments alone. State Capital Stuttgart is therefore seeking additional occupancy rights through the "Alliance for Housing" and extensions of rent and occupancy restrictions through municipal financing.

Classification / Definition

This indicator was first introduced in 2025. There is a high demand for affordable rental apartments in Stuttgart. Given the housing shortage and high rents, it is particularly difficult for low-income households in Stuttgart to find affordable housing. These households are often dependent on subsidised housing and assistance from the city. It is therefore important to be able to provide sufficient social housing units.

Calculation

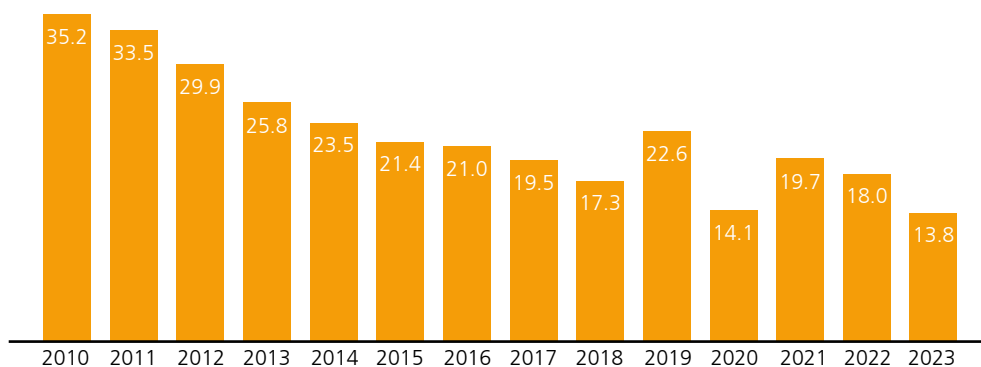
Proportion of social housing in the overall rental market:

$$\frac{\text{Number of social housing units}}{\text{Overall rental housing market}} \times 100$$

Indicator 11-4:

Allocation of accommodation with municipal occupancy rights to households with urgent housing needs

Figure 99:
Allocation quota of units with
municipal occupancy rights
(in percent)



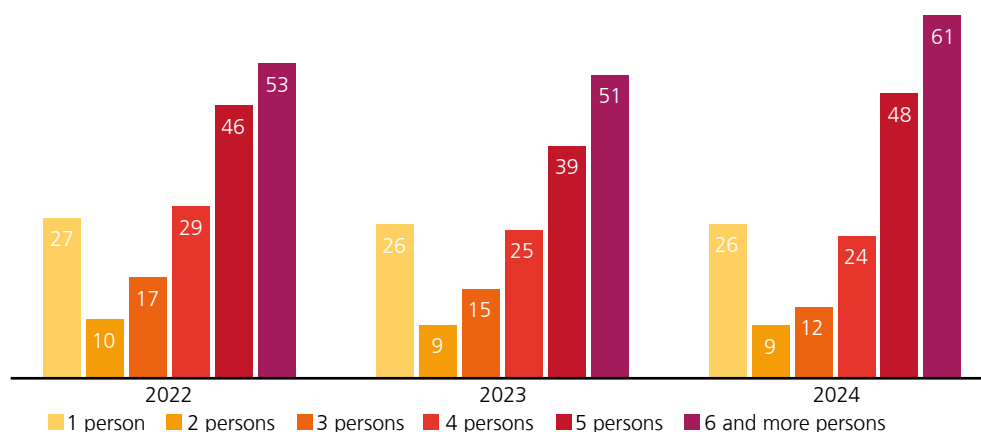
Source: State Capital Stuttgart, Urban Planning and Housing Office

Across Germany, the number of social housing units has roughly halved over the past 15 years, partly due to the abolition of rent controls. The tight housing market in large cities is also reflected in Stuttgart in the allocation rate for apartments with municipal occupancy rights and in the average waiting time. The proportion of households that were successfully allocated an apartment with municipal occupancy rights declined during the reporting period. In 2010, 35 percent of households on the waiting list were successfully allocated an apartment; by 2020, this proportion had dropped by more than half to 14.1 percent. In 2019, a notably high number of apartments were allocated (22.6 percent), as many new construction projects with a high proportion of social housing were completed that year. In 2022, 18.0 percent of households on the waiting list (4,564 households in 2023) were successfully allocated an apartment with municipal occupancy rights, and in 2023, only 13.8 percent. The increasingly difficult situation regarding social housing and apartments with municipal occupancy rights is due to increased demand caused by people moving to Stuttgart and rising rents, coupled with a decline in the number of social housing units available.¹⁶⁵



This indicator is used to measure SDG target 11.1:
"Safe and affordable housing"

Figure 100:
Waiting periods for units with
municipal occupancy rights
(in months)



Source: State Capital Stuttgart, Urban Planning and Housing Office



The development of average waiting times for an apartment with municipal occupancy rights varies depending on household size. Between 2022 and 2023, waiting times fell slightly for all household sizes, but rose again in 2024 for larger households. By far the longest average waiting times are for larger households of five or more people.

Until 2021, waiting times were recorded against even more criteria. In addition to household size, a distinction was made between EU and non-EU nationals, and this was also reflected in the latest "Stuttgart – A Livable City" Voluntary Local Review. ¹⁶⁶ These data highlighted the fact that citizens from non-EU countries had to wait much longer for an apartment than EU citizens. They also showed that waiting times became continuously longer between 2010 and 2021.

Classification / Definition

The supply of affordable housing is a real problem for people on low incomes. In addition to the rent itself, the procedures for allocating apartments with municipal occupancy rights highlights the difficulties faced by people on low incomes in finding affordable housing.

Housing with municipal occupancy rights includes

- (1) Social housing units for which the city has the right to submit tenant proposals to housing companies,
- (2) Units for which the city has occupancy rights based on hereditary building rights agreements (sometimes no longer subsidised) and
- (3) Municipal housing units.

As of 31 December 2023, there were 19,444 units with municipal occupancy rights, including:

- 12,374 social housing units with municipal occupancy rights,
- 6,131 units with occupancy rights based on hereditary building rights agreements,
- 939 municipal housing units.

Two indicators show the extent to which people on low incomes are successfully allocated housing with municipal occupancy rights. Firstly, the allocation rate shows how often households were successfully allocated an apartment relative to all households on the waiting list. Secondly, the average waiting time for a "tied apartment" illustrates the periods within which people with a legitimate claim are successfully allocated a social rental apartment.

The allocation rate for apartments with municipal occupancy rights compares the number of households placed with all households in the municipal registration file.

The average time spent on the waiting list for a tied apartment varies according to the size of the apartment required and is shown separately.

Inclusion in the municipal registration file for the allocation of an apartment with municipal occupancy rights is only possible with a residence permit valid in Baden-Württemberg.

Calculation

Allocation of units with municipal occupancy rights (quota):

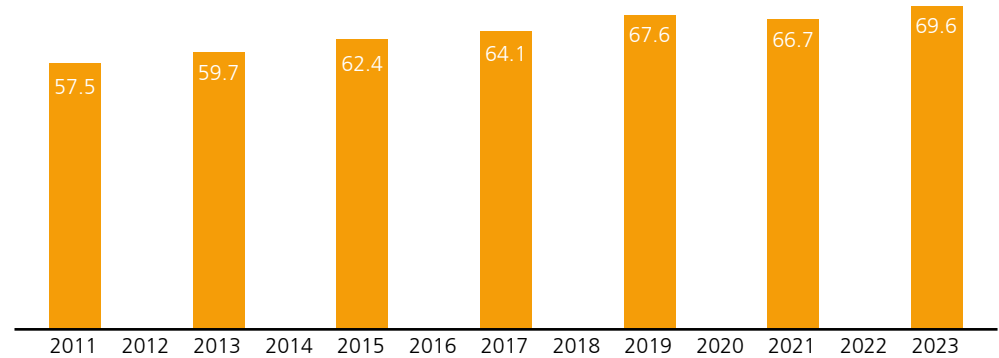
Number of households placed
/
Total number of households in the municipal registration file
* 100

Allocation of units with municipal occupancy rights (waiting period):

Average waiting period for a unit by size of household

Indicator 11-5: Transport means for getting to work (including walking)

Figure 101:
Choice of environmentally friendly modes of transport for getting to work, including walking (in percent, multiple answers possible)



Source: State Capital Stuttgart, Statistics Office (citizen surveys. Stuttgart survey)

Environmentally friendly modes of transport (bicycles, e-bikes, public transport) and walking are widespread. More than half of Stuttgart's residents use environmentally friendly modes of transport or walk to work or school. This proportion increased steadily during the period under review. In 2011, 57 percent of respondents to citizen surveys stated that they used environmentally friendly modes of transport. This figure rose steadily thereafter, the year 2021 being an exception, and stood at over 69 percent in 2023. During this period, car use also declined, especially among young people. They are less likely to own a car and are increasingly using bicycles, Public transport or other alternatives. If, on the other hand, a car is available, it is often used for commuting to work.¹⁶⁷

The slight decline in figures observed in 2021 can be attributed to the COVID-19 pandemic. The pandemic led to a decline in the proportion of public transport users. This reduced the share of environmentally friendly modes of transport used for commuting, as the decline could not be fully offset by increases in other environmentally friendly modes of transport.



This indicator is used to measure SDG target 11.2:
"Affordable and sustainable transport systems"

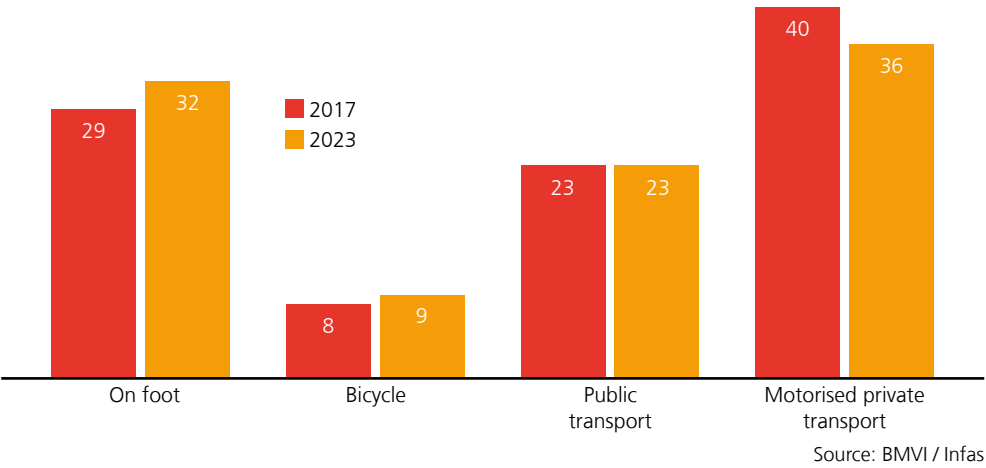


Figure 102: Information on modal split in Stuttgart in 2017 and 2023 (in percent)

Modal split



The modal split, which does not refer exclusively to the most frequently used modes of transport for commuting to work or education, but instead reflects the actual mix of modes of transport used by residents, was last surveyed for Stuttgart in 2023 as part of the "Mobility in Germany" study conducted by the Federal Ministry of Transport and Digital Infrastructure in cooperation with the Institute for Applied Social Sciences. Although motorised private transport accounted for the largest share at 36 percent, over 60 percent of everyday journeys were made using environmentally friendly modes of transport (public transport, bicycle) or on foot (see Figure 102).

Classification / Definition

The distribution across different modes of transport is estimated primarily using data from the Stuttgart survey (previously known as the citizen survey). Since commuting to work or training is a daily and therefore frequent activity, the survey – conducted out every two years – asks specifically about the primary modes of transport used. While the survey focuses on one key route, it's important to note that other types of travel, such as shopping and leisure trips, are also part of the total traffic volume. Since multiple answers are possible for this question, the individual values were standardised to 100.

Calculation

The indicator is calculated as the proportion of transport users who travel to work by environmentally friendly means, namely on foot, by bicycle, e-bike or public transport:

Number of people travelling to work or training on foot, by bicycle, e-bike or public transport

/

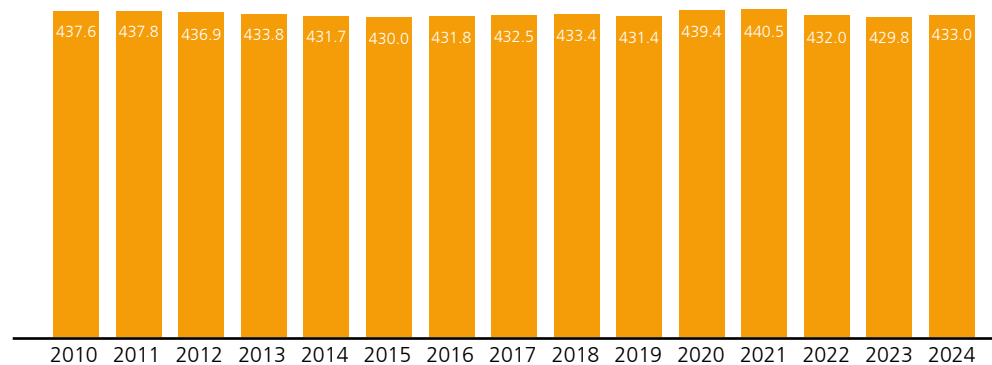
Total number of people travelling to work or training

* 100



Indicator 11-6: Car density

Figure 103:
Car density
(number of private cars) /
1000 residents
over the age of 18)



Source: State Capital Stuttgart, Statistics Office

The number of private cars per 1,000 inhabitants over the age of 18 varied only slightly during the period under review. It fell from around 438 cars in 2010 to 430 cars in 2015. In the years that followed, this figure rose slightly again, the year 2019 being an exception, to around 440 cars in 2020 and 2021. The increase in car density in 2020 and 2021 can be explained by the COVID-19 pandemic, as many people valued car ownership during this period due to fears of infection when using public transport. Once the infection rate had stabilised in 2022, many of the newly purchased or registered cars were deregistered.¹⁶⁸ Accordingly, the figure fell again in 2023 to around 430 cars per 1,000 inhabitants over the age of 18, but rose slightly to 433 cars in 2024.



This indicator is used to measure SDG target 11.2:
"Affordable and sustainable transport systems"

Classification / Definition

This indicator describes the level of motorisation in State Capital Stuttgart, measured by the number of private cars per 1,000 inhabitants over the age of 18. All passenger cars, including estate cars, registered in accordance with the Road Traffic Licensing Regulations (StVZO) and have an official licence plate are taken into account.

The indicator is linked to target 11.2 (Sustainable transport systems) through the reduction in car density and the increase in alternative and environmentally friendly modes of transport.

Calculation

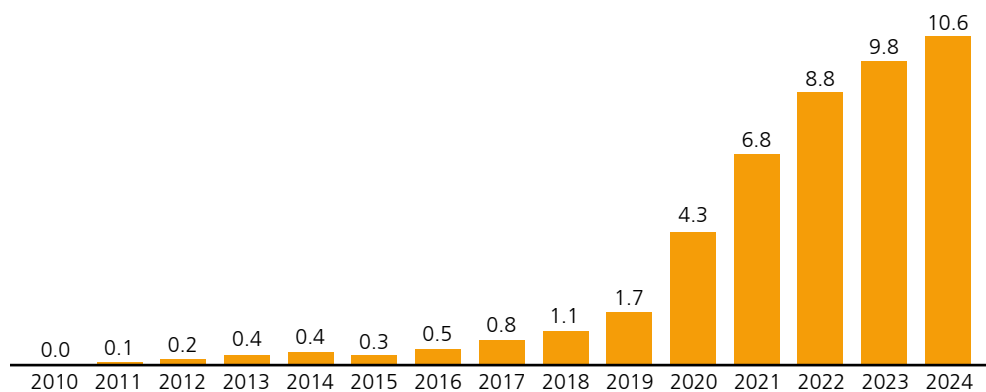
Car density:

$$\frac{\text{Number of private cars}}{\text{Population (over 18 years of age)}} \times 1000$$



Indicator 11-7:

Passenger cars with electric drive



Source: State Capital Stuttgart, Statistics Office

Figure 104:
Proportion of passenger cars with electric drive (incl. plug-in hybrids) (in percent)

Measured by the total number of registered passenger cars, the proportion of electric vehicles in Stuttgart has increased significantly between 2010 and 2024. A continuous rise was observed with the exception of the year 2015. The increase was particularly sharp between 2019 and 2022. Although this growth slowed somewhat from 2023 onward, the proportion of electric vehicles still continued to rise – recently peaking at 10.6 percent.



This indicator is used to measure SDG target 11.2:
"Affordable and sustainable transport systems"

Classification / Definition

Passenger cars with electric drive or plug-in hybrids are a more sustainable alternative to those with conventional combustion engines. They offer considerable potential for energy savings in terms of greenhouse gas emissions, particulate matter pollution and noise emissions relevant to urban traffic at speeds of up to approximately 50 km/h. Accordingly, the German government has set a target of putting at least 15 million electric cars on the road throughout Germany by 2030.¹⁶⁹

The indicator covers both purely electric vehicles and plug-in hybrids equipped with both an electric motor and a combustion engine. It compares all registered passenger cars with electric drive (including plug-in hybrids) to the total number of registered passenger cars.

Calculation

Passenger cars with electric drive:

Number of registered passenger cars with electric drive

/

Total number of registered passenger cars

* 100

Are electric passenger cars more environmentally friendly?

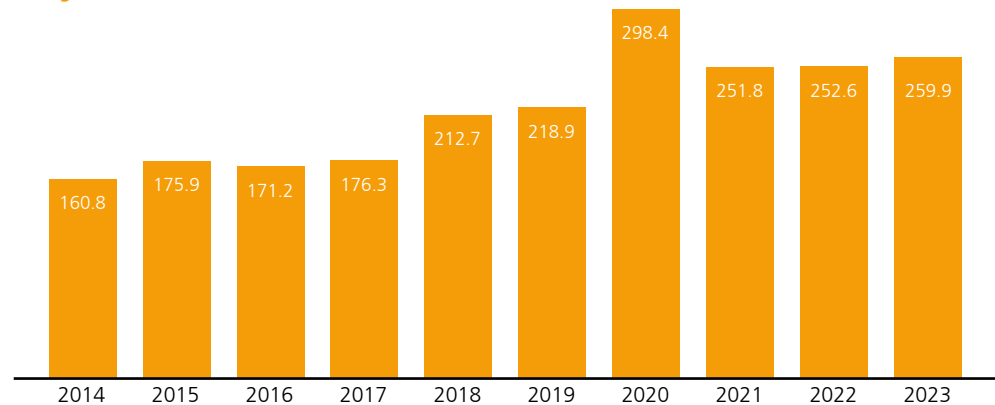
i

A common argument against the environmental benefits of electric cars is the high resource consumption for the batteries. According to data from the Fraunhofer Institute on the environmental friendliness of electric cars, the batteries have a significant impact on the vehicles' ecological balance, particularly during production. However, looking at the entire life cycle, these environmental impacts can be easily offset by using a clean electricity mix for charging and a long service life compared to a conventional car. The earlier this is achieved, the higher the ecological added value of an electric passenger car.¹⁷⁰



Indicator 11-8: Bicycle traffic

Figure 105:
Trips at selected bicycle
counting stations (bicycles /
100 residents)



Source: State Capital Stuttgart, Civil Engineering Office

The increase in bicycle traffic in Stuttgart is also reflected in the 15 permanently installed automatic bicycle counting stations in the city. In 2023, a total of around 1.6 million bicycle trips were recorded at the counting stations on Böblinger Straße and König-Karls-Brücke. If the 2020 figure is related to the number of Stuttgart residents, the two counting stations recorded a total of just under 300 bicycles (or bicycle trips) per 100 residents this year. The sharp increase this year was due to the COVID-19 pandemic, during which many users of public transport turned to bicycles out of concern for infection. From 2021, the figure dropped back to around 250 bicycle trips, but remained at a higher level than before the pandemic until 2023. In 2023, it stood at around 260 bicycles (or bicycle trips) per 100 inhabitants. No comparable data is available for 2024 due to the relocation of the measuring station at the König-Karls-Brücke bridge.



This indicator is used to measure SDG target 11.2:
"Affordable and sustainable transport systems"

Classification / Definition

Stuttgart has 15 permanent automatic bicycle counting stations. The first one was erected on 1 July 2012 at König-Karls-Brücke in Bad Cannstatt on the main cycling route 1. Another counting station, also on the main cycling route 1, is located in Stuttgart-Süd, Böblinger Straße. The number of cyclists passing this location has been counted since 10 December 2013. The indicator uses the values from these two counting stations because comparable data have been available here since 2014. It may be possible to expand the concept to other bicycle counting stations in the future. The indicator relates the number of bicycle trips counted at the two counting stations to 100 residents.

Calculation

Bicycle traffic:

Number of trips counted

/

Population

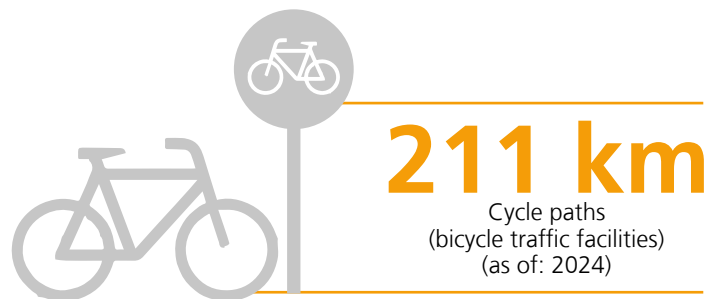
* 100

Opinions on conditions for cyclists

i

Only 22 percent of respondents to the 2023 Stuttgart survey were satisfied or very satisfied with the conditions for cyclists in Stuttgart. The largest proportion of respondents (34 percent) stated that they were very dissatisfied or dissatisfied with the conditions. 25 percent answered the question with neither satisfied/nor dissatisfied, 18 percent declined to answer.¹⁷¹

Indicator 11-9:

Cycle paths (bicycle traffic facilities)

Source: State Capital Stuttgart, Urban Planning and Housing Office

Stuttgart had approximately 360 kilometres of cycling infrastructure in 2024. Of these, 159 kilometres were designated as shared paths/bicycle access and 211 kilometres as dedicated bicycle traffic facilities. Bicycle traffic facilities include various sections on the road, such as bike lanes or bike protection lanes, as well as structurally separated cycle paths or shared pedestrian and cycle paths.

In addition, there are 265 one-way streets open to cyclists travelling in the opposite direction and 128 so-called bicycle gates. Approximately 70 percent of the road network in Stuttgart has a speed limit of 30 km/h, which is compatible with mixed traffic involving motor vehicles.



This indicator is used to measure SDG target 11.2:
"Affordable and sustainable transport systems"

Following the Municipal Council's resolution on 21 February 2019 to "make Stuttgart a bicycle-friendly city" and promote sustainable mobility, the advancement of cycling was given high priority in Stuttgart. To make cycling even more appealing, the cycle path network in State Capital Stuttgart is being continuously expanded. The resolution sets a long-term target of having cycling account for 25 percent of total traffic. According to the latest available data from the 2017 mobility survey "MID – Mobilität in Deutschland", this figure was 8 percent at that time (measured by the use of transport for commuting to work. See information on modal split under indicator 11-5).



Cycling in Stuttgart: Between approval and scepticism

i

The 2023 Stuttgart survey clearly shows that the topic of cycling in the city is highly polarised: While 51% of respondents are in favour of higher spending on expanding the cycle path network, 25% are in favour of savings and only 24% want spending to remain unchanged. No other issue in the survey shows such clear divisions.

A statistical analysis of user groups also shows that cycling is particularly popular among younger, healthier and higher-income people without their own cars. Party affiliation also has an influence: Supporters of green and left-wing parties are particularly in favour of increased investment in cycling infrastructure, while opposition is mainly found among conservative voters.

The results underscore that cycling is not only a transport policy issue, but also a socio-political debate. Different realities of life and political convictions shape perceptions and assessments of the measures, making the expansion of cycling a particularly socially sensitive issue in urban development.¹⁷²

Classification / Definition

Introduced in 2025, this indicator shows how many kilometres of the road network are specifically available for cycling. The German government's goal of making Germany a cycling country¹⁷³ underlines the relevance of this indicator.

The cycle route network consists of three different levels that serve different purposes and requirements: Cycle highways, main cycle routes and supplementary routes, and recreational routes. Cycle highways connect the surrounding area and neighbouring municipalities with Stuttgart city centre and are particularly attractive for commuters. The Stuttgart cycle highways are to be integrated into a supra-regional network planned for the whole of Baden-Württemberg. They are funded by the Federal Ministry of Transport and Infrastructure and the state of Baden-Württemberg. A central element of the promotion of cycling is the creation of the main cycle route network. The main cycle routes are designed for everyday traffic and are routed via various cycling infrastructure, such

as bicycle boulevards, cycle paths, cycle lanes and 30 km/h zones. They are recognisable as main cycle routes thanks to uniform signage. Supplementary routes are important connections that complement the network in a meaningful way. Leisure routes usually follow scenic paths and are primarily intended for recreation or sporting activities. Examples include the Radel-Thon and the FilderRadRunde.



You can find a map of cycle paths in State Capital Stuttgart here:
<https://tinyurl.com/bddm7f5j>

Calculation

Total kilometres of cycle paths



Indicator 11-10:
Accessibility of public transport

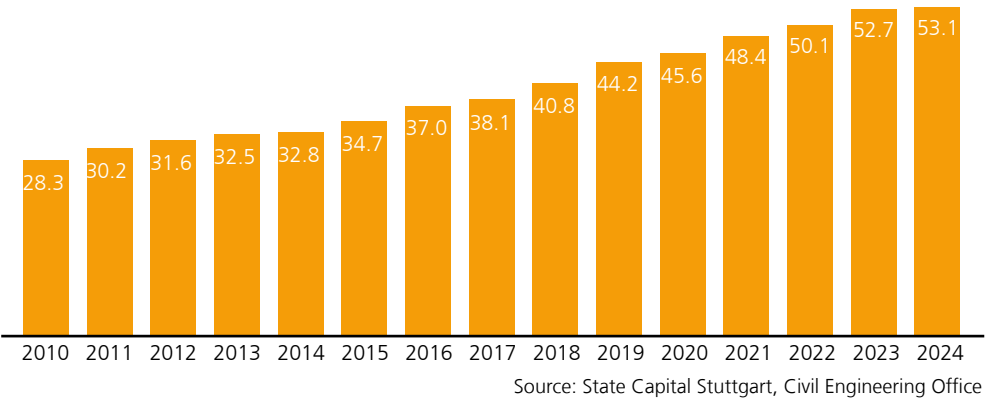


Figure 106:
Accessible bus stops
(in percent)

By the end of 2024, 441 of 831 bus stops (kerbs) had been equipped with kerb ramps. These ramps make it easier to board the bus and give the visually impaired a point of reference. During the period under review, the number of accessible stops rose steadily. As a result, more than half of Stuttgart's bus stops were accessible at the end of the period. In addition, the stops on the light rail (SSB) and suburban rail (DB) networks are largely accessible.¹⁷⁴



This indicator is used to measure SDG target 11.2:
"Affordable and sustainable transport systems"

Classification / Definition

Accessibility of the local public transport system (ÖPNV) is crucial for people with physical disabilities, as it allows them to participate in public life.

Accessibility in public transport covers a wide range of aspects that cannot easily be reflected in a single indicator. The indicator shows the proportion of accessible bus stops in Stuttgart from 2010 onwards.

Calculation

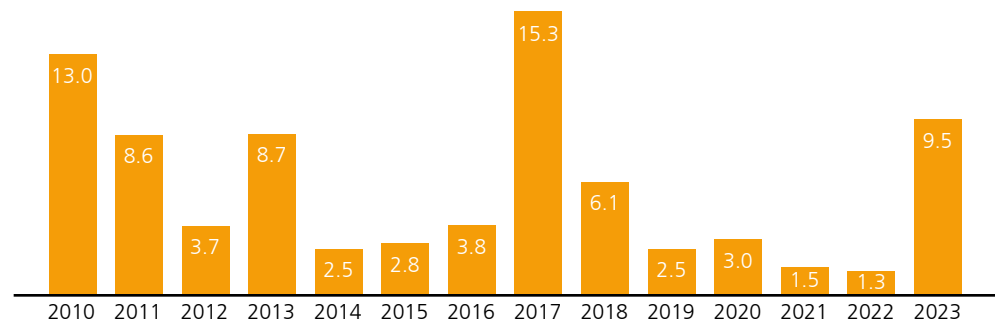
Accessibility of public transport:

$$\frac{\text{Number of accessible bus stops}}{\text{Total number of bus stops}} \times 100$$



Indicator 11-11: Land use

Figure 107:
Annual land use
(in hectares)



Source: State Capital Stuttgart, Statistics Office

Measures such as inner development, redensification and land recycling have significantly reduced land use in State Capital Stuttgart. In the 1980s, residential and traffic areas still grew by an average of 73 hectares per year, but between 2010 and 2023 the average was 5.9 hectares. Despite the general decline in land use, large-scale urban development projects in individual years repeatedly led to a stronger increase in residential and traffic areas, such as the expansion of the airport site in Plieningen in 2005. However, special developments, such as the change in the land use designation of the Pattonville special airfield in Mühlhausen in 2008, also had an impact on the indicator. The last particularly large land use took place in 2017 with the rezoning of the Langenäcker-Wiesert development area in Stuttgart-Stammheim. Land use in 2023, on the other hand, was not attributable to a single, particularly large project, but to several smaller changes in land use (in particular of land that was used for agricultural purposes until 2023 and was rezoned for settlement purposes).



This indicator is used to measure SDG target 11.3:
"Inclusive and sustainable urbanisation"

Classification / Definition

As a non-renewable resource, soil holds particular value. The German government has therefore set itself the goal of achieving "net zero" land use by 2050.¹⁷⁵ The economical use of land is an important factor in sustainable urban development.

Land use refers to the annual increase in residential and traffic areas. In this context, previously undeveloped areas are generally incorporated into the settlement structure through development.

However, the residential and transport areas do not correspond to the sealed area, as they include some low-density uses, such as green spaces, campsites and cemeteries. Residential and transport areas also include sections that are secondary to the primary use and remain unsealed. These include front gardens of residential buildings and roadside greenery.

Calculation

Annual land use:

Residential and transport areas in hectares

–

Residential and transport areas for the
previous year in hectares



Indicator 11-12: Recreational areas

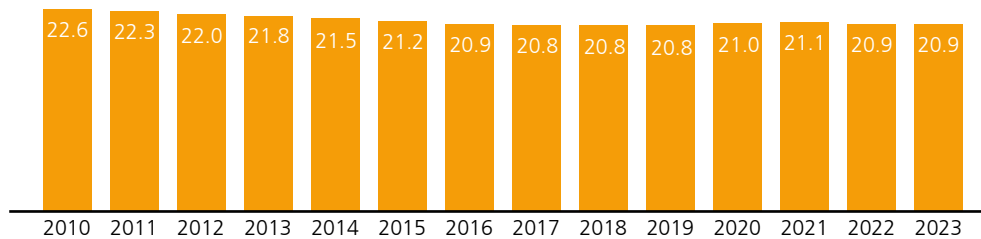


Figure 108:
Recreational areas
(in m² per capita)

Source: State Capital Stuttgart, Statistics Office

In purely mathematical terms, all residents have access to an average of around 20 square metres of sports, leisure, green areas and recreational space at their disposal – not including forest areas. This value initially fell slightly during the period under review as a result of changes in the population, and only rose slightly between 2019 and 2021 – to 21.1 square metres per capita. In 2022 and 2023, the figure stood at 20.9 square metres per capita.



This indicator is used to measure SDG target 11.7:

Ensure access to safe and inclusive green spaces and public spaces

Green spaces and recreational areas consistently account for around two percent of the Recreation area in State Capital Stuttgart. Around 600 hectares of Stuttgart's green spaces consist of high-quality, ecologically maintained parks and green spaces. However, Stuttgart's largest local recreation area is its forest. With an area of around 5,000 hectares, 24 percent of the city is covered by forest. In addition, the State Capital's vineyard and the historic vineyards in the city centre are a trademark of Stuttgart.

The preservation, further development and creation of green structures is essential for maintaining and improving the daily well-being of Stuttgart's population. In order to preserve the social and ecological benefits of public green spaces in the long term and develop them in a forward-looking manner, it is necessary to weigh up the importance of urban green spaces against other urban development policy objectives and needs.

Classification / Definition

In urban areas, open spaces and natural areas fulfil important social and ecological functions. They have a high recreational value, can reduce stress and serve as places where people can get together. However, recreational areas also have ecological value, as they can improve air quality through climate regulation and air filtration, especially in urban areas. The indicator compares the area of green spaces and recreational areas to the city's population. It also includes sports areas (see SDG 3 "Urban physical activity spaces"), but goes beyond this by including all green spaces and recreational areas

Calculation

Recreational areas:

Green areas and recreational spaces

/

Population

Opinions on green spaces

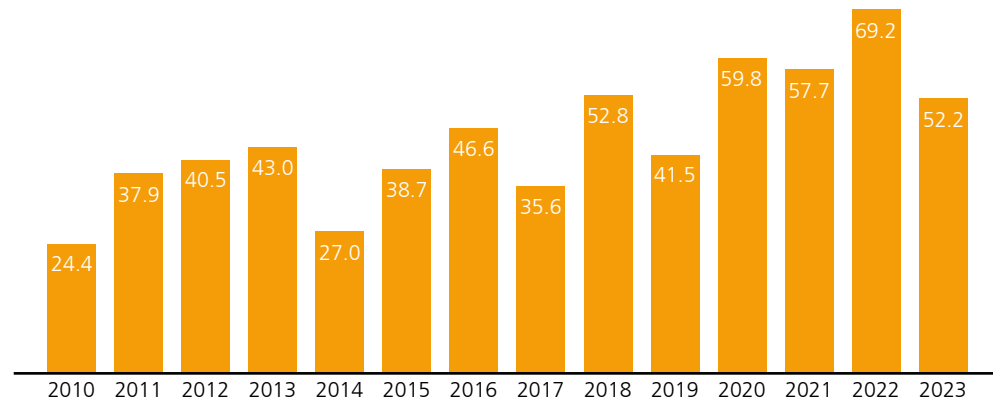
i

Around one third of the urban area in State Capital Stuttgart consists of woods, vineyards, orchards and public green areas, which include playgrounds and cemeteries, in addition to various parks. They make a significant contribution to the quality of life and public amenities available to the population. According to the 2023 citizen survey, 65 percent of Stuttgart's residents are satisfied or very satisfied with the parks and green areas.¹⁷⁶ However, in the 2023 participatory budget, the demand for creating new green areas is among the top places on the list.¹⁷⁷



Indicator 11-13: Completed residential buildings with renewable heating energy

Figure 109:
Proportion of completed
residential buildings with
renewable heating energy
(in percent)



Source: State Capital Stuttgart, Statistics Office

Since 2018, heating systems using renewable primary energy sources (mainly heat pumps, but also environmental or geothermal energy and fuels from renewable raw materials such as wood) have predominated in new construction projects. This has replaced gas as the most important heating energy source in new buildings. The proportion of completed residential buildings using renewable energies for heating was over 50 percent from 2020 to 2023.



This indicator is used to measure SDG target 11.b:

"Implement policies and plans for inclusion, resource efficiency and disaster risk reduction"

Classification / Definition

The indicator shows the ratio of newly erected residential buildings that are heated primarily with renewable energy to all new residential buildings of one year. Renewable primary heating energy includes geothermal energy, environmental thermal energy (air/water), solar thermal energy, wood, biogas, as well as other biomass energy sources.

Calculation

Completed residential buildings with renewable heating energy:

Number of completed residential buildings
with renewable primary heating energy

/

Total number of completed residential buildings

* 100

Energy-efficient renovation in Stuttgart: A key to climate neutrality

i

With a new construction rate of only around 0.6 percent in 2023, energy-efficient renovation of existing buildings in Stuttgart is essential to achieving climate targets. Although around 43 percent of residential buildings in the city have already undergone energy improvements, only a small number of older properties have been extensively upgraded. A large proportion of buildings still consume too much energy.

In order to achieve the climate targets by 2035, many of the older properties will have to be either completely or

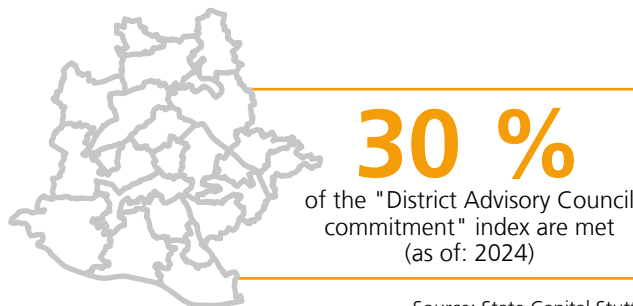
partially renovated. Renovating the most energy-inefficient properties is especially important. Many private owners are interested in energy-efficient renovations, but need attractive subsidies to put their ideas into practise.

State Capital Stuttgart supports renovation measures through subsidy programmes and advisory services and relies on information events and neighbourhood concepts to accelerate change in the building stock and win over owners to the cause.¹⁷⁸



Indicator 11-14:

Index of District Advisory Council commitment in the context of the Sustainable Development Goals (SDGs)



Source: State Capital Stuttgart, Statistics Office

In 2024, an average of around 30 percent of the District Advisory Council commitment index was fulfilled across the city. This means that, on average, the districts fulfilled slightly more than three of the nine criteria in the index (see list of questions below). However, the index fulfilment rate varies greatly between individual districts, ranging from 10 to 90 percent. On the one hand, this underlines that a lot is already being done in some districts on the topic of sustainability with reference to the International Sustainability Goals (SDGs), but on the other, it also highlights existing potential in several districts.



This indicator is used to measure SDG target 11.3:
"Inclusive and sustainable urbanisation"

The index questions show that districts are launching and implementing a wide variety of measures and activities. This highlights the creative opportunities available to the districts to align themselves with the SDGs. For example, in response to the question about the consideration of sustainability issues in consultations (question 1 in the questionnaire below), the districts pointed out that an energy concept for the district was being promoted in consultation with the Municipal Council. On the other hand, the responses referred to the promotion of sustainable administrative procedures (e.g. through attempts to switch to electronic meeting documents for consultations on construction projects). Very low-threshold measures are sometimes sufficient to meet individual criteria of the index. For example, in response to a question on sustainable procurement (question 2), reference was made to the use of reusable bottles and fair trade products. The range of activities also includes support for dedicated (civil society) 2030 Agenda initiatives, which, for example, have contributed to increasing the number of PV systems on private homes in the district through their commitment or have worked with citizens to assess the quality of public spaces (see, among other things, practical examples from the districts in the 2019 and 2021 reports and the districts' websites).

The index was introduced in 2025. It highlights the relevance of district advisory councils for achieving the International Sustainability Goals and the role they play in this. As multipliers, they can bring many SDG topics directly to the public and actively support local initiatives.

District Advisory Councils and sustainability

The District Advisory Councils in Stuttgart are the central link between the Municipal Council, the city administration and the citizens. According to the municipal code for Baden-Württemberg, the District Advisory Council has an advisory function, must be consulted on important matters affecting the municipal district and can submit motions to the Municipal Council. In addition, it is supposed to advise the administration of the municipal district on all important matters (such as the preparation of development plans or the accommodation of refugees) and has its own budget for civic projects in Stuttgart. The 326 seats are divided among the 23 city districts. The number of members of the District Advisory Council depends on the population of the respective district, and its composition reflects the results of the local elections in the city district concerned. In order to represent the interests of citizens effectively, District Advisory Councils usually meet once a month, with larger city districts sometimes holding meetings every two weeks.

Through their information and advisory role, District Advisory Councils have the opportunity to influence whether and to what extent sustainable development is promoted locally. However, the final decision rests with the Municipal Council.

Within the scope of their own work, however, the city districts can also pursue a sustainable course independently of the Municipal Council. For example, they can be recognised as a Fairtrade Town (or district) if they meet five criteria set by Transfair e. V. (including the adoption of a council resolution, the establishment of a steering group or the networking of civil society stakeholders).¹⁷⁹ In addition, they can actively engage with the 2030 Agenda and its relevance to the local context in their meetings, or specifically promote events on sustainability topics and support local sustainability initiatives.

Several data sources can be used to identify specific needs in the district. For example, State Capital Stuttgart provides the "Datenkompass Stadtbezirke Stuttgart" (Stuttgart City District Data Compass) and the "Statistikatlas Stuttgart" (Stuttgart Statistics Atlas).¹⁸⁰ Both provide data relevant to the city district level on the topic of sustainability (e.g. figures on the provision of daycare facilities for children, unemployment figures, income distribution). In addition, data from the city's own SDG dashboard will also be presented at the city district level in the future. In line with a data-driven approach, districts have the option of developing their own district-specific sustainability indicators and drawing up a district-specific sustainability strategy.

Classification / Definition

District Advisory Councils are very close to citizens. Thanks to their ability to advise the Municipal Council and be heard, they can influence issues that affect their district, such as construction projects. The index is a tool for making the District Advisory Councils' commitment to sustainability visible and measurable. In future, this commitment will be further supported by the planned provision of data for sustainability indicators at district level, so that data-based analyses can also be conducted at district level and used accordingly. This addresses the specific request of several District Advisory Councils. Actively involving the District Advisory Councils in this way is also relevant because there is currently no systematic and/or strategic set of indicators aimed at District Advisory Councils, either at federal level or in the "SDG Indicators for Municipalities" project, which is central to the municipal level.

The district commitment index is a summary index of nine dichotomous variables based on a standardised questionnaire with the questions listed below. Thirteen of the 23 city districts of the State Capital Stuttgart responded to the questionnaire and are included in the index value accordingly. The index was developed by the Statistics Office of State Capital Stuttgart.

1. Does your District Advisory Council take sustainability issues into account when advising or consulting the Municipal Council?
2. Does your District Advisory Council consider sustainable and fair procurement for District Advisory Council meetings?



3. Is your district recognised as a Fairtrade District (by TransFair e.V.)?
4. Has your District Advisory Council already discussed the Sustainable Development Goals (SDGs) and their implementation internally?
5. Does your District Advisory Council specifically promote events that are relevant to the Sustainable Development Goals (SDGs) (website, notice board, etc.)?
6. Does your District Advisory Council actively support the establishment or work of associations/initiatives that are directly related to the Sustainable Development Goals (SDGs)?
7. Does your District Advisory Council have its own website that provides information on topics relevant to the Sustainable Development Goals (SDGs)? Or does your District Advisory Council support relevant websites run by local stakeholders through its own contributions or other forms of commitment?
8. Were any events or campaigns organised by residents of the district last year that were clearly related to the Sustainable Development Goals (SDGs), and did your District Advisory Council provide targeted support for these?
9. Has the commitment of your District Advisory Council already led to concrete or measurable results or impacts for the Sustainable Development Goals (e.g. an increase in citizen participation or the number of private households with solar panels)? It is important to note that these results/effects are indeed attributable to the commitment of the District Advisory Councils.

Calculation

"District Advisory Council commitment" index:

Number of criteria met within the municipality
(answers with yes)

/

Total number of criteria to be evaluated (9)

* 100

Correlation with other SDGs

Many aspects of sustainability influence the design of the city or are affected by its design.

The economic development of the city (SDG 8 "Decent Work and Economic Growth" and SDG 9 "Industry, Innovation and Infrastructure") has direct implications on land use, soil protection and many other aspects such as water consumption and water pollution (SDG 6) or the development of energy infrastructure (SDG 7). The creation of infrastructure to promote the economy (SDG 8) and industry (SDG 9) must be reconciled with the prevention of environmental pollution in order to avoid target conflicts. Increased use of industrial land, for example, could lead to an increase in greenhouse gas emissions, which could exacerbate climate change (SDG 13).

However, these dimensions of sustainability in a city also depend on transport and consumption patterns (SDG 12 "Sustainable consumption and production"). The expansion of public

transport systems and the promotion of environmentally friendly mobility solutions are key factors that influence land use and climate-damaging gas emissions while improving the quality of urban life.

Measures to mitigate climate change (SDG 13) are often urban planning measures. This is where the opportunities and target conflicts of sustainable development collide. The expansion of green spaces and the improvement of energy efficiency in buildings are crucial for reducing greenhouse gas emissions and increasing the resilience of cities to climate change. However, these measures could lead to a target conflict if they are implemented in densely populated areas with high property values, potentially jeopardising affordable housing.

Furthermore, the social and cultural dimensions of the sustainable development goals are particularly relevant to social cohesion. This means reducing poverty (SDG 1) through access

to economic resources and affordable housing. Housing must be designed in such a way as to promote social cohesion and avoid gentrification (SDG 10 "Reduced inequalities"). Similarly, the impact on health (SDG 3) should be improved through lower noise pollution, better air quality and the expansion of health infrastructure. At the same time, access to education for all (SDG 4) must be ensured through the expansion of educational facilities.

Social inclusion (SDG 10) also plays a role, for example through the creation of barrier-free housing. Equally important is the promotion of gender equality (SDG 5), for example through greater representation of women on Stuttgart's Municipal Council. Finally, peace, justice and strong institutions (SDG 16) and global partnerships (SDG 17) should also be strengthened.

In addition, the promotion of social integration and access to cultural activities (SDG 4) are of great importance for the creation of sustainable cities. Cities that promote a diverse cultural identity and enable inclusion support social cohesion and reduce social inequalities. This also requires inclusive urban planning that offers all social groups access to resources and opportunities for participation.

Urban development measures should be planned and implemented in an environmentally sustainable manner that conserves energy and resources in order to mitigate target conflicts in the area of environmental sustainability (SDG 6, SDG 13, SDG 14, SDG 15). At the same time, the transition to sustainable energy sources and the development of "green" infrastructure projects, such as solar panels on buildings (SDG 7) and efficient waste management systems (SDG 12), are important steps towards promoting environmental sustainability.

The design of urban infrastructure also has a significant impact on consumption and production patterns and is therefore linked to almost all of the SDG 12 targets. For example, efficient public transport and the promotion of recycling and circular economies in urban areas are closely linked to SDG 12 and promote sustainable consumption patterns. However, a target conflict arises when urbanisation leads to increased consumption of resources and, at the same time, more waste is produced.

SDG 11 "Sustainable Cities and Communities" was explicitly included in the 2030 Agenda to underline the important role of municipalities in achieving the sustainable development goals as a whole. In fact, all SDGs concern socially, economically and ecologically sustainable urban development. The challenge is to combine all dimensions of sustainability in urban development without promoting one dimension at the expense of another.

The following indicators are also directly relevant to SDG 11, "Sustainable cities and communities":

- SDG 1:** "Homelessness"
- SDG 3:** "Air quality"
- SDG 3:** "Noise pollution"
- SDG 3:** "Places in nursing homes"
- SDG 3:** "Medical care"
- SDG 3:** "Primary care close to home – distance to the nearest GP practice"
- SDG 3:** "Urban physical activity spaces"
- SDG 3:** "Perception of loneliness"
- SDG 4:** "Media collection of the Stuttgart City Library"
- SDG 4:** "Culture budget"
- SDG 6:** "Barrier-free or low-barrier sanitary facilities"
- SDG 7:** "Charging station infrastructure"
- SDG 7:** "Energy productivity"
- SDG 8:** "Occupational safety"
- SDG 8:** "Accommodation places"
- SDG 10:** "Low-barrier housing"
- SDG 11:** "Financial burden of housing costs"
- SDG 12:** "Amount of waste"
- SDG 12:** "Environmental protection investments in the manufacturing sector"
- SDG 13:** "Greenhouse gas emissions"
- SDG 13:** "Municipal Climate Adaptation index"
- SDG 13:** "Trees in public spaces"
- SDG 15:** "Soil index"
- SDG 15:** "Conservation areas"
- SDG 15:** "Biodiversity"
- SDG 16:** "Registered users at 'Stuttgart – meine Stadt' [Stuttgart – my city]"
- SDG 16:** "Digital municipality"
- SDG 16:** "Mobile working"
- SDG 16:** "Crimes"
- SDG 16:** "Cash surplus / deficit for the long-term fulfilment of tasks"



Practical example 19: Social planning in urban renewal



Context

Social planning is a specialist unit within the Urban Renewal Department that supports urban development measures from a social perspective and upholds the principle of social compatibility in accordance with Section 180 of the German Building Code (BauGB). The main focus is on accompanying and supporting tenants and owners in redevelopment areas. The aim is to discuss various issues and work out mutually acceptable solutions with those involved. In accordance with Section 180 of the German Building Code (BauGB), State Capital Stuttgart offers tenants affected by redevelopment special support where necessary to mitigate or avoid adverse effects, for example in finding replacement and temporary accommodation, organising the move, applying for financial support and providing individual assistance by arrangement.

Particularly when promoting private modernisation, careful consideration of those affected by redevelopment is an important concern of urban renewal in Stuttgart. Their social concerns are becoming even more pressing due to the tight housing market. It is the responsibility of the municipality to develop ideas on how the adverse effects of urban redevelopment measures on residents can be avoided or at least minimised. This is done through an area-specific social plan.

Description / Implementation

Social planning plays a central role in urban renewal at the Urban Planning and Housing Office of State Capital Stuttgart. Every person affected by redevelopment has their own needs that must be taken into account (SDG 11). This requires individual consideration and sensitive handling in each individual case (SDG 10).

The central aspect of social planning is to mitigate or even prevent the adverse effects of urban redevelopment measures on those affected by redevelopment (SDG 1). Social planning therefore works together with the project managers of the redevelopment areas at an early stage and is comprehensively involved. If necessary, an individual social plan with appropriate measures to mitigate disadvantages is drawn up with those affected by the redevelopment (SDG 1, SDG 11, SDG 16).

Individual support for each case allows the needs and concerns of those affected to be better understood and addressed in a solution-oriented manner. Social planning works closely with those affected, listens to them and develops solutions together with them (SDG 1, SDG 11, SDG 16). This dialogue-oriented approach not only ensures greater acceptance of the measures, but also promotes trust in the municipal authorities (SDG 16).

In addition, the individual consideration of each case offers the opportunity to learn from every situation. Each case brings new challenges and experiences that can be incorporated into future cases. This ensures that work is continuously improved (SDG 1, SDG 11, SDG 16).

The following case studies illustrate the sustainability aspects of social planning:

Case study 1:

An investor purchases a building in a redevelopment area. Due to extensive modernisation of the building, a tenant has to move out. Due to psychological and social limitations, the tenant is already receiving support from a social services agency before the redevelopment affects them. Ultimately, they can be offered an apartment without a kitchen. As the tenant is unable to manage their life independently due to the aforementioned problems, social planning not only takes care of the financial arrangements, but also plans and orders the new kitchen. The tenant is provided with funding for both the move and the new kitchen.

The following sustainability goals are addressed: Municipal support and assistance enable socially disadvantaged individuals and households to access information. This is therefore part of time-critical social protection measures (SDG 1) and, in the case of resource-conscious procurement (SDG 9) and use, is cost-saving in the long term and sustainable for those affected by redevelopment (SDG 1). Municipal advice and procurement can ensure the use of economical, energy-efficient (SDG 7) technical equipment. Municipal support ensures access to critical technical equipment and other infrastructure in the household (SDG 10).

Case study 2:

In a redevelopment area with municipal garden plots, lease agreements are being terminated because the land is to be used for public purposes. Social planning supports those affected in finding alternative garden plots and provides financial assistance for moving garden furniture and equipment. As the termination has a negative impact on the personal circumstances of those affected – they lose their garden plots – they are considered to be affected by redevelopment within the meaning of Section 180 of the German Building Code (BauGB).

The following sustainability goals are addressed: Enabling and ensuring access to affordable green spaces for vulnerable and socially disadvantaged people (SDG 1) contributes to reducing inequalities (SDG 10). The opportunity to engage in urban gardening on the garden plots and to grow vegetables and fruit to a limited extent can contribute to securing local, and therefore inexpensive (SDG 2), and healthy (SDG 3) food. Municipal support also ensures access to safe, inclusive and accessible green spaces (SDG 11.7). Preserving and protecting unsealed or green spaces contributes to climate adaptation at the local level (SDG 13) and supports the preservation of biodiversity (SDG 15).

In both examples, the aim is to achieve transparent cooperation and advice that is as inclusive and accessible as possible (SDG 16).

Experience / Results

Since social planning often involves working with vulnerable groups (SDG 1, SDG 5), individual support services such as access to social services (SDG 3), care and assistance for the elderly (SDG 3), as well as support from job centres, counselling services and language courses (SDG 4) are provided and accompanied.

Another important point is the promotion of social networks within neighbourhoods. Targeted measures and projects can strengthen community spirit and cohesion. This is particularly important in order to prevent social isolation and create a lively, supportive environment in which everyone feels comfortable.

Overall, social planning is an indispensable tool for urban renewal in Stuttgart. It ensures that the interests and needs of those affected by redevelopment are at the centre of attention and that urban redevelopment measures have no or at least as little adverse impact as possible.

The legal requirements of Section 180 of the German Building Code (BauGB) give municipalities considerable leeway in interpreting and weighting this target provision. In a nationwide comparison of cities, State Capital Stuttgart holds an outstanding position in terms of effort, scope and depth.

Division / Office / Public Undertaking

Urban Planning and Housing Office

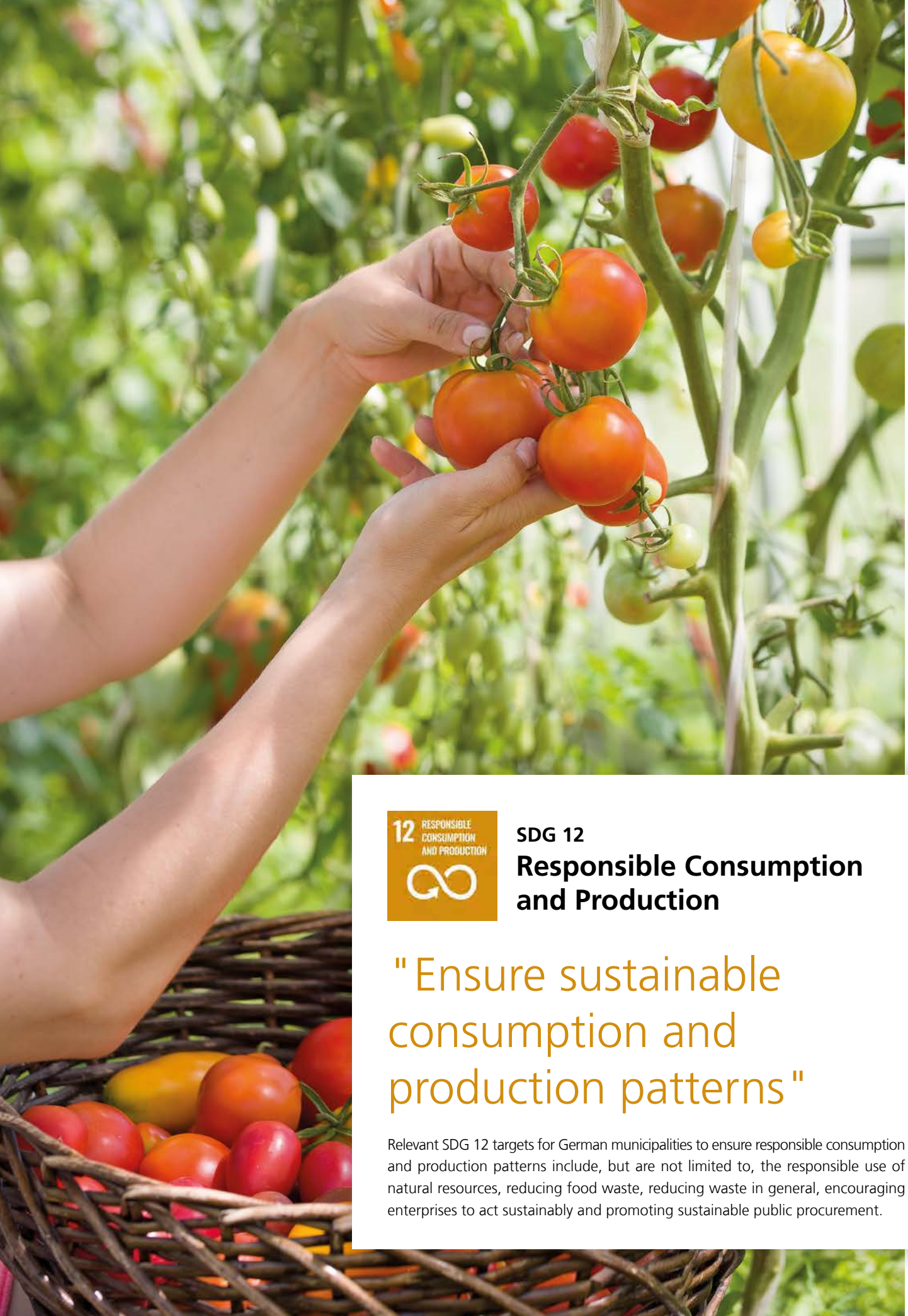
Urban Renewal and Residential Development Department / Urban Renewal subdepartment, Social planning in the of Urban Planning, Housing and Environment Division

Further reading / links

Section 180 of the German Building Code (BauGB); www.stuttgart.de/leben/stadtentwicklung/stadtplanung/ (Last access on 10.02.2025)



Further practical examples at: www.stuttgart.de/lebenswertes-stuttgart



SDG 12 Responsible Consumption and Production

"Ensure sustainable
consumption and
production patterns"

Relevant SDG 12 targets for German municipalities to ensure responsible consumption and production patterns include, but are not limited to, the responsible use of natural resources, reducing food waste, reducing waste in general, encouraging enterprises to act sustainably and promoting sustainable public procurement.

Overview of the relevant targets

The following targets of SDG 12 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Appendix II.



12.1 Implement the ten-year programme framework for sustainable consumption and production patterns



12.5 Substantial reduction of waste



12.6 Encouraging enterprises to introduce sustainable processes and sustainability reporting



12.7 Promotion of sustainable processes in public procurement

The following relevant targets have not yet been represented by indicators:



12.2 Sustainable farming and efficient use of natural resources



12.3 Halving the global food waste per capita



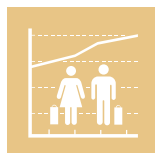
12.4 Responsible management of chemicals and waste



12.8 Promotion of a general understanding for sustainable lifestyles



12.a Support of scientific and technological capacities of developing countries for responsible consumption and production patterns



12.b Development and implementation of instruments to monitor sustainable tourism activities

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Indicator 12-1:
Fair trade schools

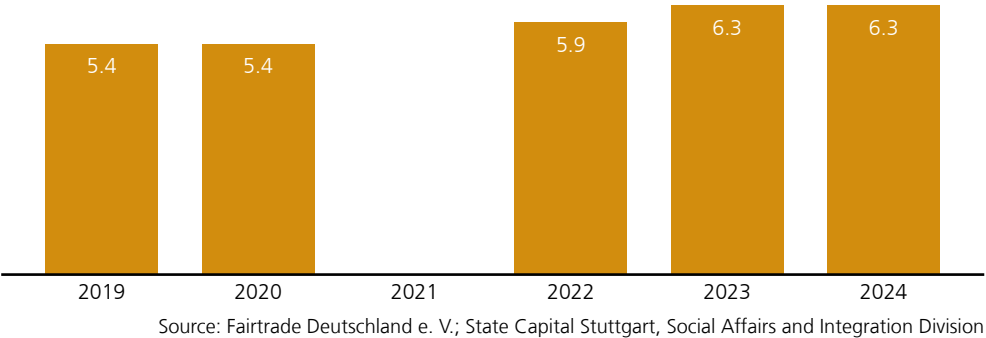


Figure 110:
Proportion of fair trade schools
(in percent)

While the proportion of fair trade schools remained constant at 5.4 percent of all public schools in Stuttgart in 2019 and 2020, the figure rose to just over 6 percent in 2023 and 2024. According to the current map of the fair trade schools campaign, ten of the 159 public schools in Stuttgart are currently fair trade schools (three more schools are in the certification process).¹⁸¹

This indicator is used to measure SDG target 12.1:
"Implement the ten-year programme framework for sustainable consumption and production patterns"

Classification / Definition

The indicator indicates the proportion of fair trade schools in relation to all Stuttgart schools. The "Fair Trade Schools" campaign offers schools the opportunity to integrate the subject of fair trade into everyday school life and raises the awareness of pupils for sustainable development.¹⁸² In addition, the participating schools can show their commitment and their creativity to the outside world. The campaign, which has been running since 2012, aims to support the international education campaign "Education for Sustainable Development" and also to promote cooperation between local Fairtrade Towns and universities in order to implement joint projects. To become part of the campaign, schools must meet five criteria

that reflect fair trade and commitment at various levels. The campaign also supports schools in developing local projects to disseminate information about fair trade.

Calculation

Fair trade schools:

Number of fair trade schools

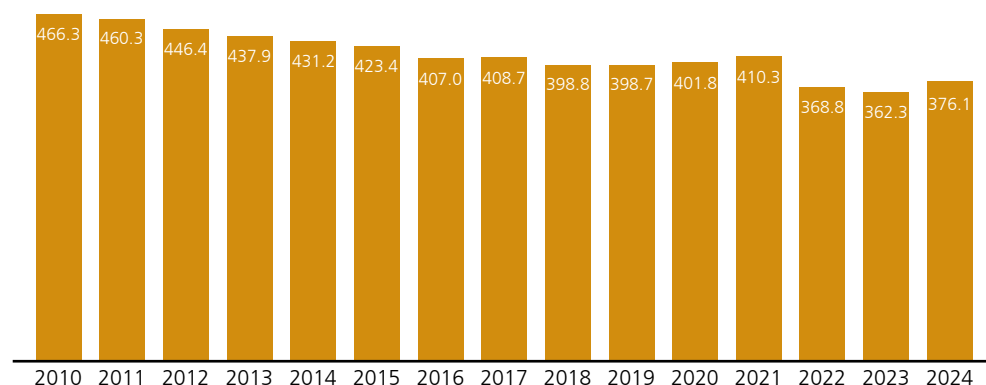
/

Total number of schools

* 100

Indicator 12-2: Amount of waste

Figure 111:
Amount of municipal waste
(domestic, bulk, organic waste
and recyclable material)
(in kg per capita)



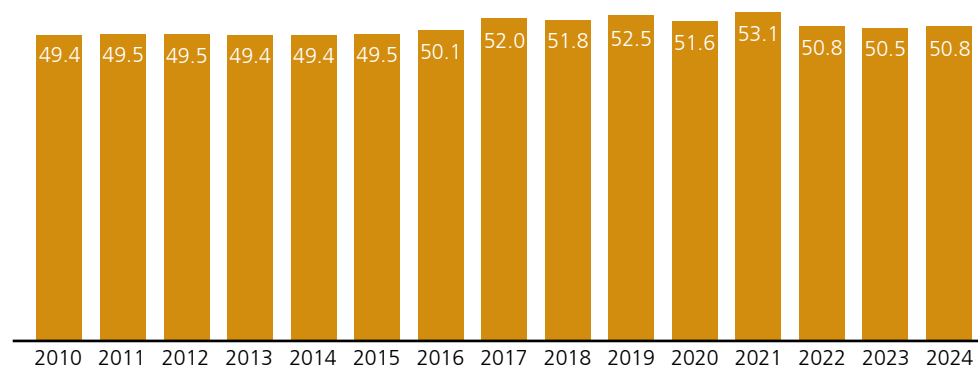
Source: State Capital Stuttgart, Public Undertaking Stuttgart Waste Management (AWS)

After a temporary increase since 2010, municipal waste generation per capita declined and has stagnated at around 400 kilograms per capita since 2018. However, in 2020 and 2021, municipal waste generation rose again to 410 kilograms per capita (presumably due to the COVID-19 pandemic). In 2022, the figure then fell significantly to around 369 kilograms per capita and will remain at a lower level than before the COVID-19 pandemic until 2024. The decline applies to waste of all kinds.



This indicator is used to measure SDG target 12.5:
"Substantial reduction of waste"

Figure 112:
Percentage of recyclable
material and green waste in the
amount of waste (in percent)



Source: State Capital Stuttgart, Public Undertaking Stuttgart Waste Management (AWS)

Overall, the proportion of recyclable materials and green waste in the total waste amount rose by 1.4 percentage points between 2010 and 2022. Since then, this figure has remained relatively stable at around 51 percent up to and including 2024. Reducing the amount of municipal waste is a development goal that should not be neglected. However, particular attention is paid to separating residual waste from recyclable materials in order to increase the proportion of separately collected recyclables. The idea is to screen the recyclable material contained in residual waste and send it for recycling. Not least thanks to the expansion of recycling facilities, the proportion of recyclable materials in the total waste amount has increased in recent years. A positive trend is also expected for the years to come, not least because of the comprehensive introduction of mandatory organic waste bins throughout the city, which began in 2015 and was completed in 2018. The organic waste bin was introduced on a voluntary basis over 20 years ago.



Opinions on waste disposal



In the 2023 Stuttgart survey on satisfaction in various areas of life, just under 78 percent of respondents said they were satisfied with waste disposal and rubbish collection. Some 21 percent of respondents were even very satisfied. The cleanliness of streets and green spaces was rated much more positively in the 2023 survey than in the one conducted in 2021. While around 29 percent considered the cleanliness of streets and green spaces to be inadequate in 2023, the figure was 51 percent two years earlier.

Classification / Definition

Reducing waste and reusing recyclable materials have long been important sustainability concerns. These issues focus on two main aspects: the overall amount of municipal waste produced and the effective use of recyclable materials. The waste amount indicator is limited to household waste and excludes commercial waste.

To determine the amount of municipal waste in kilograms per capita, data is gathered on household and bulky waste, green and organic waste, as well as all other separately collected recyclable materials, such as waste paper, glass, lightweight packaging, and electronic waste. The analysis does not take into account separately collected commercial and construction waste, which can be deposited with the public waste disposal authority but is not governed by municipal disposal requirements in principle. It is therefore not to be counted directly as household waste or as part of the per capita waste quantities collected under municipal control. In contrast, problematic waste collected by municipal hazardous waste collection services is added to residual and bulky waste.

The indicator reflects the amount of waste generated per year in relation to the population of Stuttgart. The proportion of recyclable material indicates the proportion of recyclable material contained in the waste.

Calculation

Total amount of waste:

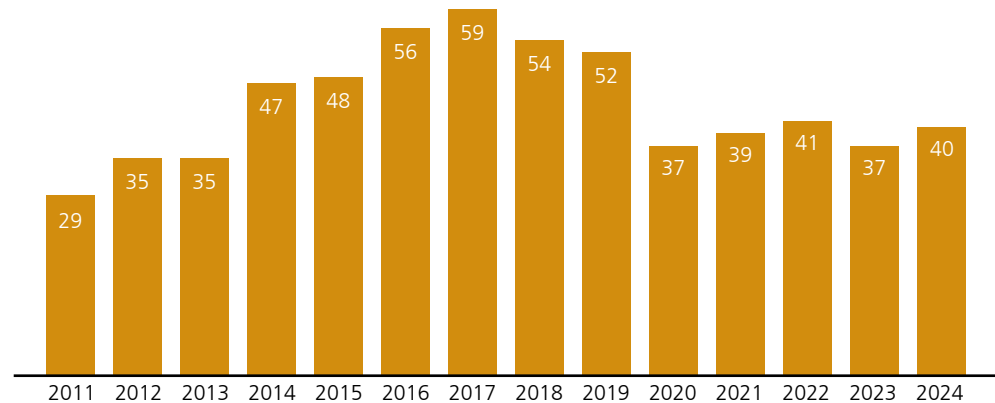
Total amount of waste in kg
/
Population

Proportion of recyclable material in the volume of waste:

Amount of recyclable material, green and organic waste in kg
/
Total amount of waste in kg
* 100

Indicator 12-3: EMAS-certified sites

Figure 113:
EMAS-certified sites
(in number of sites)



Sources: German Chamber of Industry and Commerce, evaluation by The German Institute for Urban Studies

The number of sites certified according to the Eco Management and Audit Scheme (EMAS) increased steadily to 59 by 2017. The number of EMAS-certified sites declined in the period between 2018 and 2020. Since then, the number has remained steady at around 40 sites. This is in line with the overall trend in Germany, which has also been declining since peaking in 2017.¹⁸³



This indicator is used to measure SDG target 12.6:
"Encouraging enterprises to introduce sustainable processes and sustainability reporting"

Classification / Definition

The Eco Management and Audit Scheme (EMAS) is a European certification system for assessing the environmental compatibility of companies. The German government aims to achieve 5,000 EMAS-certified organisational sites nationwide by 2030.¹⁸⁴ In doing so, companies commit to aligning their energy and resource use with ecological principles beyond the legal requirements. Regular reporting obligations and audits by state-supervised environmental experts are also included in the profile of requirements.

EMAS-certification reliably reflects environmentally compatible business processes. That said, non-certified companies can also align themselves with environmental criteria to avoid the expense of certification procedures. This leads to an under-estimation of the number of environmentally focused business sites.

EMAS certification is awarded to operating sites. The number of EMAS sites refers to the postcode area of Stuttgart (beginning with 70xxx). Since the number of operating sites in State Capital Stuttgart is unknown, it is not possible to determine the proportion of EMAS sites. The data for individual years should only be regarded as approximate, as certificates may be added or expire during the course of a year.

Calculation

EMAS-certified sites:

Number of EMAS-certified sites

Indicator 12-4:

Environmental protection investments in the manufacturing sector

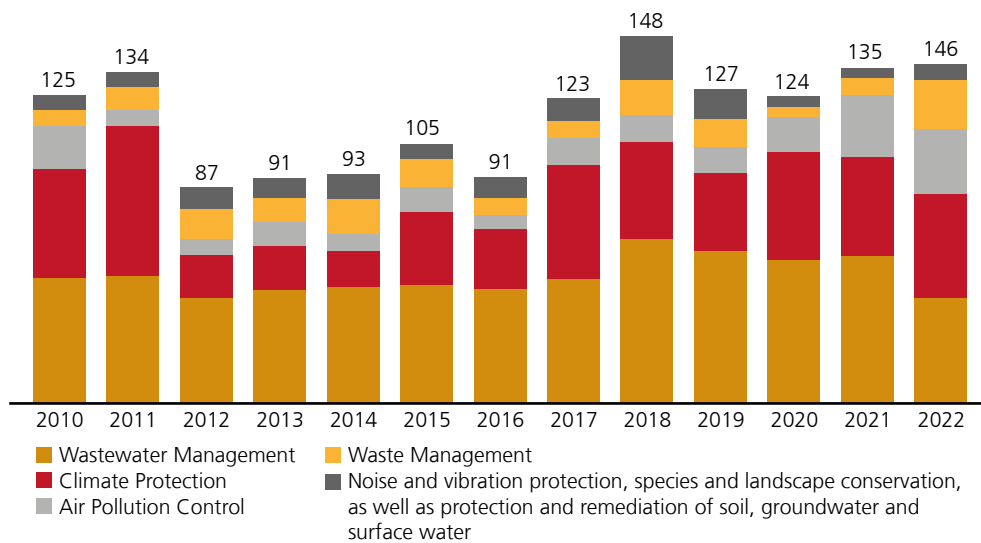


Figure 114: Environmental protection investment in the manufacturing sector by environmental area (figures in millions of euro)

Source: State Statistical Office Baden-Württemberg

The total amount invested in environmental protection in the manufacturing sector in Stuttgart in 2022 was around 146 million. This represents an increase of around 8 percent on the previous year.

A large proportion of all environmental protection investments are in the areas of wastewater management and climate protection. In 2022, these two areas combined accounted for around 64 percent. Some 35.3 percent of all environmental protection investments were made in the wastewater management sector alone. This includes measures to improve wastewater treatment or reduce the volume of wastewater. Climate protection measures contribute to the prevention and reduction of greenhouse gas emissions in accordance with the Kyoto Protocol.¹⁸⁵ These include the use of renewable energies and increasing energy efficiency. A significant increase in investment has also been observed recently in the environmental sector of air pollution control. From 2019 to 2022, investment in this area rose by 14.5 million euro (41.2%). A growth surge was recorded in 2020, as investments in electric mobility have been included since this reporting year. In addition to measures that contribute to reducing and avoiding exhaust gases, for example, measures that contribute to providing the infrastructure for electric mobility are now also included in the calculations. The total investment in the environmental sector of waste management has more than tripled between 2010 and 2022. This includes measures that invest in waste treatment and disposal facilities.



This indicator is used to measure SDG target 12.6:
"Encouraging enterprises to introduce sustainable processes and sustainability reporting"

Classification / Definition

Environmental protection investments in the manufacturing sector are an important measure of the efforts made by companies and businesses to improve the environmental compatibility of their production. The manufacturing sector includes mining, energy, manufacturing and construction. Investments in facilities that contribute to reducing, preventing or eliminating emissions into the environment or enable more resource-efficient use of resources are referred to as environmental protection investments.¹⁸⁶ These are divided into five areas: Wastewater management, climate protection, air pollution control, waste management, noise and vibration control, species and landscape protection, and protection and remediation of soil, groundwater and surface water.

The environmental economy is becoming increasingly important for economic policy decisions and issues of sustainable development. From a business perspective, environmental changes must increasingly be incorporated into corporate strategy in order to be able to respond to changes in a timely manner and remain competitive in the long term. The integration of sustainability not only benefits the environment, but also has economic advantages, such as cost savings through reduced resource consumption.

The indicator was included in SDG monitoring for the first time in 2025.

Calculation

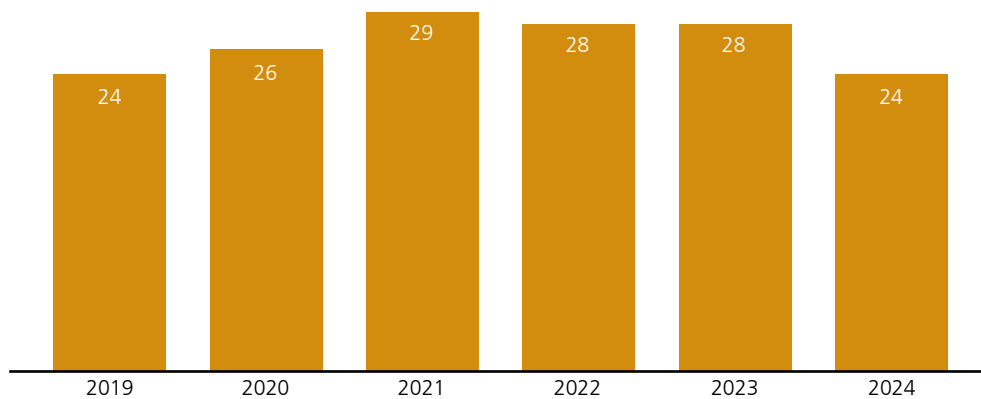
Environmental protection investments
in the manufacturing sector:

Environmental protection investments in the
manufacturing sector by environmental area
in millions of euro





Indicator 12-5: Sustainable procurement



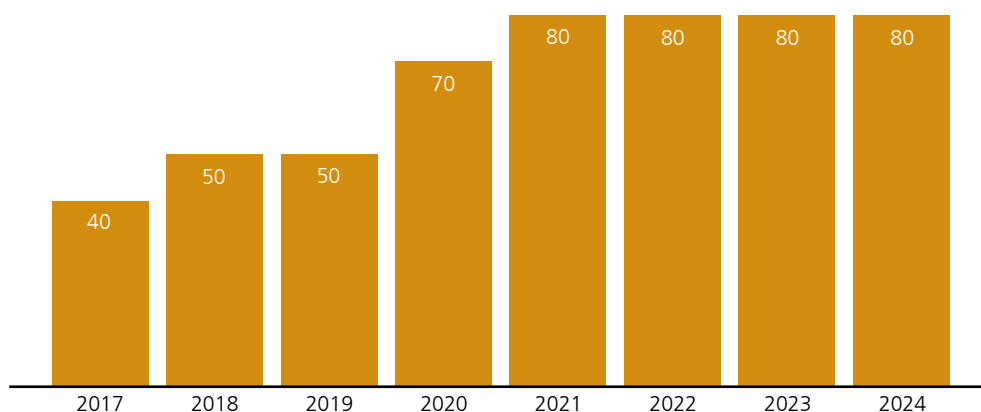
Source: State Capital Stuttgart, Central Purchasing

Figure 115:
Sustainable procurement
procedures of State Capital
Stuttgart (in percent)

Around a quarter of the procurement procedures carried out by the Central Purchasing Department of State Capital Stuttgart are sustainable. Their share of all procurements has been calculated since 2019 and most recently stood at 24 percent. Fluctuations in the figures are not necessarily the result of less consideration being given to sustainability, but also of the type of tenders issued. For example, the number declined in 2024 due to a high volume of smaller tenders that placed little emphasis on sustainability, such as German language courses, specialised software, or repair measures). As the population varies accordingly, comparisons over the years are challenging and the trend should be interpreted in a medium to long-term perspective. This is another reason why the "sustainable procurement" index, which measures procurement processes in municipalities, is a relevant additional indicator for this area (see Figure 116). This index rose significantly in Stuttgart between 2017 and 2021 and has remained unchanged at 80 percent since then.



This indicator is used to measure SDG target 12.7:
"Promotion of sustainable processes in public procurement"



Source: State Capital Stuttgart, Central Purchasing

Figure 116:
Sustainable procurement index
of State Capital Stuttgart
(in percent)

The values of the "Sustainable Procurement" index correspond to the number of 'yes' answers to the questionnaire below.

One example of sustainable procurement is that of paper and printed materials. According to municipal regulations, recycled paper has been mandatory since 2014. The proportion of recycled paper in the total paper consumption in the administration of State Capital Stuttgart therefore increased almost continuously from 2007 to 2018. Whereas nearly 25% of the paper consumed in 2007 was non-recycled, this proportion had dropped to below one percent by 2023. This means that the Stuttgart administration has almost completely switched to recycled paper.

The majority of all public procurement is handled by the municipalities. This involves a high degree of responsibility and sets an example for sustainable development, which State Capital Stuttgart is keen to fulfil. Stuttgart's Municipal Council decided back in 2005 to stop purchasing products that are made using exploitative child labour. Generally speaking, the Central Purchasing Department in the Office of Administrative Services and Human Resources requires all bidders and their subsidiaries and suppliers to comply with the core labour standards of the International Labour Organisation (ILO), which are intended to ensure humane working conditions and adequate protection. The product range of municipal procurement is constantly extended by regional, ecological and fair trade items. Since 2013, Stuttgart has been among the Fairtrade cities.

Classification / Definition

The proportion of sustainable procurement is estimated annually by Central Purchasing on the basis of the list of contract numbers.

The "Sustainable Procurement" index is a sum index of ten dichotomous variables based on a standardised survey¹⁸⁷ containing the following questions:

1. Is there a council order on a sustainable orientation of procurement?
2. Is a guideline on sustainable procurement applied (e.g. ISO 20400)?
3. Are specific, sustainable procurement goals defined?
4. Have quality requirements for sustainable production methods and supply chains been established?
5. Are measures available to support suppliers / contractors in complying with the required standards?
6. Are business relationships with suppliers not complying with the required standards ultimately terminated?
7. Does your municipality analyse the social and environmental risks of the products to be procured?
8. Are defined business processes for sustainable procurement available?
9. Does your municipality communicate the goals, activities and results of sustainable procurement management to the general public?
10. Is there an office responsible for sustainable procurement management in the municipality?

Calculation

Sustainable procurement procedures:

Number of sustainable procurement procedures

/

Total number of all procurement procedures

* 100

"Sustainable Procurement" index:

Number of measures for sustainable procurement implemented in the municipality (answers with yes)

/

Total number of measures under review

* 100



Correlation with other SDGs

Sustainable consumption and production patterns, which are reflected in the behaviour of individuals and organisations, have an impact on all dimensions of sustainability. The emphasis is on the social and environmental aspects, which directly influence the economic dimension. An integrative approach that takes ecological, social and economic factors into account is crucial for creating a sustainable consumption and production system.

Cities and municipalities, but also companies and private individuals, have a direct impact on improving people's living conditions along global value chains through socially and environmentally responsible procurement and purchasing decisions. One example is the reduction of poverty (SDG 1) and thus hunger (SDG 2) or by the creation decent jobs and fair wages (SDG 8). Especially at urban level, sustainable purchasing decisions and consumption habits – such as promoting local, organic products (SDG 2) – can have positive effects on social justice and economic inclusion. Here, the focus is on the social and environmental dimension, which in turn has a direct impact on the economic dimension. Impacts on health can also be improved by complying with health standards, thereby reducing occupational accidents and the release of pollutants (SDG 3).

Environmentally friendly consumption and production choices provide an opportunity to reduce direct environmental impacts by lowering drinking water use, minimising waste, and promoting ecologically responsible management. This leads to positive effects on the environment (SDG 13, SDG 15), marine resources and marine pollution (SDG 14).

In a broader sense, sustainable consumption and production patterns aim at sustainable behaviour overall. This applies to both the consumption of goods and the use of energy and resources, which has a direct impact on the ecological footprint (SDG 6, SDG 7, SDG 13, SDG 14 and SDG 15). SDG 12 refers to the need to adapt behaviour and production patterns. Cities can act as pioneers for sustainable consumption habits by promoting environmentally conscious urban infrastructure, such as energy-efficient buildings and environmentally friendly transport (SDG 11). This requires regulatory guidelines and innovations (SDG 9, "Industry, innovation and infrastructure"), but also implies a fundamental change in the way business is done, leading not only to growth in sustainable sectors but also to a phase-out of unsustainable economic activities. This

highlights potential target conflicts with SDG 8, "Decent Work and Economic Growth", SDG 1, "No poverty", and also other directly related SDGs. The transition to more sustainable economic models could have short-term negative effects on jobs in traditional industries and on the income situation of low-income groups.

Another potential target conflict lies in the transfer of more sustainable production models to the global supply chain, which could lead to rising costs and possible competitive disadvantages for companies. This could pose a threat to local competitiveness and access to jobs in countries with weaker economies. It is essential to strike a balance that supports ecological sustainability while safeguarding jobs and incomes.

Information and education are prerequisites for awareness of sustainable development and lifestyles. Promoting education (SDG 4) on sustainable consumption and production at all levels is crucial to bringing about long-term changes in the behaviour of individuals and organisations.

The following indicators are also directly relevant to SDG 12 "Responsible Consumption and Production":

- SDG 2:** "Nitrogen surplus"
- SDG 2:** "Organic farming"
- SDG 3:** "Air quality"
- SDG 3:** "Noise pollution"
- SDG 4:** "Educational programmes for sustainable development"
- SDG 6:** "Wastewater treatment"
- SDG 6:** "Consumption of drinking water"
- SDG 6:** "Quality of running water"
- SDG 7:** "Energy productivity"
- SDG 7:** "Energy consumption"
- SDG 7:** "Power from photovoltaics"
- SDG 7:** "Production of renewable energy in the city area"
- SDG 8:** "Occupational safety"
- SDG 8:** "Accommodation places"
- SDG 11:** "Completed residential buildings with renewable energy"
- SDG 13:** "Greenhouse gas emissions"
- SDG 15:** "Biodiversity"
- SDG 15:** "Soil index"



Practical example 20: Circular economy in procurement (textiles and paper towels)

Context

As anchored in SDG 12, production and consumption must remain within the planet's ecological boundaries. The circular economy principle aims to keep products in use for as long as possible. Closing material loops conserves the Earth's resources and promotes resource efficiency.

In procurement, consideration of circular economy aspects is a fundamental part of the holistic sustainability approach pursued. In addition to purchasing durable products and supporting reparability, State Capital Stuttgart actively works to close material loops. Products in the textile and hygiene paper sectors are circulated in a closed cycle by means of collection and return.

Description / Implementation

State Capital Stuttgart collects used workwear in what it calls "resource boxes" to ensure it is not disposed of through thermal recycling. Once sufficient quantities have been collected, these boxes are collected centrally and sent to a recycling partner. The recycling partner uses the valuable resources to manufacture new textile products such as work socks or dirt-trapping mats.

Using paper towels in washrooms is essential. Throwing them away with residual waste results in the loss of a valuable resource. To address this, State Capital Stuttgart participates in a paper towel recycling program at its town hall and other sites. The cleaning staff collect the paper towels from the washrooms in a separate container and deposit them in a separate waste bin. This is collected at regular intervals by a logistics partner of the paper towel manufacturer and returned to the manufacturer's production facility. It is then used to produce new hygiene paper.

Experience / Results

The demand for textile recycling boxes is steadily increasing among the municipal offices and enterprises of State Capital Stuttgart. In 2024, as many as 1.5 tonnes of used textiles were returned to the circular economy.

Three sites are currently participating in paper towel recycling. In just one year, this system has collected and recycled almost three tonnes of paper towels.

Both approaches are notable for their simplicity, yield clear results, and have gained widespread acceptance at every level. An expansion to other locations is planned.

Division / Office / Public Undertaking

Office of Administrative Services and Human Resources, Central Purchasing in the General Administration, Culture and Legal Affairs Division



Practical example 21:

#jetztklimachen [ClimateActionNow] repair map



Context

In order to make it easier to repair everyday items in future, the EU Parliament passed the Right to Repair in April 2024. This significantly strengthens consumer rights. Manufacturers must offer repairs at reasonable prices and within reasonable timeframes after the statutory warranty period has expired (two years for new goods and one year for used goods). They must also inform customers about their right to repair.

Description / Implementation

On International Repair Day on 19 October 2024, the municipal climate campaign #jetztklimachen drew attention to its new repair map as a service for the people of Stuttgart. Under the motto #stuttgartrepariert [Stuttgart repairs], the online map provides an overview of more than 200 repair shops in the State Capital. Whether repair cafés, open workshops, customer services for computers, service centres for household appliances, shoe repair shops or bicycle repair shops: The platform shows the right location for each product.

You can find the new repair map at
<https://jetztklimachen.stuttgart.de/reparieren>
 (Last access on 20.12.2024)

To find a suitable match for your defective product, simply enter the product category you want in the search window; examples are "household appliances", "smartphone", "glasses" or "bicycle".

Experience / Results

Giving electrical appliances and everyday items a second chance conserves resources, protects the environment and helps the climate. According to the Fraunhofer Institute, an average of 98 kilograms of CO₂ equivalents can be saved per repair. This matches the amount of CO₂ absorbed by eight trees in one year.

Feedback on the repair map came from citizens and stakeholders in the repair movement.

Division / Office / Public Undertaking

Department for Climate Protection

Further reading / links

<https://jetztklimachen.stuttgart.de/reparieren>
 (Last access on 08.11.2024)



Practical example 22: EU Sustainability Reporting (CSRD) – Support for Companies

Context

The European Union's Green New Deal launched a series of regulatory measures in 2019 to ensure transparency and comparability of sustainability disclosures by companies. These include the Corporate Sustainability Reporting Directive (CSRD), a mandatory sustainability reporting requirement that will apply to companies with 250 or more employees and a turnover of more than 50 million euro or a balance sheet total of more than 25 million euro. Comparability will be achieved through uniform standards, the European Sustainability Reporting Standards (ESRS), which are to be applied throughout Europe.

The requirements of these new standards are complex and particularly challenging for companies that have not previously reported. This impacts not only companies obligated to report but also their business partners within the supply chain. It is expected that the market for products and services will increasingly align with the key sustainability issues set by the CSRD, especially since banks are also subject to this regulation, making loans and investments contingent on these criteria. In this respect, it is advisable for every company to familiarise itself with at least the main features of the CSRD. At the same time, early knowledge of the relevant issues offers opportunities to adapt business models accordingly, drive innovation and position oneself in the market with sustainable, CSRD-compliant offerings.

Description / Implementation

In 2023, the Economic Development Department developed a funding programme, which gives enterprises access to the new European Sustainability Reporting in accordance with the Corporate Sustainability Reporting Directive (CSRD). The funding programme consists of three components, which can be used by all Stuttgart businesses without special access requirements:

1. Monthly peer learning groups, known as "Thinking Circles", in which companies work together to prepare for sustainability reporting. This includes understanding the regulatory requirements and professionally positioning themselves with regard to the relevant topics of CSRD. This service is subject to a fee and is subsidised by the city.

2. Monthly webinars, knowledge sessions, a low-threshold information format for all companies interested in knowledge transfer on CSRD with high-quality keynote presentation and facilitated discussion.
3. Up to three network meetings are held each year to promote networking and community building among companies interested in partnering to tackle issues such as sustainability and reporting.

The "Switch to Sustainability – CSRD Support" programme will be augmented in 2025 by a series of workshops for small and medium-sized enterprises (SMEs), for which separate voluntary standards have now been developed. They are consistent with the ESRS standards for large companies in terms of content, but are significantly less comprehensive.

Experience / Results

Numerous companies have already participated in the programme in 2023 (starting in June) and 2024. A total of 1,455 registrations were received for the knowledge sessions, 252 for the networking meetings and 25 for the thinking circles.

Further reading / links

www.stuttgart.de/csrd-support
(Last access on 20.12.2024)



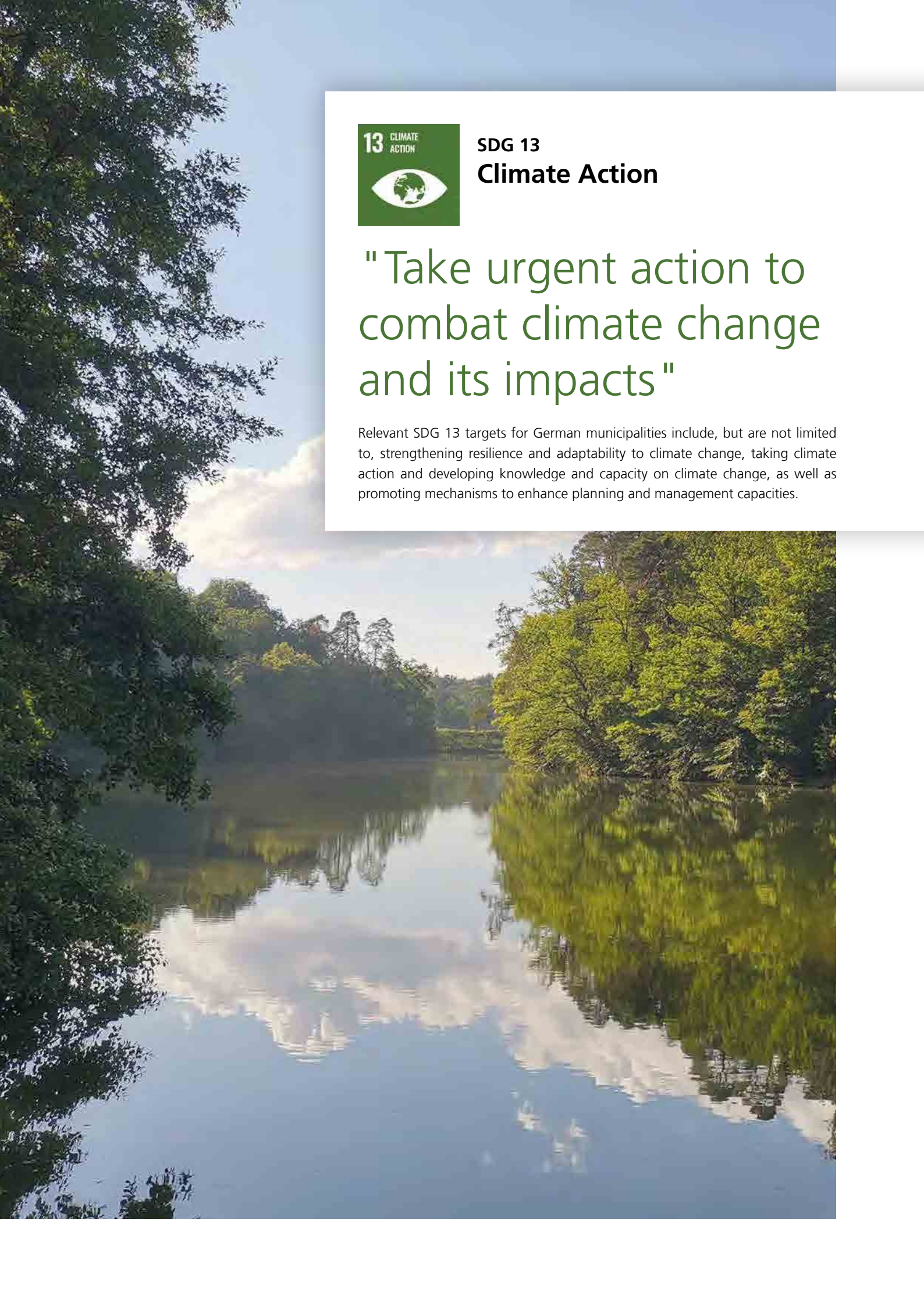
Further practical examples at: www.stuttgart.de/lebenswertes-stuttgart



SDG 13 Climate Action

"Take urgent action to combat climate change and its impacts"

Relevant SDG 13 targets for German municipalities include, but are not limited to, strengthening resilience and adaptability to climate change, taking climate action and developing knowledge and capacity on climate change, as well as promoting mechanisms to enhance planning and management capacities.





Overview of the relevant targets

The following targets of SDG 13 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Appendix II.



13.1 Strengthen resilience and adaptability to climate-related disasters



13.2 Integrate of climate protection programmes into politics and planning

The following relevant targets have not yet been represented by indicators:



13.3 Develop knowledge and capacities for tackling climate change

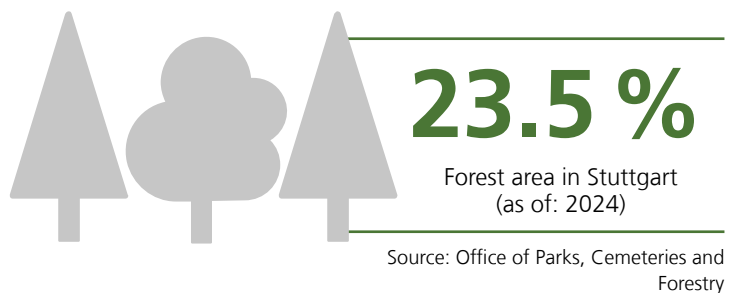


13.b Mechanisms to enhance effective planning and management capacities for climate change

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Indicator 13-1:
Forest area



Large forest areas in particular are important for climate protection, since they act as carbon sinks. They help improve the carbon footprint by absorbing emitted CO₂. However, the proportion of forest areas generally only changes over long periods of time. Stuttgart's forest area is constant at 23.5 percent of the total area. This means there is around 80 m² of forest area for every one of Stuttgart's residents. A good half of the forest area (2,700 hectares) is owned by the city. All of the municipal forest area is certified by the Programme for the Endorsement of Forest Certification and Forest Stewardship Council.



This indicator is used to measure SDG target 13.1:
"Strengthen resilience and adaptability to climate-related disasters"

Healthy forests not only protect our soil, climate, and biodiversity, they are also indispensable as economic and recreational areas. In addition, they help maintain a balanced water cycle and promote clean air.¹⁸⁸ When it comes to protecting the climate, forest health matters just as much as forest size. In 2023, 44 percent of the forest area in Baden-Württemberg was considered significantly damaged. While forest conditions showed improvement in 2023 compared to previous years, they remain generally poor. The reasons for this poor condition are storm and snow damage combined with pronounced summer droughts, as well as a massive spread of various spruce and fir bark beetles.¹⁸⁹ In the future, other tree species that are better adapted to the changing climatic conditions will have to be cultivated.

Classification / Definition

The "Forest area" indicator is defined as the proportion of forested area in relation to State Capital Stuttgart's total area. Forest areas are not only important for climate protection, but also to preserve biodiversity. Biodiversity-friendly forest management plays a vital role in this regard, involving aspects such as the proportion of dead wood, microhabitat structure and development, tree species diversity and age distribution. This indicator, then, is directly linked to target 15.2, which focuses on sustainable forest management.

Calculation

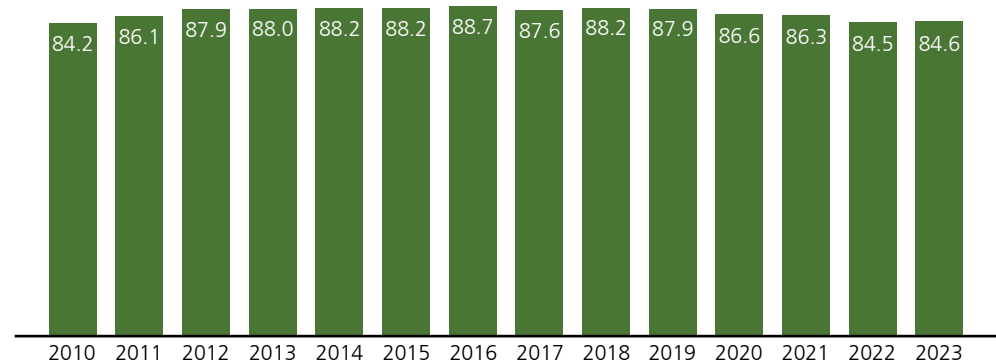
Forest area:

Forest area in Stuttgart
/
Total area of Stuttgart
* 100



Indicator 13-2: Trees in public spaces

Figure 117:
Trees in public spaces (number
of trees per hectare)



Source: State Capital Stuttgart, Office of Parks, Cemeteries and Forestry

The tree density in public spaces remained relatively stable during the period under review. In 2023, there were an average of around 85 trees per hectare of public space in State Capital Stuttgart. The figure peaked in 2016 at just under 89 trees per hectare. The annual fluctuations are due to tree felling that is essential to large construction projects or for safety reasons.



This indicator is used to measure SDG target 13.1:

"Strengthen resilience and adaptability to climate-related disasters"

Trees not only beautify the cityscape, they also have a significant impact on the urban climate. Especially in hot summers, trees provide shade and cool entire streets. They also cool their surroundings through evaporation. Furthermore, they supply oxygen and can filter dust and toxic nitrogen oxides from the ambient air. Wherever trees stand, the air is fresher and less polluted. Trees also reduce noise and provide a habitat for birds, squirrels, bats, and insects. Old trees especially are true biotopes.

Stuttgart has a tree protection statute to protect trees even on private properties.¹⁹⁰

Classification / Definition

In addition to large forest areas, free-standing individual trees also help improve local air quality and the microclimate. The age and size of the trees are important for the climatic effect. Mature trees with large crowns are more efficient than younger trees or those with less foliage. More detailed data on the shape of urban trees is not available.

When interpreting the data, it is important to note that approximately 25 percent of the tree population consists of young trees, which have a lower climate mitigation effect compared to mature specimens. Urban trees account for over 40 percent of the total tree population in public spaces. While the lifespan of an urban tree is only around 40 years, trees in natural locations can live many times as long.

The data only show trees in public green spaces and on streets. This does not include trees in forests, wooded areas or cemeteries. The indicator is defined as the number of individual trees relative to the total public area.

Calculation

Trees in public spaces:

Number of trees in public spaces

/

Total area of public space in hectares



Indicator 13-3: "Municipal Climate Adaptation" index

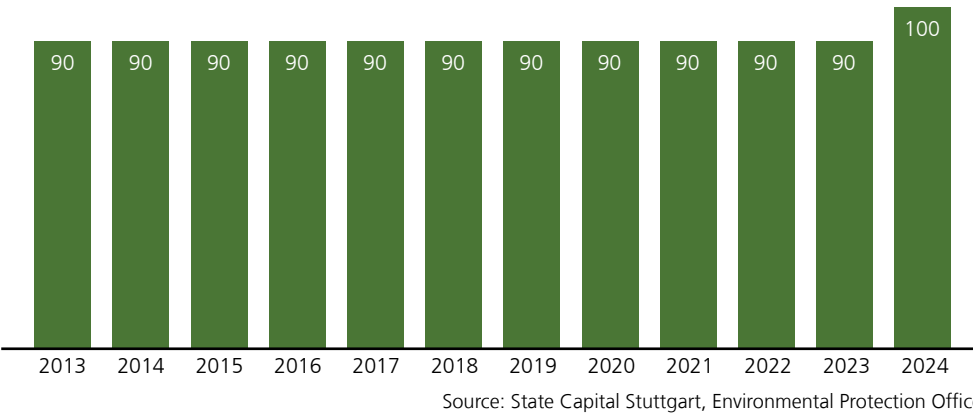


Figure 118:
Municipal climate adaptation
(in percent)

Since 2013, 90 percent of the "Municipal Climate Adaptation" Index has been consistently met. The ten percent shortfall had always been down to the creation of a heat action plan. This has now been developed as part of the update of the Stuttgart Climate Change Adaptation Concept (KLIMAKS). Once the heat action plan had been created and launched, all ten questions underlying the index could be answered with a "yes" for the first time in 2024.



This indicator is used to measure SDG target 13.1:
"Strengthen resilience and adaptability to climate-related disasters"

Classification / Definition

The "Municipal Climate Adaptation" index is an aggregate index of ten dichotomous variables based on a standardised questionnaire¹⁹¹ that includes the following questions:

1. Have a climate analysis and threat map been developed for your municipality?
2. Has there been a political decision on climate adaptation?
3. Is there a concept that addresses the effects of climate change within the municipality, considers the specific municipal impact and threat, and develops a local strategy with appropriate adaptation measures (climate adaptation concept)?
4. Has this climate adaptation concept been adopted?
5. Is the adaptation to the consequences of climate change (protection from flood, heat, drought, storm damage, etc.) considered in urban planning and development?
6. Have measures to adapt to the consequences of climate change already been implemented in public projects / buildings / areas (e.g. green roofs and façades, desealing and greening squares, retention areas and so on) or are they set to be implemented?
7. Does your municipality have an interdisciplinary/cross-departmental "climate adaptation" working group?
8. Is there a municipal heat action plan or a similar instrument to prepare for heat waves?
9. Are there any initiatives to raise awareness and provide information to citizens about climate change and adaptation?
10. Are there municipal support programs for private climate adaptation measures and self-sufficiency initiatives for stakeholders in urban communities?¹⁹²

Calculation

"Municipal Climate Adaptation" index:

Number of criteria met within the municipality
(answers with yes)

/

Total number of criteria (10)

* 100



Climate change in Stuttgart

2023 was the hottest year in Stuttgart since weather records began in 1881, with an average temperature of $12.3^{\circ}\text{C} - 1.6^{\circ}\text{C}$ up on the long-term average.¹⁹³ Although 2024 did not set a new record, it was still well above the long-term average at 12.1°C . Eight of the ten warmest years on record have already been recorded this century. June 2023 was the second warmest June since 1881, at 20.9°C , autumn being particularly noteworthy: Temperatures were $+2.7^{\circ}\text{C}$ above average, peaking at $+4^{\circ}\text{C}$ in September. In 2024, February was the month that most stood out. The average temperature was 8.2°C , 5.3°C above the long-term reference value for the years 1991 to 2010.

Fortunately, after several rather dry years, there were no reports of insufficient precipitation in 2024. Rain and snow combined totalled 769 litres/m^2 , exceeding the long-term average by 71 litre. Such precipitation surpluses are now a rarity. Above-average rainfall has only been recorded four times this millennium. The last time this happened was in 2013, when rainfall exceeded the long-term average by 184 litres to reach 881 litres/m^2 .

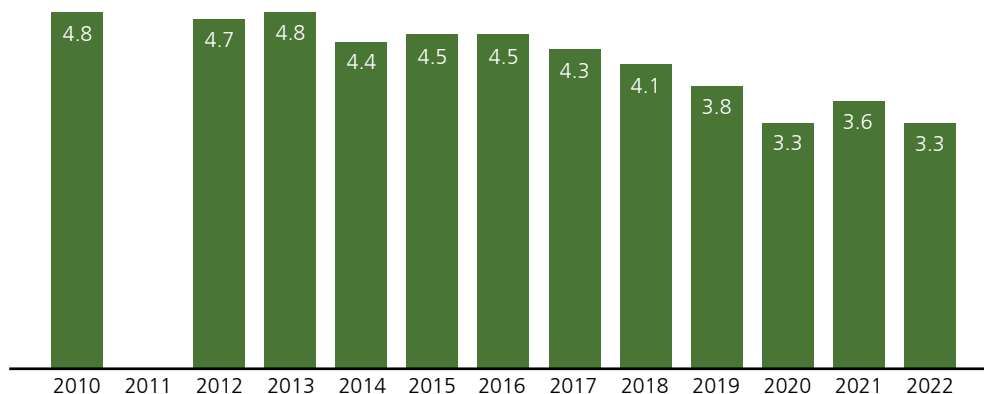
Overall, 2024 had three very rainy months. The month with the most precipitation was May, when rainfall totalled 171 litres/m^2 . In a "normal" May, the figure would be just 78 litres/m^2 . On 16 May alone, the German Weather Service recorded almost 53 l/m^2 of rain in one day on the Schnarrenberg mountain. June also brought around a third too much precipitation, with 107 litres/m^2 , 36 litres/m^2 of which fell right at the beginning of the month. This led to flooding across the entire country. September was also unusually wet, with 89 litres/m^2 of rain, 70 percent more than the average.

Last year, the effects of climate change were once again evident in extreme weather conditions and sharp temperature fluctuations. Although Stuttgart experienced a brief pause in breaking annual temperature records last year, we're likely to see more frequent reports of new record highs for Stuttgart weather in the future.

Rising temperatures and changing precipitation patterns highlight the local effects of climate change in Stuttgart and the call for adaptation strategies.



Indicator 13-4: Greenhouse gas emissions



Source: State Capital Stuttgart, Environmental Protection Office

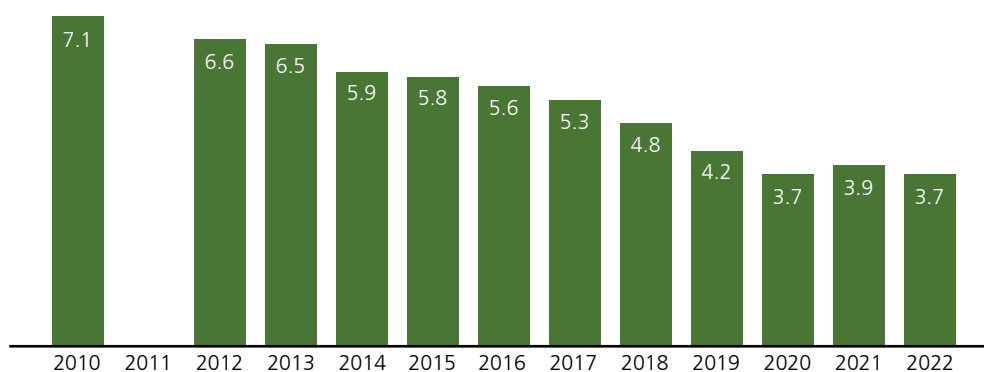
Figure 119:
Energy-related greenhouse gas emissions in the city as a whole (in million tonnes of CO₂ equivalent)

The annual energy-related greenhouse gas emissions from all sectors of the city as a whole fell from 4.8 to 3.3 million tonnes of CO₂ equivalent from 2010 to 2022. In 1990, Stuttgart emitted 6.4 million tonnes of CO₂ equivalent. This trend is partly due to the rising proportion of renewable energies in the federal electricity mix and the inevitable change in the CO₂ factor for electricity procurement. Another key reason for the significant decline in energy-related greenhouse gas emissions is the efficiency increases in individual sectors.

The German Federal Government is pursuing the goal of reducing emissions by at least 65 percent by 2030 compared to 1990 levels. Another goal is to achieve greenhouse gas neutrality by 2045.¹⁹⁴ State Capital Stuttgart has set itself a more ambitious climate protection target: Stuttgart aims to be climate-neutral by 2035.¹⁹⁵



This indicator is used to measure SDG target 13.1:
"Strengthen resilience and adaptability to climate-related disasters"



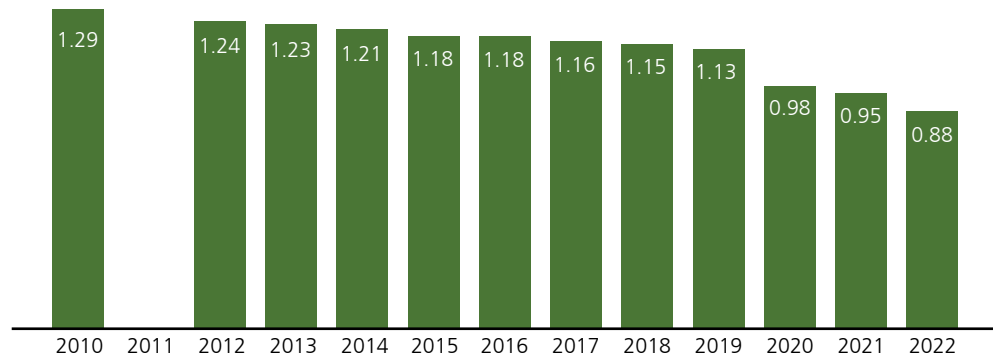
Source: State Capital Stuttgart, Environmental Protection Office

Figure 120:
Energy-related greenhouse gas emissions from industry, commerce, trade and services (in tonnes of CO₂ equivalent/ssc)

Greenhouse gas emissions from commerce, trade, services and industry per employed person subject to social security contributions (ssc) per year fell steadily between 2010 and 2020 from around 7.1 to 3.7 tonnes of CO₂ equivalent. In 2021, greenhouse gas emissions rose slightly again, but dropped back to 2020 levels in 2022. Long-term data show an even more pronounced decline: In the mid-1990s, it still stood at 9.8 tonnes of CO₂ equivalent per employee subject to social security contributions.



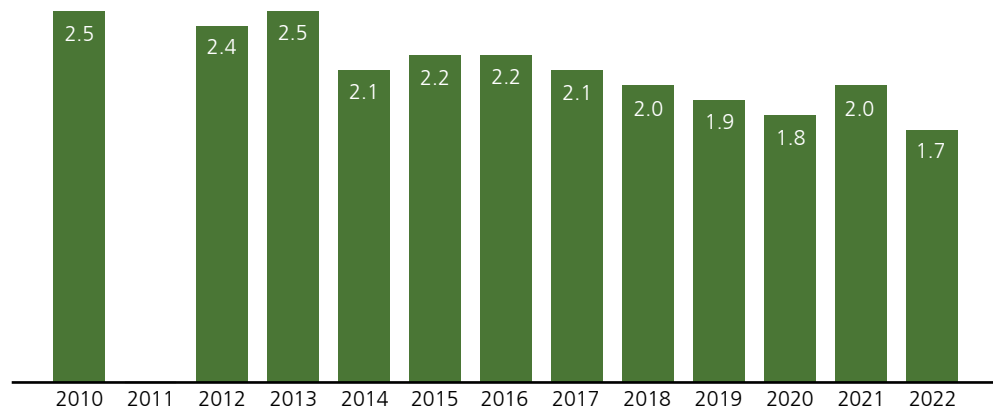
Figure 121:
Energy-related greenhouse gas emissions from traffic
(in tonnes of CO₂ equivalent/ssc)



Source: State Capital Stuttgart, Environmental Protection Office

Energy-related greenhouse gas emissions from traffic per capita per year fell slightly during the period under review, from 1.29 tonnes of CO₂ equivalent per capita in 2010 to 0.88 tonnes of CO₂ equivalent per capita in 2022. In 2020, the figure dropped below 1 tonne of CO₂ equivalent per capita for the first time. The transport sector accounts for around 14 percent of greenhouse gas emissions in Stuttgart.¹⁹⁶ Here too, the long term trend is a positive one. In the 1990s, per capita greenhouse gas emissions from traffic were still above the 1.5 tonnes of CO₂ equivalent mark.

Figure 122:
Energy-related greenhouse gas emissions from private households
(in tonnes of CO₂ equivalent/capita)



Source: State Capital Stuttgart, Environmental Protection Office

Energy-related greenhouse gas emissions from private households per capita per year fell from 2.5 tonnes of CO₂ equivalent per capita in 2010 to 1.7 tonnes of CO₂ equivalent in 2022. This trend is mainly down to the significant improvement in the CO₂ factor for electricity procurement. The significant rise in renewable energies within the German electricity mix has led to a reduction in specific CO₂ emissions from electricity consumption.

Opinions on climate change

i

In the 2023 Stuttgart survey, a large proportion of respondents said that they were concerned about the possible consequences of climate change. Confidence in the ability of politicians to implement effective measures against climate change was viewed rather pessimistically. Around ten percent of respondents rated Stuttgart as climate-conscious and sustainable. However, when asked what characteristics they would like to see in Stuttgart in 2040, 50 percent cited climate awareness and sustainability.¹⁹⁷



Classification / Definition

The reduction of greenhouse gas emissions is among the key measures for achieving the goals of the Paris Agreement of 2015, which aims to limit the long-term average global warming to a maximum of two degrees.

The indicator compares greenhouse gas emissions with the number of users. In the case of greenhouse gas emissions from industry, commerce, trade and services, this is the number of employees subject to social security contributions (ssc), and in the case of transport and private households, the number of residents.

Calculation

Greenhouse gas emissions – city as a whole:

CO₂ equivalent of emissions from all sectors

Greenhouse gas emissions –
trade, commerce, services and industry:

CO₂ equivalent of emissions from trade,
commerce, services and industry

/

Employees subject to social security contributions
in trade, commerce, services and industry

All direct and indirect emissions of greenhouse gas (expressed in CO₂ equivalent) attributable to trade, commerce, services and industry, including agriculture, are recorded. State Capital Stuttgart currently only has data on energy-related greenhouse gas emissions, to which all calculations refer.

Greenhouse gas emissions – traffic:

CO₂ equivalent of emissions from traffic

/

Population

All direct and indirect emissions of greenhouse gas attributable to traffic in the Stuttgart district are recorded. The balancing process is conducted territorially, with transit traffic (including airports, motorways, and interregional rail) excluded.

Greenhouse gas emissions – private households:

CO₂ equivalent of emissions from private households

/

Population

All direct and indirect emissions of greenhouse gas attributable to energy consumption of private households are recorded.



Correlation with other SDGs

Climate change has direct social and economic consequences, as well as ecological impacts. Tackling climate change calls for a combination of climate protection measures, adaptation strategies and social innovations that touch on all SDGs.

The ecological impacts of climate change affect biodiversity, the condition of forests, soil and water quality (SDG 15), freshwater resources (SDG 6) and marine ecosystems (SDG 14). Reducing greenhouse gas emissions and promoting biodiversity are directly linked to tackling climate change, as healthy ecosystems (forests, soils, water bodies) act as carbon sinks that help stabilise the climate. The conservation of local soil reserves, whether forested or not, plays a vital role in climate resilience (SDG 15 "Life on Land"), as these soils help produce cool air and serve as conduits for fresh air. Depleting these soil resources could intensify environmental and climate-related issues, with adverse effects on urban areas, particularly regarding air quality and resilience to climate change.

Measures to enhance CO₂ absorption by trees and forests are intrinsically linked to broader city planning strategies and the development of public urban spaces (SDG 11). The creation of green urban spaces and urban forests therefore not only contributes to reducing greenhouse gas emissions, but also improves the quality of life in cities and supports biodiversity. This can create positive synergies between SDG 13, SDG 11 and SDG 15.

While these aspects are mutually reinforcing and synergistic, as already mentioned in SDG 11, they can conflict with alternative land uses (SDG 2, SDG 15). The conversion of land for urban green spaces can clash with the need for housing and infrastructure in conurbations, posing a challenge for sustainable land use and urban planning. This applies, for example, to the construction of infrastructure in all areas of housing and the housing market (see SDG 3, SDG 4, SDG 7 and SDG 9), transport planning (SDG 11) and economic growth with business start-ups or expansions (SDG 8 and SDG 9).

"Quality Education" (SDG 4) and sustainable consumption patterns (SDG 12) also impact the goal of sustainable and climate-friendly urban development. Educating people about

climate change, sustainable living, and adaptation strategies empowers them to make more climate-conscious choices. However, target conflicts arise when the social and economic needs of the population overlap with urgently needed climate protection measures. Reducing greenhouse gas emissions in connection with sustainable consumption and production (SDG 12) is essential for mitigating climate change, in particular through the direct reduction of consumption and production. The promotion of circular economy models could also lead to a reduction in resource consumption and emissions, but there are target conflicts when these models cannot be reconciled with economic interests (SDG 8) and the demand for certain consumer goods.

In the social context, greenhouse gas emissions primarily affect marginalised and vulnerable groups (SDG 1, SDG 5 and SDG 10). These groups often suffer most from the consequences of climate change – such as droughts, floods, extreme heat and extreme weather events – but usually lack the financial resources to adapt. This demonstrates a correlation between SDG 13 and SDG 10, as climate protection measures should also be used as a means of combating social inequality. Climate change has been proven to have a direct impact on human health (SDG 3). The clear health effects of climate change include heatwave-related complaints, including increased mortality, the rise in respiratory diseases due to poor air quality, and the spread of infectious diseases and pests harmful to health as a result of changing climatic conditions.

Extreme weather events such as heavy rainfall and droughts have an impact on water resources (SDG 6), agriculture and food production (SDG 2) and thus also on economic growth (SDG 8). Adaptation measures to climate change should be linked to the goals of sustainable agriculture and sustainable resource use. Target conflicts could arise here if measures to reduce emissions restrict the availability of agricultural land and resources or jeopardise food security.

Damage caused by extreme weather events not only has a direct impact on economic growth, but also affects the design of sustainable cities and communities (SDG 11) and infrastructure in general, and requires innovation (SDG 9) to adapt to climate



change, including in the area of resilient infrastructure. The expansion of resilient infrastructure can help reduce climate risks, but the cost of rebuilding existing urban infrastructure can lead to a target conflict when it competes with other economic needs.

Greenhouse gas emissions are closely linked to the goals of reducing "energy consumption" in all sectors, increasing the "proportion of renewable energy" and improving "energy productivity" (SDG 7). The transition to a more energy-efficient and renewable energy supply is crucial for mitigating climate change. SDG 13 is therefore also reflected in the indicators mentioned under SDG 7. In order to obtain a comprehensive picture of greenhouse gas emissions, non-energy emissions, for example in industry and agriculture, as well as emissions from imported goods and services, must also be taken into account. However, sufficient data is not currently available for this.

The following indicators are also directly relevant to SDG 13 "Climate Action":

- SDG 2:** "Organic farming"
- SDG 4:** "Educational programmes for sustainable development"
- SDG 7:** "Proportion of renewable energy in final energy consumption"
- SDG 7:** "Energy productivity"
- SDG 7:** "Energy consumption"
- SDG 8:** "Accommodation places"
- SDG 11:** "Land use"
- SDG 11:** "Recreational areas"
- SDG 11:** "Completed residential buildings with renewable energy"
- SDG 11:** "Bicycle traffic"
- SDG 11:** "Cycle paths"
- SDG 11:** "Passenger cars with electric drive"
- SDG 12:** "Environmental protection investments in the manufacturing sector"
- SDG 15:** "Soil index"
- SDG 15:** "Biodiversity"





Practical example 23: Appreciation of food and support for food sharing initiatives

Context

Food waste has a major impact on the climate, as greenhouse gases are released during the production, transport and disposal of food. This is the reason why State Capital Stuttgart is stepping up targeted measures to reduce food waste. In December 2022, following a unanimous decision by the Municipal Council, it signed the "food sharing cities" declaration of intent. State Capital Stuttgart aims to establish and support systems that help ensure surplus edible food can be reused rather than ending up in the bin.

Description / Implementation

On the back of this, the administration has developed a package of measures to help reduce food waste. The aim is to learn from each other and reduce food wastage at all stages of the value chain.

Around 80,000 tonnes of food end up in the bins in Stuttgart every year. 59 percent of this comes from private households. Therefore, citizens in Stuttgart should be made aware of the actions they can take themselves. For this reason, the #jetztklimachen [ClimateActionNow] campaign brought the issue of food appreciation to the public's attention in autumn 2024: Under the motto #2teliebe [Second Chance], posters and digital advertisements raised awareness of giving edible food a second chance. The awareness campaign included practical solutions for how food that is still edible can be processed or shared. The website <https://www.jetztklimachen.de/2teliebe> provides facts and figures as well as valuable tips on what individuals can do to combat food waste in their everyday lives.

In July 2024, the Municipal Council approved funding for a food sharing initiative. The funding programme for decentralised and public food sharing schemes aims to support organisations, initiatives, and private individuals in establishing food-sharing projects in their neighbourhoods that comply with food safety regulations. Initiatives can apply for municipal support to actively help reduce food waste.

In parallel, two collaborative events were held in 2024 with the Stuttgart Partnership for Education Department, the Youth Welfare Office, the Department for Climate Protection and the Stuttgart Youth Centre Society for Young People. Shared cooking sessions using rescued food and working with "Harrys Bude" (a project for distributing rescued food) showed young people practical solutions for making good use of leftover food in the future.

Experience / Results

In line with the campaign launch in November, the first new food sharing initiative in Stuttgart-Wangen, which has taken advantage of the funding, started on 11 November 2024.

Further building blocks for practice-oriented learning fields on the topics of food waste prevention and poverty prevention are being developed and implemented.

Division / Office / Public Undertaking

Department for Climate Protection in the Climate Protection, Mobility and Housing Policy Unit, in cooperation with the Stuttgart Partnership for Education Department and the Youth Welfare Office in the Youth and Education Division, with the Department for Strategic Social Planning and the Public Health Office in the Social Affairs, Health and Integration Division, and with the Office of Public Order in the Public Safety, Order and Sport Division.

Further reading / links

<https://www.stuttgart.de/leben/umwelt/klima/klimastrategie/klima-fahrplan-2035/foerderprogramm-fairteiler.php>

Landing page:

<https://jetztklimachen.stuttgart.de/2teliebe>
(Last access on 20.12.2024)

<https://jetztklimachen.stuttgart.de/fairteiler>
(Last access on 08.11.2024)



Further practical examples at: www.stuttgart.de/lebenswertes-stuttgart



SDG 14 **Life below Water**

"Conserve and responsibly use the oceans, seas and marine resources for sustainable development"

Relevant targets of SDG 14 for German municipalities include, but are not limited to, reducing all forms of marine pollution, particularly from land-based activities, the responsible use of marine resources, and the conservation and responsible use of the oceans and their resources.

Overview of the relevant targets

The following targets of SDG 14 are relevant to German municipalities, but have not yet been covered in the VLR by indicators. Because of Stuttgart's geographical location, "Life Below Water" has only limited relevance for State Capital Stuttgart. Consequently, no indicators have been used to directly measure any targets for this SDG. Nonetheless, holistic correlations to other SDGs are presented in the section entitled "Correlation with other SDGs" as well as in Annex II.



14.1 Reduce marine pollution



14.7 Increase the economic benefit of sustainable use of marine resources



14.c Improve the conservation and responsible use of oceans and their resources

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Smart water monitoring at Lake Max Eyth

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To ensure the water quality of Lake Max-Eyth in Stuttgart, the city introduced a raft of measures following the massive fish kill during the summer of 2019. In that year, exceptionally high temperatures and low oxygen levels caused mass fish death. From that point onward, advanced digital sensors have enabled real-time monitoring of parameters such as oxygen content, pH value, and turbidity. The data obtained makes it possible to react quickly to critical developments, by deploying ventilation systems or alternative countermeasures for example.

The city's goal is to improve the ecological stability of the lake over the long term. The measure is part of a more comprehensive concept for intelligent environmental monitoring. Going forward, the aim is to gain a deeper understanding of natural processes such as algae formation and oxygen consumption, and to actively manage them.¹⁹⁸

Correlation with other SDGs

Despite Stuttgart being geographically distant from oceans and seas, urban society influences their resources and marine pollution, primarily through consumer and production practices (SDG 12).

Recycling and the circular economy, which are promoted under SDG 12 and SDG 13, play a crucial role in preventing marine pollution, especially stemming from plastic and other resilient waste products. The Neckar, as a tributary of the Rhine, can carry improperly managed waste (SDG 12), agricultural residues (SDG 2), and microplastics from textiles and cosmetics all the way to the North Sea. Plastic waste exported abroad and inadequately recycled at its destination further contributes to marine pollution. This highlights how urban development, agricultural practices, and industrial processes can significantly impact marine ecosystems and biodiversity, even when cities are located far from the coast.

Microplastics re-enter the human food chain through the consumption of fish and seafood, posing risks to human health (SDG 3). The consumption of fish and seafood – from unsustainable fisheries in particular – also affects the conserva-

tion of marine ecosystems and aquatic biodiversity. Overfishing driven by unchecked consumption and the lack of sustainable fishing practices results in the decline of marine biodiversity and harms entire ecosystems. This is directly linked to SDG 2, SDG 12, and SDG 14, as sustainable fish and seafood consumption, along with the promotion of responsible fishing practices, are key to preserving oceanic biological resources. The interaction between environmental protection, health, and consumption habits highlights the intricate links between SDG 14, SDG 3, and SDG 12, emphasising the need to make our consumption patterns more sustainable to safeguard marine ecosystems and protect human health.

The effects of climate change (SDG 13) on seas and oceans only serve to exacerbate the problems of pollution and over-exploitation. Rising water temperatures and ocean acidification, driven by greenhouse gas emissions, adversely affect marine life and lead to coral bleaching, depletion of fish stocks, and destruction of marine habitats. Stuttgart's commitment to climate protection and reducing CO₂ emissions directly benefits ocean health and helps mitigate the adverse effects of climate change on marine ecosystems.

Another important link concerns the conservation of water resources (SDG 6). Contaminated waters, resulting from improper waste management and excessive agricultural run-off, harm marine ecosystems and degrade drinking water quality, potentially leading to health problems and long-term environmental crises.

Ultimately, education and raising awareness (SDG 4) play a vital role in reaching the goals of SDG 14. Educating the public on the environmental impacts of overfishing, plastic waste, and other oceanic risks is vital to fostering responsible consumer choices and supporting sustainable marine resource management.

The following indicators are also directly relevant to SDG 14 "Life below Water":

- SDG 6:** "Quality of running water"
- SDG 6:** "Wastewater treatment"
- SDG 12:** "Amount of waste"
- SDG 12:** "Sustainable procurement"
- SDG 12:** "Environmental protection investments in the manufacturing sector"
- SDG 13:** "Greenhouse gas emissions"
- SDG 15:** "Renaturation measures of watercourses"
- SDG 15:** "Biodiversity"



SDG 15 **Life on Land**

"Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss"

Relevant SDG 15 targets for German municipalities include, but are not limited to, protecting terrestrial ecosystems, sustainable forest management, restoring degraded land and preserving biodiversity.



Overview of the relevant targets

The following targets of SDG 15 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Appendix II.



15.1 Conservation and restoration of terrestrial and fresh water ecosystems



15.3 Combat desertification and restore degraded land



15.5 Safeguard biodiversity and natural habitats

The following relevant targets have not yet been represented by indicators:



15.2 End deforestation and restore damaged forests



15.7 Prevent poaching and illegal trade with protected species



15.8 Prevention of invasive non-resident species on land and in water ecosystems



15.9 Integrate ecosystems and biodiversity into public planning



15.a Increase financial resources to ensure the responsible use of ecosystems and maintain biodiversity

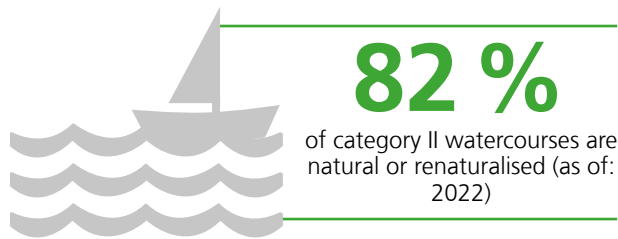


15.b Financing and incentives for the sustainable management of forests

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Indicator 15-1: Renaturation measures of watercourses



Source: State Capital Stuttgart, Civil Engineering Office with
Public Undertaking Municipal Sewage Management (SES)

State Capital Stuttgart is responsible for the maintenance of category II watercourses in the city area. This includes around 70 watercourses with a total length of approximately 150 kilometres. In 1980, around 67 percent of these fell into the natural or near-natural category. Approximately 21 kilometres of waterways have been renaturalised over the past 30 years. For example, large sections of the Feuerbach river between Rotweg and Hohlgraben and in the area of the old sports field in Zazenhausen were restored to a near-natural state. In addition, parts of the Tränkebach from Hoffeldstraße to its confluence with the Ramsbach and the Ramsbach between Degerloch and Schönberg were renaturalised. This increased the proportion of natural or renaturalised water bodies to around 82 percent in 2022, and this figure has remained unchanged since then.

The Neckar in Stuttgart is a federal waterway. The Federal Waterways and Shipping Administration (WSV) is responsible for the administration, maintenance and development of federal waterways. For the Neckar, this is the Neckar Waterways and Shipping Authority. The Neckar is therefore not included in the indicator "Renaturation measures of watercourses".



This indicator is used to measure SDG target 15.1:
**"Conservation and restoration of terrestrial
and fresh water ecosystems"**

From the sewer to the natural stream



At 11.5 kilometres, the Feuerbach is Stuttgart's longest river. Originally a free-flowing watercourse, it was used as a sewer from 1897 and extensively piped until 1909. In the 1970s, the city began separating the stream from the sewage system, and the Feuerbach has been free of sewage since 2014. To remedy the ecologically problematic situation, the Stuttgart Civil Engineering Office launched the "Schmutzwasserfreimachung Feuerbach" (Feuerbach Sewage Removal) remediation programme. The renaturation is complex, as it must take into account residential, traffic and industrial areas as well as flood protection. Nevertheless, a new living and recreational area is being created. Since the 1990s, six sections with a total length of 1.3 kilometres between Zuffenhausen and Zazenhausen have been successfully renaturalised. This involved removing bank reinforcements, greening the stream bed and flattening the banks. Walkways and cycle paths were also created. In the long term, the Feuerbach is to be further renaturalised and completely freed from its artificial embankments.¹⁹⁹

Classification / Definition

In the past, a large proportion of watercourses were built over, piped and straightened, partly for flood protection and development reasons. The Water Framework Directive (2000/60/EC) obliges EU member states to restore unnatural surface waters to good ecological status. The restoration of near-natural water bodies is also referred to as renaturation.

The primary areas of action for the renaturation of streams and rivers include the restoration of ecological continuity, the initiation of self-sustaining watercourse development and thus the improvement of watercourse structure. Examples of measures include the removal of riverbed and bank structures, the planting of site-appropriate riparian vegetation and the elimination of straightened watercourses.

Calculation

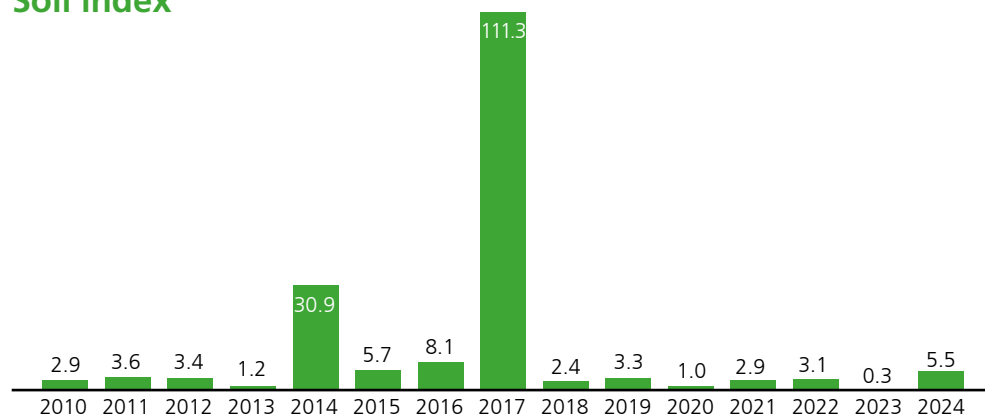
The "Renaturation measures of watercourses" indicator reflects the proportion of watercourse kilometres of category II watercourses in Stuttgart's urban area that are in a near-natural or renaturalised state.

Renaturation measures of watercourses:

$$\frac{\text{Length of renaturalised watercourses (category II)}}{\text{and canalised (category II)}} \times 100$$

Indicator 15-2: Soil index

Figure 123:
Loss of soil quality in the
Stuttgart urban area (data in
soil index points)



Source: State Capital Stuttgart, Environmental Protection Office

The development of land use is illustrated by the annual consumption of land index points. In most years since 2010, the loss was low due to consistent internal development. In years with much higher consumption rates, high-quality land in the outer areas was rezoned (see indicator "Land use", SDG 11). In 2014, for example, the "Sta 114" Langenäcker-Wiesert development plan came into force. This involves the redevelopment of a building site on the outskirts of the Stammheim district. The construction of high-quality and very high-quality land covering an area of 8.9 hectares resulted in a loss of 21.7 soil index points due to this development plan alone. In 2017, section 1.3a of the Stuttgart-Ulm railway project was approved. The rapid transit railway line crosses the Filder plateau, requiring the use of 32.8 hectares of high-quality and very high-quality land in the Stuttgart urban area. This alone resulted in a loss of 109.4 soil index points in 2017.



This indicator is used to measure SDG target 15.3:
"Combat desertification and restore degraded land"



Further information is required to assess the loss of soil index points, such as the total available soil stock in soil index points or the annually permissible soil consumption. Controlling soil consumption calls for concrete target agreements. In Stuttgart, the total stock of soil index points was surveyed and, in particular, consumption rates and target values were set on the basis of Municipal Council resolutions passed as part of the Stuttgart Soil Protection Concept (BOKS) adopted in 2006.

The BOKS goes beyond the mere measurement of index points in that clear target agreements have been made. Through the targeted management of a "soil quota", whose initial value in 2006 was 1000 soil index points, soils of "high" and "very high" quality are to be continuously secured. The aim is to cover the demand for soil (land) as completely as possible within the inner city area and to achieve the goal of a land cycle economy before the quota of 1,000 soil index points (BX) is used up. The current soil quota stands at 757.9 soil index points (as of 31 December 2024).

The preservation of multifunctional soils that fulfil soil functions to a particularly high degree is at the forefront of soil protection efforts in State Capital Stuttgart. The "soil index" indicator therefore takes into account not only the amount of land used but also soil quality. This is based on the "Soil Quality Stuttgart" planning map, which compiles all available specialist information for the entire city on a single map. This map classifies soil quality on a scale from 0 (= poor soil quality) to 5 (= very high soil quality), providing planners and municipal decision-makers with an easily comprehensible basis for their work. In order to ensure that appropriate decisions can be made in planning processes, it is necessary to record the soil quality of an area under consideration and to measure the planned land use there.

Classification / Definition

When calculating land use, the development of the proportion of settlement and transport areas in relation to the total area is taken into account. The quality of the land used is not relevant here.

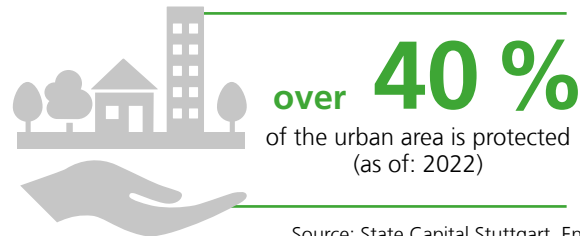
Soil is one of the resources that can hardly be renewed within human time scales. Therefore, the economic management of local soil resources is a central component of promising concepts for sustainable soil protection. Because traditional consumption patterns, such as the construction of detached houses in rural areas, inevitably deplete the resource and because the demands placed on the soil can hardly be effectively offset, sustainability can only be achieved if a constant, optimal soil condition (i.e. a defined standard of functional performance = soil quality) can be guaranteed within a defined area of consideration. This is only possible if the consumption of new soil is consistently reduced in order to ultimately achieve a land use cycle economy.

Calculation

To calculate the soil index, the specific quality status of a land area is calculated by multiplying the soil area (hectares) by the value of the corresponding soil quality levels (value/ha) and expressed in so-called soil index points (dimensionless). Until 2023, the data refer to the reference date of 30 April of each year. The value for 2024 refers to the period from 1 May 2023 to 31 December 2024.



Indicator 15-3: Conservation areas



Source: State Capital Stuttgart, Environmental Protection Office

In total, over 40 percent of the urban area was designated as nature conservation areas in 2022. Landscape conservation areas accounted for the largest share of this (see Figure 124). There are generally only minimal requirements for this protection category (e.g. no intensive agriculture, certain building restrictions). In this respect, the significance of the data regarding the quality of the areas is limited.



This indicator is used to measure SDG target 15.5:
"Safeguard biodiversity and natural habitats"

Classification / Definition

The indicator describes the proportion of land covered by three different types of nature conservation areas:

- (a) Natura 2000 areas (bird protection and fauna-flora habitat areas) serve as a European system of protected areas established by a 1992 decision to establish and maintain a network of natural and near-natural habitats.
- (b) Nature reserves serve to preserve large-scale natural monuments and specially protected biotopes. In doing so, parts of the landscape are to be preserved, protected and maintained as undisturbed as possible. Significant changes are prohibited.
- (c) The purpose of conservation areas is not only to protect the ecosystem, but also to safeguard recreation amenities for the citizens.

Calculation

Conservation areas:



Total conservation areas in Stuttgart

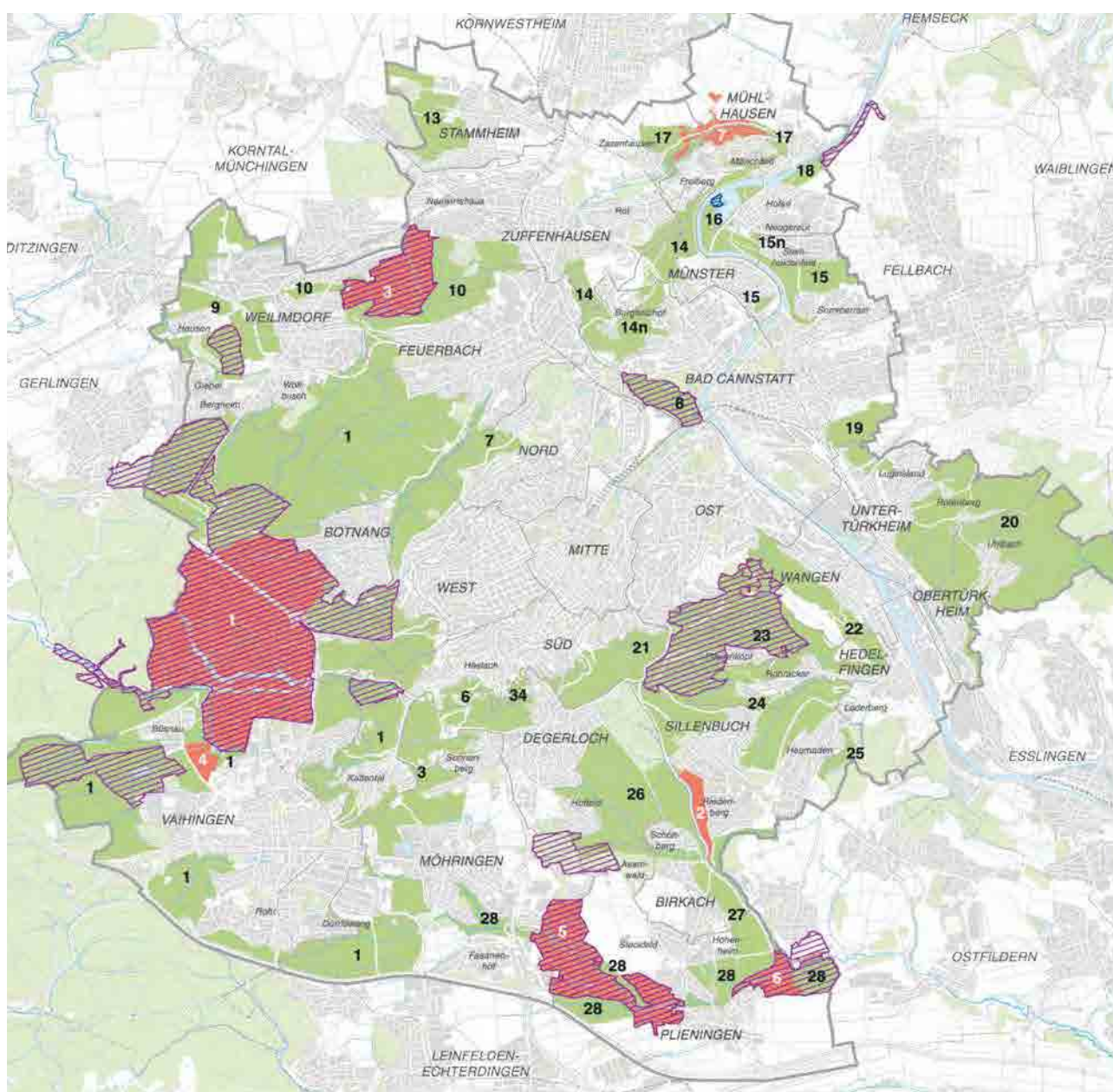
/

Total area of Stuttgart

* 100

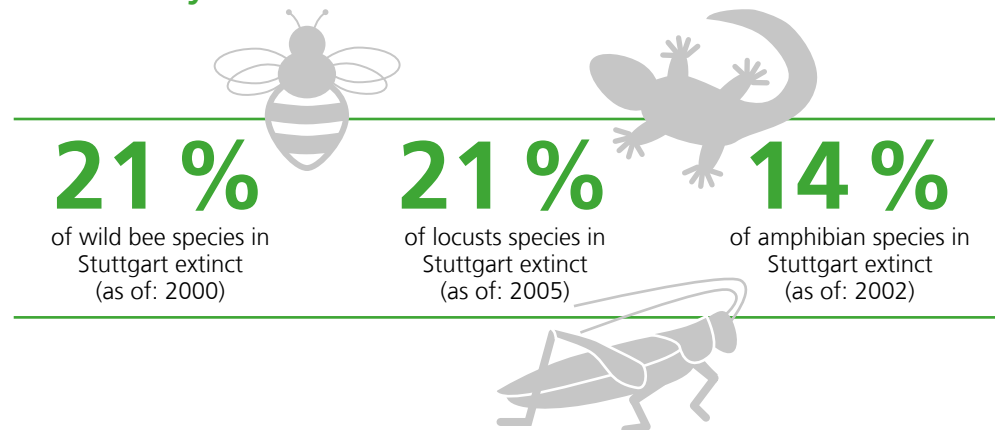
Figure 124:
Conservation areas in Stuttgart

Conservation areas		Nature reserves	
1	Glemswald in the Stuttgart district area	1	Rot- und Schwarzwildpark (red deer and wild boar park)
3	Dornhalde – Haldenwald	2	Eichenhain
6	Waldfriedhof – Dornhalde	3	Greutterwald in the Stuttgart district area
7	Feuerbacher Heide	4	Büsnauer Wiesental
8	Rosensteinpark	5	Weidach and Zettach forest
9	Weilimdorf – West	6	Häslach forest in the Stuttgart district area
10	Reisachmulde – Lemberg	7	Lower Feuerbach valley with hillside forest and surrounding area
13	Stammheim West		
14	Schnarrenberg – Krailenshalde	Natura 2000 areas:	
14n	Prag – Wolfersberg		Fauna, flora and habitat areas: 2,346 hectares
15	Hochflur		Bird sanctuary: 3 hectares
15n	Zuckerberg – Muckensturm		
16	Max-Eyth-See		
17	Eschbach – Kirchberg		
18	Eichenäcker		
19	Blick		
20	Vineyards and orchards		
	Württemberg and Götzenberg		
21	Silberwald		
22	Wangener Höhe		
23	Frauenkopf – Dürrbach		
	Burghalde – Allmendhäule		
24	Sillenbuch – Heumaden		
25	Heumaden Ost		
26	Ramsbachtal – Auener Bachtal		
27	Birkacher Osthang		
28	Körschtal		
34	Schimmelhüttenweg		



Map basis (2013): Surveyor and Land Records Office; sources: Environmental Protection Office, State Institute for the Environment, Measurements and Nature Conservation.
As of: July 2014

Indicator 15-4: Biodiversity



Source: State Capital Stuttgart, Environmental Protection Office

The loss of biodiversity is exemplified by the loss of species of wild bees, locusts and amphibians.

In Stuttgart, around 270 species of wild bees were known in the year 2000, of which at least 58 had already become extinct. This represents a loss of 21 percent of species. According to the Red List of Baden-Württemberg, about one third of the wild bee species are classified as endangered, threatened with extinction, or on the early warning list.²⁰⁰

Of some 43 locusts species, at least 9 were already extinct in 2005. Here, a species loss of 21 percent can be observed and about one third of locusts species is threatened with extinction, endangered or on the watch list according to the Red List of Baden-Württemberg.²⁰¹

In addition, two (14%) of Stuttgart's 14 amphibian species have become extinct since 2002. More than half of the amphibian species are threatened with extinction, endangered or on the watch list according to the Red List of Baden-Württemberg.²⁰²



This indicator is used to measure SDG target 15.5: "Safeguard biodiversity and natural habitats"

The reasons for species extinction are the negative developments of the respective habitats, for instance due to land loss by all kinds of developments, intensive land use and agriculture or by succession and overgrowth with shrubs and the use of biocides and fertilisers.

The city-wide mapping carried out at the beginning of the millennium, which forms the basis for the above data, is still relevant today, as species populations generally develop over a longer period of time. Compared to then, it is very likely that the threat to species diversity has worsened. This has led to the extinction of other species, such as the small heath grasshopper *Stenobothrus stigmaticus* in Eichenhain. Local declines in many other species have also been recorded. State Capital Stuttgart wants to counteract this with its species protection concept.

State Capital Stuttgart's species protection concept dating back to 2018 envisages a largely complete inventory of all animal and plant species occurring in Stuttgart, as well as the evaluation of ecologically valuable species for the target and individual species protection concept. The target species protection concept lists typical species – known as target species with umbrella species



function – for the biotope types found in Stuttgart in order to promote not only the biotopes themselves but also all the animals and plants typical of the location through protective measures for these target species. Species that only occur at individual locations are listed in the individual species protection concept and are to be specifically promoted at their locations. Initial implementation steps with pilot areas were already taken in 2018, with the first signs of recovery already visible in some cases. In the long term, further areas are to be transferred to the implementation portfolio of the species protection concept to ensure biodiversity in habitats by targeted species protection. The success of the measures can then be evaluated by remapping species populations at specific locations and across the entire Stuttgart city area.

The indicator groups are examined regularly so that the development of the species population can be monitored. Since 2021, the mapping of wild bees in Stuttgart has therefore been undergoing an update.²⁰³ In addition, the promotion of green spaces and urban greening by State Capital Stuttgart has a positive effect on biodiversity.²⁰⁴

Classification / Definition

Biodiversity refers to the diversity of species in its entirety and is therefore difficult to represent with a single indicator. However, the distribution of individual species is also closely linked to the distribution of other species. For example, the endangerment of individual species is an indication of the endangerment of other species if they are interdependent via the food chain or react to the same environmental factors. It should be noted that the figures are already 20 to 25 years old and that no systematically updated surveys are available. This makes it difficult to make precise statements about the current state of biodiversity in Stuttgart. Nevertheless, experts assume that the loss of species has continued to worsen since then, for example due to increasing soil sealing, climate change and invasive species.

The "biodiversity" indicator illustrates species extinction using the example of species losses among wild bees, locusts and amphibians. The aim is to prevent species extinction and the deterioration of the status quo of biodiversity in Stuttgart through targeted habitat enhancement measures. Wild bees, locusts and amphibians are particularly good bioindicators for determining the overall quality of a habitat.

Calculation

The indicator is based on the categorisation of three example animal species according to their endangerment status:

Biodiversity (Biodiversity A):

Wild bee species according to their endangerment status as per the Baden-Württemberg Red List

Biodiversity (biodiversity B):

Locust species according to their endangerment status as defined by the Baden-Württemberg Red List

Biodiversity (biodiversity C):

Amphibian species according to their endangerment status as defined by the Red List Baden-Württemberg

Invasive species



In Stuttgart, too, more and more animal and plant species are appearing that are not native to the area. This becomes a problem when these species are more competitive than the native ones and spread rapidly at their expense (invasive species). The complete list would include many hundreds of species. Important harmful species include Canadian goldenrod and Japanese knotweed among plants, and raccoons, zebra mussels and Egyptian geese among animals. Eradication is rarely promising, so control measures are usually limited to protected areas or other high-value areas. Pathogens and the diseases they cause also fall under the category of invasive species, such as ash dieback and many skin diseases in amphibians, which were also often introduced and against which little can be done (other than reducing their spread).



Correlation with other SDGs

Biodiversity is the basis for all ecosystem services and is therefore crucial for secure food production and the achievement of SDG 2 ("Zero Hunger"). The majority of food depends on the services that nature provides for humanity, such as pollination or the production of fertile soil by soil organisms. Many companies, not only in the primary sector, are also directly dependent on biodiversity, ecosystem services and natural resources. The economy's dependence on natural resources highlights the link between biodiversity conservation (SDG 15) and economic growth (SDG 8), as biodiversity loss can have long-term negative effects on the economy and gross domestic product. Natural capital is not yet included in the calculation of economic growth (SDG 8). The sustainable use of natural resources and the preservation of biodiversity are therefore crucial for economic stability.

Organic farming (SDG 2) can contribute to biodiversity by reducing the use of biocides. This not only promotes healthy food production, but also contributes to the goals of sustainable agriculture and soil management. In addition to avoiding material pollution, the development and preservation of habitats is also particularly important in agriculture. This is crucial for the preservation of biological diversity and is closely linked to SDG 13 (climate action) and SDG 6 (water) as well as SDG 14 (life below water), as organic farming helps to protect ecosystems both on land and in water.

Securing soil resources also contributes to SDG 2, as multifunctional soils are generally also used for agriculture. Soil protection, as presented in the Stuttgart Soil Index, is also linked to combating climate change and its effects (SDG 13 "Climate action"), as intact soils can store large amounts of CO₂. These synergies are particularly relevant because healthy soils not only contribute to carbon storage but also to the resilience of agricultural ecosystems and food production.

By storing and evaporating water, soils counteract summer heat stress. This demonstrates the positive link between sustainable soil management and climate change adaptation (SDG 13), while also supporting water management (SDG 6) and the mitigation of extreme weather events. Soil protection serves in particular to preserve soils of high and very high quality ("multifunctional soils"), which increase resilience to climate change while supporting biodiversity.

As an important reactor in environmental cycles, securing soil resources also supports the achievement of SDG 6 "Clean water and sanitation", in particular sustainable water management, as soils filter and purify water on its way into the subsoil, thus supporting groundwater recharge. At the same time, the water storage capacity of soils dampens peak runoff during precipitation. This shows how closely soil protection is linked to the quality of water resources and the long-term security of water supplies – issues that are central to both biodiversity and human health and well-being (SDG 3).

In addition, there are synergies between healthier diets (SDG 3) and the impact on biodiversity, ecosystems and the climate (SDG 13). A diet with fewer animal products and more plant-based products has been shown to have positive effects not only on health (SDG 3) and the prevention of malnutrition and obesity (SDG 2), but also on biodiversity and ecosystems, simply through lower land use, which is significantly higher for animal products. In Germany, for example, almost two-thirds of agricultural land is used for the production of meat, milk and eggs.²⁰⁵ This intensive use of land and the associated strain on ecosystems have both social and ecological impacts that lead to the destruction of biodiversity and natural resources. Conversely, promoting sustainable diets and agricultural practices (SDG 2 and SDG 15) can lead to a significant reduction in environmental pollution and more sustainable use of soil resources.

Air quality not only affects human health (SDG 3), but air pollutants also lead to biodiversity loss and damage natural ecosystems. There is a particular link between air quality and biodiversity in terms of habitat loss due to air pollution, for example through the loss of plant species that are sensitive to pollutants. Improving air quality therefore also contributes to environmental protection.²⁰⁶ This link is also reinforced by the climate target of SDG 13, as reducing air pollution also helps to combat climate change.

The same applies to high noise pollution, which, in addition to health consequences, has also been proven to have an impact on native wildlife.²⁰⁷ Noise reduction and environmental protection are therefore also linked to the preservation of biodiversity, as many animals are sensitive to noise and this can affect their reproduction, food intake and habitats.



There is a particular link to SDG 7, "Affordable and clean energy", in terms of renewable raw materials as energy sources and their competition with natural habitats for land use. The use of renewable raw materials for bioenergy contributes to the reduction of greenhouse gas emissions (SDG 13), but at the same time, competition for agricultural land can also threaten the loss of natural habitats and biodiversity. This gives rise to target conflicts that require careful consideration of energy production, agricultural production and the preservation of natural ecosystems. Bioenergy from waste is therefore one of the sustainable options for generating and using energy.

A higher share of renewable energies (SDG 7) mitigates climate change (SDG 13) and reduces environmental pollution, which in turn has a positive impact on biodiversity, as climate change is one of the main drivers of global biodiversity loss. Combating climate change and biodiversity loss are closely linked, as both affect people's livelihoods and resources. Combating climate change, then, has many synergies with combating the loss of biodiversity. Target conflicts may arise in the development and expansion of clean energy infrastructure (SDG 7). The expansion of wind and solar energy, even if it leads to a reduction in greenhouse gas emissions, can also mean interference with ecosystems and habitats.

There is a positive correlation with urban design (SDG 11), for example through the creation of near-natural green spaces, green facades and roofs, flower strips and wildflower meadows, or natural water bodies. The preservation of natural habitats and biodiversity in cities depends largely on urban design and often competes with built-up and sealed areas and the creation of affordable housing. Biological diversity in cities is closely linked to renaturalised and near-natural areas, but also to local recreation areas (SDG 11), which in turn have a positive impact on health and well-being (SDG 3). Cities that promote biodiversity also create more liveable environments for their residents, leading to better overall well-being and a higher quality of life (SDG 3).

Sustainable procurement (SDG 12) of products has a global impact on biodiversity through the extraction of raw materials and the waste products that are generated. Reducing the ecological footprint of consumption and production patterns, for example through environmentally oriented procurement, therefore also has a positive effect on biodiversity.

High-quality education (SDG 4) also influences the goal of protecting ecosystems and biodiversity. Education and awareness-raising are key to empowering people to consume and act more sustainably and thus preserve biodiversity.

The following indicators are also directly relevant to SDG 15 "Life on Land":

- SDG 2:** "Nitrogen surplus"
- SDG 2:** "Organic farming"
- SDG 3:** "Air quality"
- SDG 3:** "Noise pollution"
- SDG 4:** "Educational programmes for sustainable development"
- SDG 6:** "Quality of running water"
- SDG 7:** "Proportion of renewable energy in final energy consumption"
- SDG 11:** "Land use"
- SDG 11:** "Recreational areas"
- SDG 12:** "Environmental protection investments in the manufacturing sector"
- SDG 13:** "Trees in public spaces"
- SDG 13:** "Forest area"
- SDG 13:** "Greenhouse gas emissions"



Practical example 24: Insect-friendly and energy-saving street lighting

Context

State Capital Stuttgart is aiming to be climate neutral by 2035. To achieve this goal, it is necessary to save electrical and thermal energy. The main objectives of street lighting are to ensure that it operates with as little disruption as possible and to continuously renew street lighting systems, taking into account economic, technical, ecological and design aspects. In accordance with Section 21 (3) of the Baden-Württemberg Nature Conservation Act (NatSchG BW), public lighting systems must be equipped with appropriate insect-friendly lighting since 1 January 2021. The same applies if existing lighting systems need to be converted or retrofitted. In principle, all lighting systems must be converted or retrofitted to insect-friendly lighting by 2030.

Description / Implementation

In addition to replacing the existing lamps with LED lights, the brightness on main roads can be reduced during the late night hours when traffic is lighter to achieve further energy savings. This half-night mode saves energy and leads to a longer overall service life for the lights and light sources. In order to take advantage of the energy-saving potential of half-night switching, the switch cabinets are currently being retrofitted and the street lighting cabling upgraded for this option in all luminaire replacement projects on main roads. This upgrade will allow the lighting level to be reduced to 70 percent at specified times when traffic is lighter. These times have been reassessed and agreed within the administration, and will be taken into account in the programming of the switchgear during the conversion work. In side streets, lighting is already reduced throughout.

Experience / Results

As in previous years, the electricity consumption of street lighting was significantly reduced. In 2024, it stood at 16.8 million kWh, which is more than 1,650,000 kWh or 8.9 percent below the previous year's consumption. Compared to consumption in 2009 of over 27 million kWh, this represents a saving of over 35 percent. This development is primarily due to the replacement of sodium vapour lamps with more energy-efficient LED lights. The package of measures, which includes the legally required replacement of lights, the conversion of switch cabinets to more flexible and energy-efficient switching options, separate control options for individual lights and the refurbishment of lighting in pedestrian underpasses, will lead to a reduction of around 60 tonnes of CO₂ emissions per year.

Division / Office / Public Undertaking

Civil Engineering Office, Public Undertaking Municipal Sewage Management in the Engineering Division



Further practical examples at: www.stuttgart.de/lebenswertes-stuttgart



SDG 16

Peace, Justice and Strong Institutions

"Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels"

Relevant SDG 16 targets for German municipalities include, but are not limited to, reducing violence, protecting children from abuse, exploitation, human trafficking and violence, combating organised crime, reducing corruption, establishing effective, accountable and transparent institutions, and promoting citizen participation.

Overview of the relevant targets

The following targets of SDG 16 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Appendix II.



16.1 Reduce violence everywhere



16.2 Protect children against abuse, exploitation, trafficking and violence



16.4 Combat organised crime



16.5 Significantly reduce corruption and bribery



16.6 Establish effective, accountable and transparent institutions



16.7 Ensure needs-based, inclusive, participatory and representative decision-making



16.10 Ensure public access to information

The following relevant targets have not yet been represented by indicators:



16.b Promote and enforce non-discriminatory laws and policies

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>



Indicator 16-1:
Violent deaths



Figure 125:
Violent deaths
(victims per 100,000 residents)

The number of violent deaths in State Capital Stuttgart has fluctuated between 26 and 60 cases since 2019. Per 100,000 residents, there were 5.2 victims in 2019 and 9.8 in 2024. Even though the number of deaths in 2024 is particularly high, no clear trend can be discerned from the data.

The majority of the deaths shown here are attributable to the offence of "manslaughter". Of the 26 cases in 2023, 17 were victims of manslaughter and the other 9 were victims of murder. A similar distribution of crime types can also be observed for previous years. The year 2024, on the other hand, which already stands out due to its particularly high number of victims, does not follow the pattern of previous years in terms of the distribution of crimes. In 2024, for example, almost as many murder victims (29) were recorded as victims of manslaughter (31). Irrespective of this, there are clear differences in terms of gender distribution. Men are significantly more likely to be victims of murder and manslaughter. In 2024, approximately 13 percent of all victims were female. In 2020, the highest figure in the survey period was recorded, with women accounting for just under 30 percent of victims.

In 2023, State Capital Stuttgart recorded the lowest number of murders among the ten largest cities in Germany, behind Düsseldorf. Stuttgart is one of the safest large cities in Germany.²⁰⁸



This indicator is used to measure SDG target 16.1:
"Reduce violence everywhere"

Safety is essential for peaceful coexistence. To ensure this, State Capital Stuttgart has developed a concept for a safe city centre. The measures are varied.²⁰⁹ They range from preventive approaches, such as positively revitalising the cityscape, to support services such as the women's night taxi or the "Good Fairy" service for children. In addition, they also include regulatory measures such as bans on unauthorised access. Infrastructural measures, such as improved lighting and the use of bollards, are also being implemented to increase safety. A weapons ban zone also applies in Stuttgart city centre.

Classification / Definition

This indicator was introduced in 2025. The data on violent deaths includes cases of murder and manslaughter. The indicator is central to the assessment of safety in Stuttgart

Calculation

Violent deaths (murder and manslaughter):

Number of violent deaths per year
/
Population
* 100,000



Feeling of safety in Stuttgart



A recent study shows that the people of Stuttgart largely feel safe in their city. The study was conducted by the Institute of Criminology at the University of Heidelberg and the Baden-Württemberg Criminological Research Institute. Of the 50,000 citizens contacted, just under 10,000 took part in the survey. Only 14 percent expressed a high feeling of insecurity in their district. However, the researchers point out that global crises, including the Russian war of aggression in Ukraine and the Middle East conflict, could influence the subjective feeling of security.

The fear of crime is particularly pronounced in the districts of Mitte, Bad Cannstatt and Zuffenhausen. It is also striking that people who are rarely out and about in the city centre rate it as more dangerous than regular visitors. Experts therefore advise making prevention measures even more visible and targeted, taking more consistent action against disrespectful behaviour and stepping up action against "hate crimes".²¹⁰



Indicator 16-2:
Domestic violence against children and adolescents

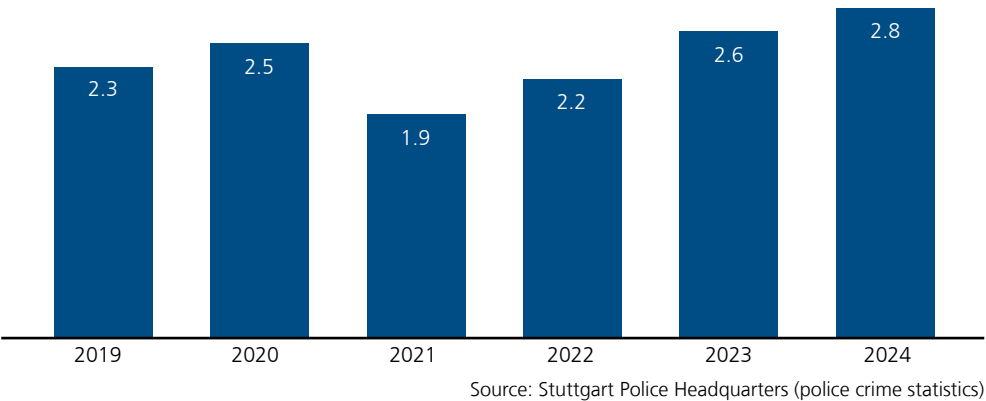


Figure 126:
Domestic violence against children and adolescents (number of cases/1000 residents under 18 years of age)

Cases of domestic violence against children and young people fluctuated between 176 (2021) and 262 cases (2024) per year during the period under review. In 2021, there were only 1.9 cases per 1000 inhabitants under the age of 18. However, 2021 was an exception, presumably due to the COVID-19 pandemic. It is likely that fewer police investigations were concluded that year. This is relevant because the data reported here are only included in the statistics when they are submitted to the public prosecutor's office (or the court) and therefore do not necessarily describe the actual "year of the offence". From 2021, the number of cases increased again. This may be due to catch-up effects from the pandemic, as there has been an increase in domestic violence during the COVID-19 pandemic, which also affects children and young people.²¹¹



This indicator is used to measure SDG target 16.2:
"Protect children against abuse, exploitation, trafficking and violence"

Classification / Definition

Due to their strong dependence on adults, children are particularly vulnerable. The statistics shown here only represent the cases actually reported. The number of unreported cases is probably much higher. A study by the Federal Criminal Police Office shows, for example, that assaults are only reported in a third of cases.²¹² The police crime statistics (PCS) therefore do not provide a complete picture of the reality of crime, but rather represent a more or less precise approximation depending on the type of offence.

The PCS are basic statistics. This means that the offences of which the police become aware are only recorded after the police investigation has been completed when the file is handed over to the public prosecutor's office or the court. Consequently, the PCS records the offences completed by the police in a calendar year regardless of when the offence was committed. The most common forms of violence in the family environment involving children and adolescents are bodily harm, followed by abuse of wards.

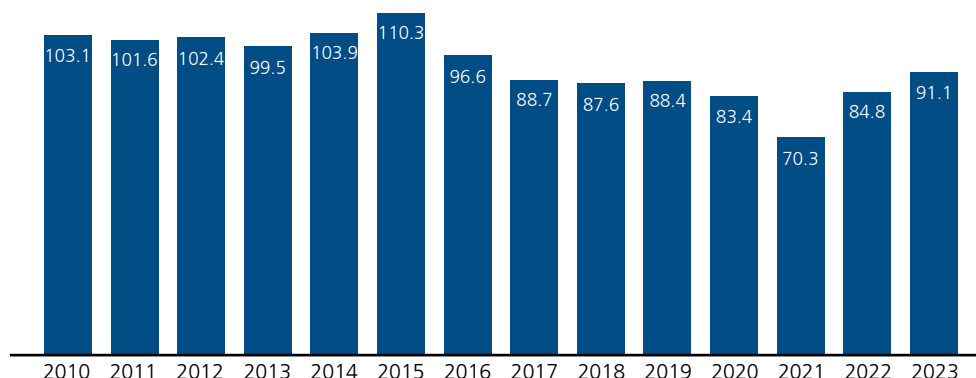
Calculation

Domestic violence against children and adolescents:

$$\frac{\text{Number of reported cases of domestic violence against minors per year}}{\text{Population (under 18 years of age)}} \times 1,000$$

Indicator 16-3: Crimes

Figure 127:
Crimes
(cases per 1,000 residents)



Source: State Office of Criminal Investigation Baden-Württemberg; State Capital Stuttgart, Statistics Office

Between 2010 and 2014, the number of offences per 1000 inhabitants remained relatively constant. In 2015, it reached its highest level in the period under review with 110 criminal offences. This increase was mainly due to more thefts and, above all, more offences against immigration and asylum law. In this area in particular, the number of offences fell again very significantly from 2016. Criminal offences also declined overall between 2016 and 2021. 2021 was the year with the lowest figure in the period under review. However, this is likely to be related to the regulations on the COVID-19 pandemic. In the years that followed, the number of recorded offences rose again to the level before the COVID-19 pandemic and in 2023 were even slightly higher than the figures for 2017 to 2019.

The German government has set itself the goal of reducing the number of recorded offences per 100,000 inhabitants to below 6,500 by 2030.²¹³



This indicator is used to measure SDG target 16.4:
"Combat organised crime"

Opinion on safety in Stuttgart

i

The 2023 Stuttgart survey revealed that security and public order are perceived as problems by those surveyed. Of the 34 possible problems listed, the issue of "insecurity on the streets (drugs, robbery, property damage)" was rated as a challenge by 32 percent of respondents, placing it seventh among the most pressing problems. The area of "insecurity on public transport" was mentioned by 28 percent of respondents and ranked 11th in the overall ranking.²¹⁴

Classification / Definition

While the expression "organised crime" refers to a specific form of crime, the indicator "crimes" covers a broad spectrum of crime with very different degrees of organisation. The police crime statistics (PCS) only register those criminal offences that come to the attention of the law enforcement authorities. This covers a wide range of offences, such as theft, fraud or violations of asylum and immigration law, as well as violent crimes.

The indicator shows the offences reported to the police relative to the population and reflects the general crime trend in the city. The PCS also enables more differentiated observations, for example according to individual types of offences.

On the other hand, there is a considerable dark field of criminal offences, as the crime statistics only cover part of the crime that actually occurs.



It makes sense to relate the number of cases to the population in order to take into account the number of potential perpetrators and victims. However, the calculation of the indicator does not take into account the fact that potential perpetrators (and victims) may also be people from outside Stuttgart.

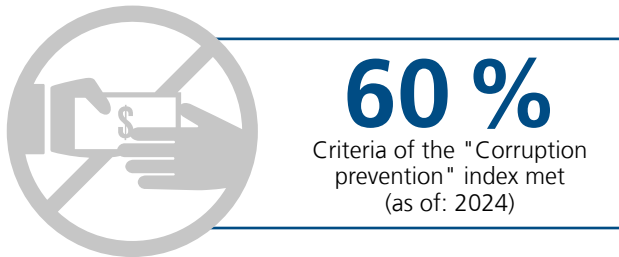
The figures given differ from other publications, as the reference figure used is the number of inhabitants according to the population register.

Calculation

Crimes:

Number of crimes reported to the police
/
Population
* 1000

Indicator 16-4:
Corruption prevention



Source: State Capital Stuttgart, Audit Office

Integrity and incorruptibility of the city administration are of paramount importance to State Capital Stuttgart. All employees of the city administration must perform their duties impartially, selflessly and lawfully, and must act in the best interests of the general public. The anti-corruption service instructions and the service instructions prohibiting the acceptance of benefits contain – in addition to the provisions of service law – the essential duties of employees to prevent corruption.



This indicator is used to measure SDG target 16.5:
"Significantly reduce corruption and bribery"

In Stuttgart, the tasks of corruption prevention and prosecution are performed by the Central Anti-corruption Unit (ZAKS). The ZAKS is part of the Audit Office of State Capital Stuttgart. The ZAKS is the point of contact for all employees, citizens and business partners of State Capital Stuttgart. Reports of corruption can also be made there or to the confidential lawyer of State Capital Stuttgart.



In addition, State Capital Stuttgart has also set up a Central Internal Reporting Office (ZIM) in accordance with the provisions of the Whistleblower Protection Act since October 2023. All employees can report illegal behaviour within the meaning of Section 2 HinSchG (not only corruption offences) to the ZIM in a protected environment – even without revealing their identity.

<https://www.stuttgart.de/antikorrupcion-meldestelle>



Classification / Definition

Corruption has numerous negative effects, both economically and politically and socially. Corruption hinders economic development, leads to a deterioration of the health and education systems, threatens social capital and thus jeopardises the population's trust in politics and administration. To fight corruption effectively, it's crucial not to wait until corrupt acts have already happened before taking action. Instead, the question is what can and must be done to prevent corruption and avoid a possible loss of trust among citizens in the integrity of public administration.

The "Corruption Prevention" index is a composite index of eleven dichotomous variables based on a standardised questionnaire with the questions listed below. Question 3 is not included in the calculation of the index value as it is not relevant for State Capital Stuttgart:

1. Is the prime responsibility for corruption prevention provisions clearly defined and publicly accessible?
2. Is a municipal transparency statute in place?
3. If applicable, does the Land Transparency Act also apply to the municipality?
4. Is there a mandatory, publicly accessible register of interests for all senior civil servants and public officials?
5. Is there a mandatory, publicly accessible code of conduct for all senior civil servants and public officials?
6. Are there publicly announced reporting channels through which public servants, citizens and third parties can report illegal behaviour (not only corruption) without revealing their identity?
7. Is there a publicly accessible policy (management guideline) for municipal companies?
8. Are the management and employees of the audit department committed to neutrality and objectivity and are they independent of instructions?
9. Are the audit reports on the municipal annual financial statements, individual organisational units and procurement and contracting processes published?
10. Are non-civil servants who are entrusted with tasks related to tendering, awarding contracts, monitoring and accounting regularly formally required to fulfil their duties conscientiously with regard to corruption offences?
11. Does the municipality have a risk analysis (no more than five years old) that identifies areas vulnerable to corruption and prescribes appropriate preventive measures?²¹⁵

Calculation

"Corruption Prevention" index:

Number of criteria met within the municipality
(answers with yes)

/

Total number of criteria to be evaluated (11)

* 100



Indicator 16-5:
Mobile working

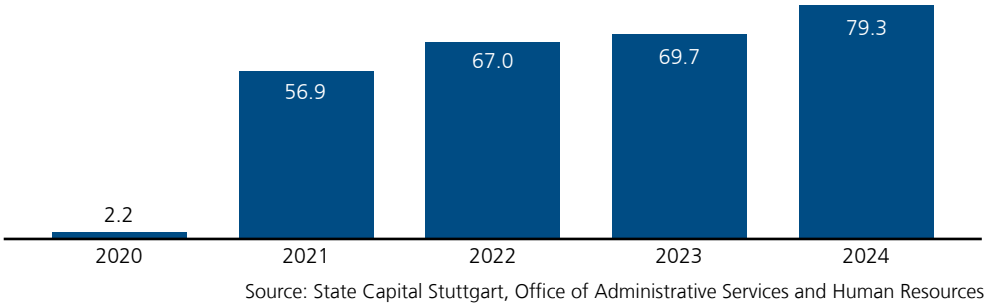


Figure 128:
VPN accounts for municipal employees (in percent)

The proportion of municipal employees who have a mobile device with VPN access out of all employees with their own email account has risen sharply since 2020. The rate for mobile working (including teleworking) calculated in this way rose from around 2 percent in 2020 to just under 80 percent in 2024. The principles for (location-independent) mobile working and teleworking are laid down in corresponding service agreements. These are evaluated and refined on a regular basis.

Mobile working has become increasingly important. In State Capital Stuttgart, it has been possible for many years to work partly from home at a designated teleworking station. Further flexible working arrangements through mobile working was and remains part of the Digital MoveS digitalisation strategy. The COVID-19 pandemic has greatly accelerated the planned expansion of flexible working arrangements.

At the beginning of 2020, there were around 250 teleworking positions in the State Capital, but by the end of 2020, the option of working from home using mobile devices had been extended to around 4,750 employees. By the end of March 2024, more than 9,000 employees were already able to work remotely.



This indicator is used to measure SDG target 16.6:
"Establish effective, accountable and transparent institutions"

Classification / Definition

According to the definition of the German Federal Office for Information Security, a VPN is a virtual network: Unlike conventional networks, such as a home network, the various end devices are not directly physically connected to each other or to a central router – for example, via network cables or a Wi-Fi connection.

A VPN usually uses the connection paths in the public Internet, whereby in a private environment a connection is usually established from a device – for example, a notebook – to a VPN server. A VPN connection is a prerequisite for secure and mobile access to the system of State Capital Stuttgart and for mobile working.

To calculate the "Mobile working" indicator, the number of employees with an email account is estimated. This is done using data from the mail database billing and the ratio of personal to functional mailboxes, assuming that the ratio is always the same (78.4% personal mailboxes / 21.6% functional mailboxes). The 31st of March of each year is set as the deadline.

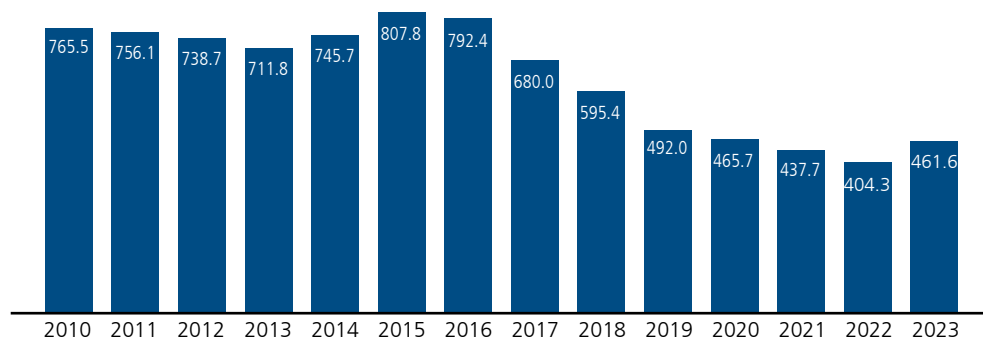
Calculation

VPN accounts for municipal employees:

$$\frac{\text{Mobile devices with VPN at State Capital Stuttgart}}{\text{Number of employees with an e-mail address}} \times 100$$

Indicator 16-6: Total municipal debt

Figure 129:
Total municipal debt
(in euro per capita)



Source: State Capital Stuttgart, Annual financial statements

The total municipal debt per inhabitant is defined as the debt of the municipality, including its own operations, to the credit market. Between 2010 and 2016, this figure ranged between approximately 712 and 808 euro per capita. The higher figures for 2015 and 2016 are attributable to larger loans for the construction of accommodation for refugees. From 2019 onwards, the hospital is no longer included in the list as its legal form changed at that time (from a legally dependent municipal enterprise to a legally independent municipal institution). In 2022, the city's total debt fell to a low of around 404 euro per capita. In 2023, it rose again slightly to 462 euro per capita. This increase was related to the municipal enterprises taking on new debt.



This indicator is used to measure SDG target 16.6:
"Establish effective, accountable and transparent institutions"

Not only the city's total debt, but also the debt of the core municipal budget has fallen significantly overall. Since 2018, the city's core budget debt has been completely repaid. This means that the city will be debt-free in terms of its core budget by 2024. Only the municipal enterprises still had debts. This opened up new financial scope for measures such as the Climate Action Programme. Despite special expenditure to combat and manage the COVID-19 pandemic, the debt level of the municipal enterprises was further reduced.

Classification / Definition

Sustainable budget management is important for the municipality's long-term ability to act. Only with a stable budget situation can the municipality react to problems and undesirable developments.

Debt shows the sustainability of budget management over an extended period of time. The total debt of the municipality, including the debt of municipal enterprises, is relevant here.

The indicator shows the level of debt in the municipal budget, including the debt of municipal enterprises, relative to the number of inhabitants. The debts of independent municipal companies are not included in the analysis.

Calculation

Total municipal debt:

Debt of the municipality in all partial budgets

/

Population



Indicator 16-7: Cash surplus/deficit for the long-term fulfilment of tasks

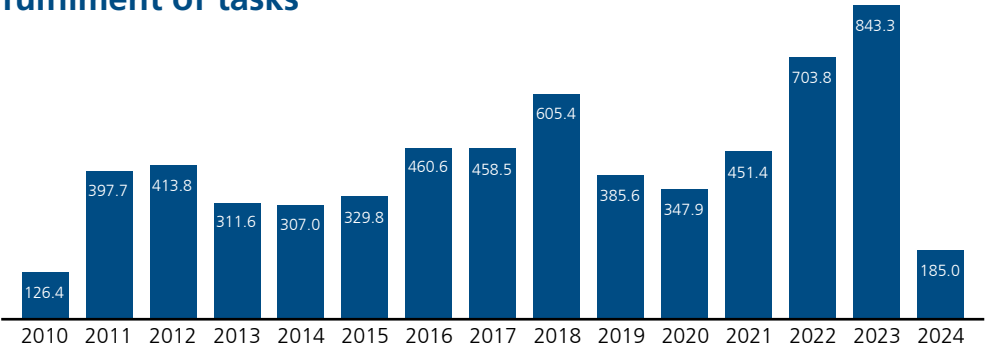


Figure 130:
Cash surplus / deficit
(in millions of euro)

Source: State Capital Stuttgart, City Treasury

The surplus of cash and cash equivalents of State Capital Stuttgart remained positive throughout the period under review, although its extent varied significantly. While the surplus was still 126 million euro in 2010, it reached a record high of 843 million euro in 2023. In 2024, however, it fell significantly to 185 million euro. This is the second lowest figure for the entire period under review. Reasons for this include increased payments (e.g. for personnel, transfer and material expenses) and lower payments from trade tax. As no ordinary repayments were budgeted at the same time, the liquidity from the cash surplus was available in full for other financing purposes.



This indicator is used to measure SDG target 16.6:
"Establish effective, accountable and transparent institutions"

Classification / Definition

Budgetary management must be planned and conducted in such a way as to ensure that a municipality can perform its tasks on a permanent basis. Municipalities are legally obliged to ensure the continuous performance of their tasks. Appropriate planning must ensure that sufficient financial resources are available to pay wages, subsidies or invoices on time, for example.

The indicator provides information on the extent to which a municipality is able to make regular payments for ongoing administrative activities from its own resources and without borrowing. A cash requirement, i.e. a negative sign, necessitates structural measures in the operating budget. The cash surplus is an important indicator for assessing the financial situation of a municipality. It must be at least high enough to finance regular repayments.

The value for 2022 has changed again in retrospect, which is why it differs slightly from the value reported in the 2023 Voluntary Local Review.

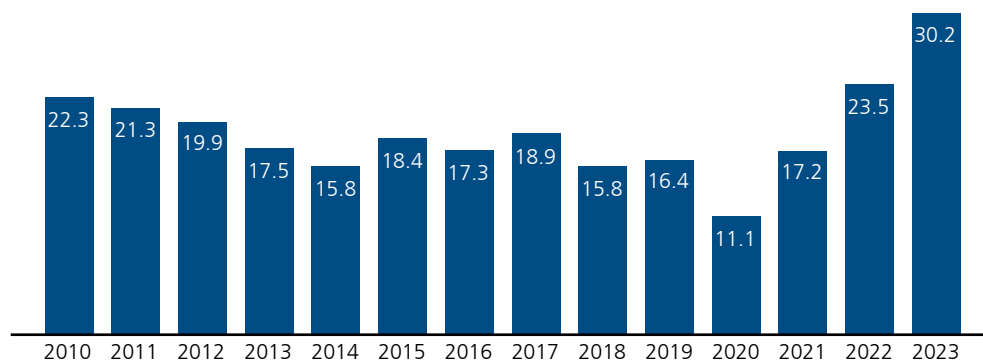
Calculation

Cash surplus / deficit:

Balance of cash inflows and outflows from ongoing administrative activities

Indicator 16-8: Trade tax rate

Figure 131:
Trade tax rate
(in percent)



Source: State Capital Stuttgart, City Treasury

At the beginning of the period under review, trade tax accounted for a good 22 percent of Stuttgart's ordinary revenue and tended to decline until 2020 despite the favourable economic situation. In 2020, in the midst of the COVID-19 pandemic, only around 11 percent of ordinary revenue was generated from trade tax. In the years that followed, there was a significant increase to a peak of around 30 percent in 2023. In recent years, trade tax revenue has grown disproportionately to total revenue. However, this trend is not expected to continue in the coming years due to the current difficult economic situation. Rather, a significant decline in the trade tax rate is to be expected.



This indicator is used to measure SDG target 16.6:
"Establish effective, accountable and transparent institutions"

Classification / Definition

Trade tax is generally levied on all commercial sole proprietorships, partnerships and corporations. The object of the tax is the business operation and its objective earning power, i.e. the profit. Trade tax is one of the most important taxes for a municipality in Germany. It is one of the few relevant sources of income that a municipality can directly influence. The local council can control the amount of trade tax through the assessment rate. The statutory minimum is 200 percent. In Stuttgart, the assessment rate is currently 420 percent.

Revenue from trade tax is subject to strong fluctuations. The main factors here are the development of the economy and the structure of the industry. The trade tax levy is intended to cushion regional differences across Germany. The indicator shows the extent to which the municipality's ability to provide

services depends on positive economic or industry developments. The lower the trade tax rate, the more dependent the municipal budget is on general federal and state tax revenues and on allocations from the state. In order to finance their portfolio of tasks reliably and sustainably, municipalities are dependent on trade tax being as stable as possible.

Calculation

Trade tax rate:

$$\frac{\text{Trade tax revenue minus tax levy}}{\text{Ordinary income}} \times 100$$



Indicator 16-9: Digital municipality

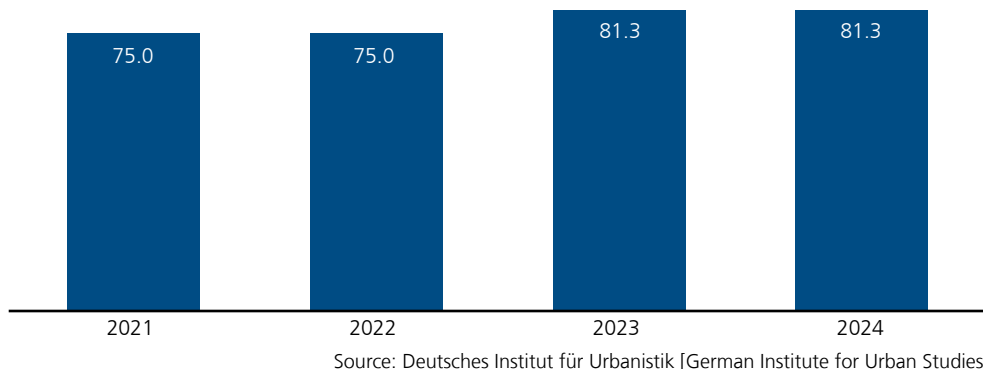


Figure 132:
"Digital municipality" index
(in percent)

In order to measure the digitalisation of municipalities, the German Institute for Urban Affairs has developed the "Digital Municipality" index.²¹⁶ The index was calculated for Stuttgart for the first time in 2021 and stands at around 81 percent in 2024.



This indicator is used to measure SDG target 16.7:
"Ensure needs-based, inclusive, participatory and representative decision-making"

In 2019, State Capital Stuttgart adopted its strategy for a digital city administration with "Digital MoveS – Stuttgart.Gestaltet.Zukunft" [Stuttgart.Shapes.Future]. Digital MoveS aims to provide people with customer-oriented, efficient and effective administrative processes that are fully digitised and based on modern and secure IT infrastructure. To this end, funds amounting to 10 million euro were included in the budget for 2020/21 for the information and communication technology (ICT) project and the creation of 98 jobs.

The COVID-19 pandemic that began in March 2020 impressively demonstrated the urgency of digitalisation. It also led to a shift in priorities within the strategy. The demand for digital solutions in the form of online services for citizens rose sharply, as did the demand for new digital forms of communication and working methods within the administration. Issues such as the rapid expansion of online services provided by the city administration, the introduction of digital forms of communication (e.g. conference platforms for telephone and video conferences) and mobile working were given top priority, together with IT security and the development of IT infrastructure. Other measures had to be put on ice.

Digitalisation will continue to be a key focus for State Capital Stuttgart in the years to come. Stuttgart is currently at a critical point in its digital transformation, where it is important to set the right course for the future. The newly created Office of Digitalisation, Organisation and IT, DO.IT for short, is working on the digital future of State Capital Stuttgart and has a staff of almost 410 (as of January 2025). In close cooperation with the municipal offices, DO.IT is driving forward technical innovations that meet both the needs of the city administration and the wishes of its citizens. The Office focuses on implementing digital solutions to optimise processes, increase efficiency and promote innovation. DO.IT is thus sending a strong signal for the implementation of digital transformation in State Capital Stuttgart.



In addition, the Office advises other departments and municipal enterprises of State Capital Stuttgart and provides concepts and technology. The establishment of the in-house consulting company "Digital MoveS" is intended to make processes that were previously carried out by external consulting firms more efficient.

Classification / Definition

Digitalisation is an indicator for the sustainability of State Capital Stuttgart. There is a dynamic progress in the most diverse working areas, which increasingly shapes the administration processes. In order to maintain performance, it is therefore necessary to intensify the activities of the city administration in this area.

The indicator provides information on the degree of digitisation of municipal processes. This raises 16 questions:

1. Does the municipality have a digital agenda / digital strategy?
2. Is the digital agenda / digital strategy fundamentally geared towards sustainable urban development and does it include individual strategic fields of action geared towards achieving this aim? (e.g. greater administrative efficiency, more transparency and participation, achievement of specific climate targets, optimised mobility and traffic flows, regional innovation and economic development)
3. Does the municipality have a permanent working group, department or competence centre that deals with digitalisation and smart city issues?
4. Are the effects and target achievement of the Digital Agenda or strategy reviewed through long-term monitoring?
5. Does the municipality or municipal companies have sovereignty over the data relevant to the fulfilment of their tasks?
6. Does the municipality have a long-term strategy for handling big data? (Data protection and security)
7. Does the municipality publish its data as open data?
8. Does the Digital Agenda or strategy pursue an inclusive and empowering approach that ensures the participation of all citizens and does not exclude individual groups? (e.g. continuous provision of all municipal services in analogue form)
9. Are there any local educational and support services tailored to specific target groups for dealing with information and communication technologies or media literacy?
10. Does the municipality support the provision of and access to devices and software?
11. Are digital platforms used in the municipality to make information that is important for democratic decision-making more readily available locally?
12. Are there any partnerships with industry and academia in the field of digitalisation to support innovation and development locally?
13. Does the Digital Agenda take into account the improvement of the location and the securing of knowledge and value creation locally?
14. Are digital technologies used in the municipality to support the local energy transition? (e.g. smart grids, smart metering, smart lighting)
15. Does the digital agenda or strategy include local sharing approaches and sustainable business models that promote a more resource-efficient economy or circular economy?
16. Does the digital agenda or strategy take into account possible spatial effects, such as land use and redevelopment potential or transport costs?

Calculation

"Digital municipality" index:

Number of criteria met within the municipality
(answers with yes)

/

Total number of criteria to be evaluated (16)

* 100



Strategy for a digital city administration

i

Over the past two years, a wide range of measures have been implemented in the four Digital MoveS programmes.

Programme 1, "Digital Citizen Services", develops digital and media-consistent, i.e. purely electronic, services for citizens and businesses, continuously identifies innovation potential and ensures the provision of services under the Online Access Act (OZG). By the end of the first half of 2024, some 114 online services were available.

Programme 2, "Digital Administration", focuses on optimising and increasing the efficiency of the internal process portfolio, developing and describing the requirements of internal processes, and establishing administration-wide, media-break-free ICT services (e.g. the introduction of city-wide e-files (pilot projects), e-recruiting, business process management).

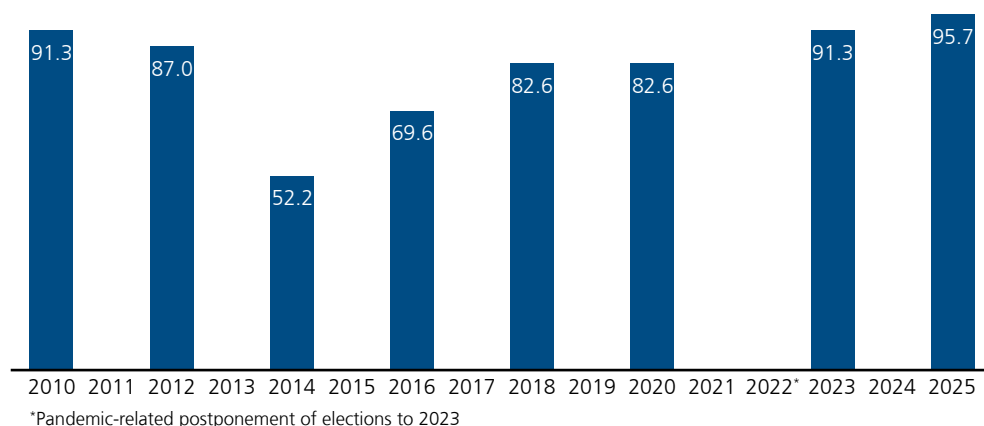
Programme 3, "Modern Working Environment", deals with projects aimed at ensuring good working conditions for employees and an attractive employer image (e.g., mobile working, renewal of media technology, change management).

Programme 4 "Digital Infrastructure" comprises projects to develop infrastructural and technological conditions for digital city administration. The use of powerful technology and tools should be made possible, as should the guarantee of secure and reliable IT operations (e.g. information security management system, digital IT service office, document management system, broadband connection).

The digital monitor is available at: <https://digitalmonitor.stuttgart.de/>

Indicator 16-10: Participation of adolescents

Figure 133:
Proportion of districts with a youth council (in percent)



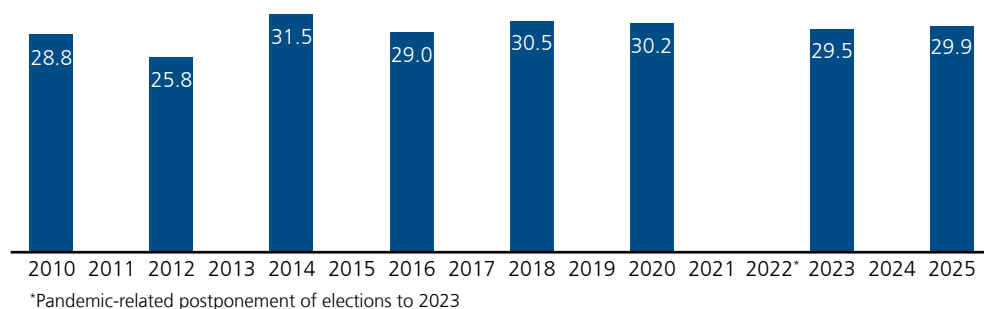
Source: State Capital Stuttgart, Office of Administrative Services and Human Resources

In 2010, around 91 percent of districts (17 districts) had youth councils. This proportion fell to 52 percent (11 districts) in 2014, but rose again to around 70 percent (12 districts) in 2016 and 83 percent (15 districts) in 2018. Since the last youth council elections in 2023 and 2025, the figure has risen again. Since 2025, 22 of the 23 districts have had a youth council (around 96 percent).



This indicator is used to measure SDG target 16.7:
"Ensure needs-based, inclusive, participatory and representative decision-making"

Figure 134:
Participation in youth council elections (in percent)



Source: State Capital Stuttgart, Office of Administrative Services and Human Resources

Participation in youth council elections has hovered around 30 percent in recent years. In 2025, it stood at 29.9 percent (7,663 voters). Youth councils in Stuttgart are elected every two years, although the 2022 election has been postponed to 2023 due to the COVID-19 pandemic.

Classification / Definition

Involving young people in decision-making processes and political representation can be a way of familiarising people with participation at an early age and thus improving political participation in the long term. The youth councils in Stuttgart are institutionalised forums where young people can raise and discuss their concerns.

The indicator "Participation of adolescents" reflects the institutionalised involvement of young people in two metrics. On the one hand, it shows the proportion of city districts that have a youth council and, on the other, participation in youth council elections. All young people who are at least 14 and not yet 19 years old on the last day of the election are eligible



to vote. Youth council elections are held in all 23 city districts of Stuttgart, with some city districts having joined together to form electoral districts.

Calculation

Participation of adolescents
(districts with youth councils):

$$\frac{\text{Number of districts with a youth council}}{\text{Total number of districts}} \times 100$$

Participation of adolescents
(participation in youth council elections):

$$\frac{\text{Number of voters in the youth council election}}{\text{Total number of eligible voters in the youth council election}} \times 100$$

Indicator 16-11: **Registered users at "Stuttgart – meine Stadt"** **[Stuttgart – my city]**

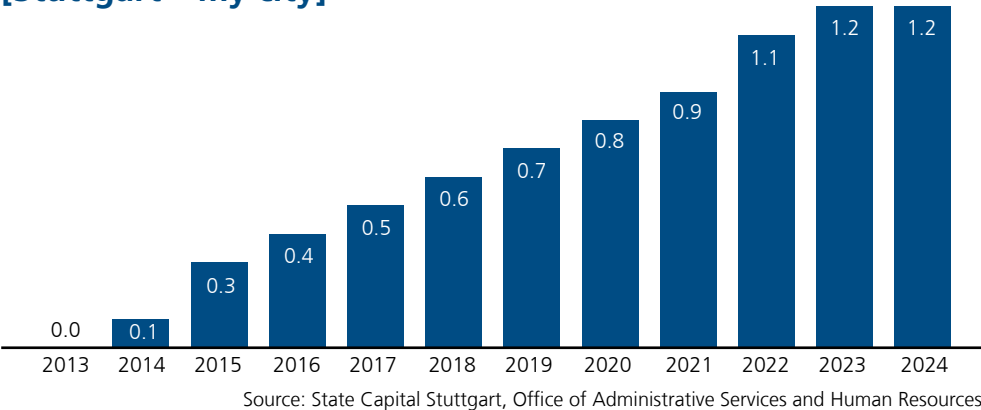


Figure 135:
Registered users at
"Stuttgart – meine Stadt"
(in percent)

As of 31 December 2024, 6,502 users had created a profile on the "Stuttgart – meine Stadt" platform. This corresponds to 1.2 percent of Stuttgart's population aged 16 and over.

In 2021, 410 new registrations were recorded on the portal. In 2022, this number of new users more than doubled. In particular, online participation in topics of city-wide relevance – such as the continuation of Stuttgart's cycling concept (mid-March to mid-October 2022) or the creation of a climate mobility plan (July 2022) – resulted in 987 new registrations for the portal. In 2023, 462 new users registered, and in 2024, there were 751.



This indicator is used to measure SDG target 16.7:
"Ensure needs-based, inclusive, participatory and representative decision-making"

Developments in recent years have shown that residents are increasingly keen to get involved in their local communities and the development of their cities. This is reflected both in their desire to participate in political decision-making and consensus-building processes and in their growing commitment to voluntary work. State Capital Stuttgart launched an initial pilot version of the participation portal www.stuttgart-meine-stadt.de in August 2013. After twelve years of operation, the participation portal no longer meets current requirements. Technologies, media use and content presentation have changed. Against this backdrop, the Municipal Council decided in June 2023 to relaunch the city's participation portal "Stuttgart – meine Stadt" (Stuttgart – my city). The new participation portal is scheduled to go online by early 2026. The aim is to create an innovative, future-proof, technically up-to-date, modern, user-friendly and lively portal that encourages participation. In this way, State Capital Stuttgart wants to motivate even more Stuttgart residents to actively participate in the development of their city and in issues affecting society as a whole.

Participation and digitalisation: Stuttgart guidelines for informal citizen participation

i

Due to the ongoing digitalisation of our living and working environments, online participation formats are becoming increasingly important. In the future, therefore, there will be an even greater focus on digital methods as a useful addition to traditional face-to-face events. The services offered on the participation portal are to be expanded to include innovative digital participation formats in order to further enhance and improve usability for users. The aim is to get more and more Stuttgart residents involved in the development of the city and in issues affecting society as a whole. A political mandate to develop standards for citizen participation procedures led to the drafting of guidelines for informal citizen participation. It was unanimously approved by the Municipal Council in April 2017 and came into force in October 2017. The mandate regulates the entire area of informal citizen participation in Stuttgart – from suggesting participation procedures to designing them

and making decisions. With these guidelines, the city has committed itself to a transparent and binding framework for informal citizen participation. The revised guidelines for informal citizen participation were published in July 2024. In the update, attention was paid to addressing specific target groups. In addition, access is now easier and the wording is less bureaucratic.²¹⁷

A central element of the guideline is the list of projects, which was published on the city's participation portal when the guideline came into force. The list of projects provides transparent information about city administration projects and the opportunities for participation. Residents can actively participate and contribute to projects online through surveys, forums and interactive maps. In February 2025, there were 225 projects online.²¹⁸

Classification / Definition

The "Stuttgart – meine Stadt" portal provides interested residents with early information about municipal participation projects and all other urban development plans. The project is an important step towards greater transparency and citizen participation. The indicator shows the development of the number of users who have registered on the online portal.

Calculation

Registered users at "Stuttgart – meine Stadt" [Stuttgart – my city]:

Number of registered users on
www.stuttgart-meine-stadt.de

/

Population (over 16 years of age)

* 100

Indicator 16-12: Stuttgart participatory budgeting

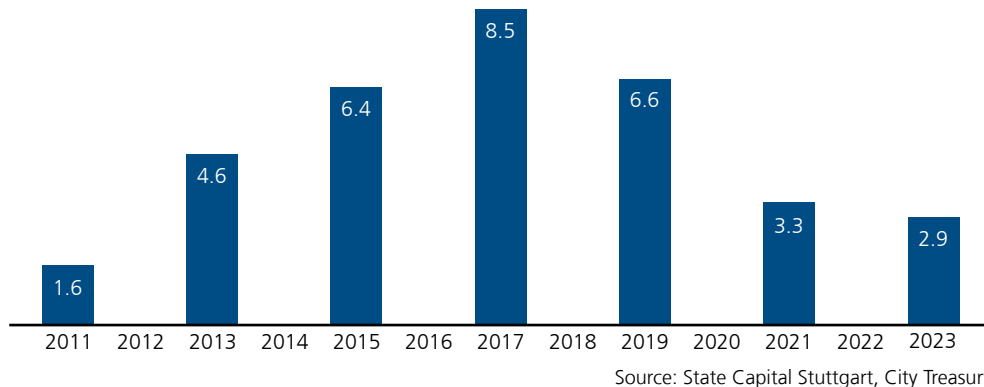


Figure 136:
Participation in Stuttgart's
participatory budget
(in percent)

In the first few years after the introduction of Stuttgart's participatory budget, which allows citizens to actively participate in budget planning, the participation rate rose significantly to 8.5 percent of the population in 2017. Since then, the participation rate has fallen steadily. In 2023, the figure was particularly low at only 2.9 percent.

The decline in the participation rate since 2021 was linked, among other things, to the discontinuation of the option of collecting and evaluating proposals submitted by citizens via signature lists. The reason for this was the complete digitisation of the participation process from 2021 onwards. Due to the COVID-19 pandemic, the usual information events in the city districts had to be cancelled. In addition, for reasons of infection control, the popular method of evaluation using paper signature lists, which had attracted around half of the participants in previous years, was not permitted for the first time. To counteract these limitations, the participatory budget was promoted even more intensively in public than in previous years. During the participation process, there was advertising on information screens (at tram stops and in trams), posters in buses and at S-Bahn stations, and Citylight posters throughout Stuttgart.²¹⁹



This indicator is used to measure SDG target 16.7:
"Ensure needs-based, inclusive, participatory and representative decision-making"

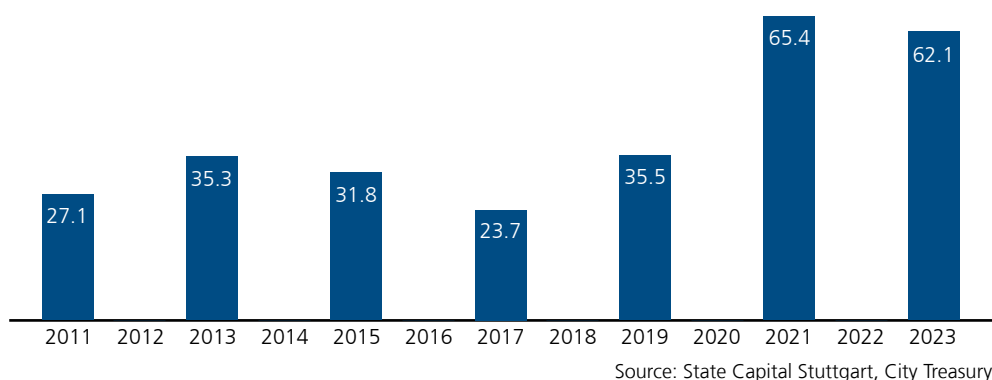


Figure 137:
Evaluation of participatory
budgeting proposals per
participant (in numbers)

In 2021 and 2023, the number of evaluations of participatory budgeting proposals almost doubled compared to the level since 2011. Between 2011 and 2019, the number of evaluations fluctuated between 20 and 35 per participant. In 2021, the number rose sharply to around 65 ratings and remained at a similar level in 2023 with around 62 ratings.



Participatory budgeting evaluation

i

As part of the 2025 participatory budget, 15,377 Stuttgart residents took part and submitted a total of 2,447 proposals. After an external moderation team reviewed the proposals for budget relevance and grouped similar ones together, 1,914 proposals remained, which received a total of 1,129,544 votes.²²⁰

The top 5 highest-rated suggestions were:

- "Swimming saves lives" – promoting free or low-cost swimming lessons for children and young people.
- "Free travel for schoolchildren" – introduction of free public transport for schoolchildren.
- "Make Marienplatz greener again" – more green spaces and seating areas in Marienplatz.
- "Upgrade the electrical infrastructure in schools" – modernising technical equipment in schools.
- "More heat protection through landscaping, sun sails and drinking fountains" – measures for adapting to climate change in urban areas.

The full list of the top 100 proposals and further information on the 2025 participatory budget can be found on the official website: www.buergerhaushalt-stuttgart.de.

The final decision on the implementation of these proposals will be made by the Municipal Council during the budget deliberations in autumn 2025.²²¹

Classification / Definition

The participatory budget gives Stuttgart residents the opportunity to actively participate in budget planning every two years. In the proposal phase, citizens can contribute their own suggestions to the participatory budget. In the subsequent evaluation phase, registered users can then rate all submitted proposals as "good for our city" or "not so good for our city".

The 100 proposals with the best ratings and the two most popular proposals for each city district are reviewed by the administration, then submitted to the district advisory board for comment and prepared for the budget deliberations in autumn. The proposals must be feasible and financially viable, and fall within the city's area of responsibility.

Calculation:

Stuttgart participatory budgeting:

Number of participants in participatory budgeting

/

Population

* 100

Evaluation of participatory budgeting:

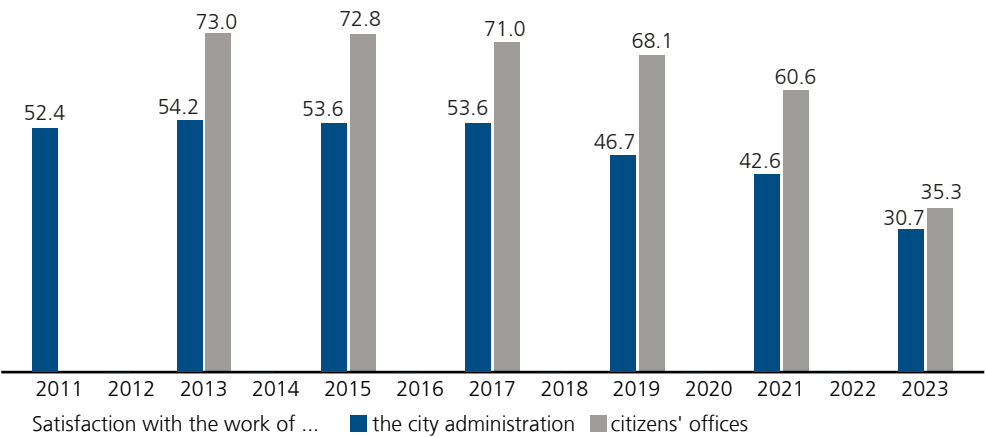
Number of positive and negative evaluations

/

Number of participants



Indicator 16-13:
Satisfaction with the work of the city administration



Source: State Capital Stuttgart, Statistics Office (citizen survey, Stuttgart survey)

Figure 138:
Satisfaction with the work of the city administration as a whole and with the work of the citizens' offices (figures in respective percentages of satisfied and very satisfied citizens)

Citizen satisfaction with the work of the city administration declined during the period under review. According to the 2021 citizen survey, while this figure was still above 50 percent between 2011 and 2017, only around 31 percent said they were satisfied or very satisfied with the work of the city administration in 2023, with 43 percent responding that they were partly satisfied.

The satisfaction of Stuttgart's population with the work of the citizens' offices has also declined since the 2013 survey. While between 2012 and 2019, around 70 percent of citizens were satisfied or very satisfied with the work of the citizens' offices, this figure had fallen to around 35 percent by 2023, almost halving since 2021. Around 32 percent answered the question with neither satisfied/nor unsatisfied.



This indicator is used to measure SDG target 16.7:
"Ensure needs-based, inclusive, participatory and representative decision-making"

Classification / Definition

Data on citizens' satisfaction with the work of the city administration (and the citizens' offices) is collected every two years as part of the citizen survey. The indicator represents the proportion of citizens surveyed who say they are very satisfied or satisfied with the work of the city administration (or the citizens' offices).

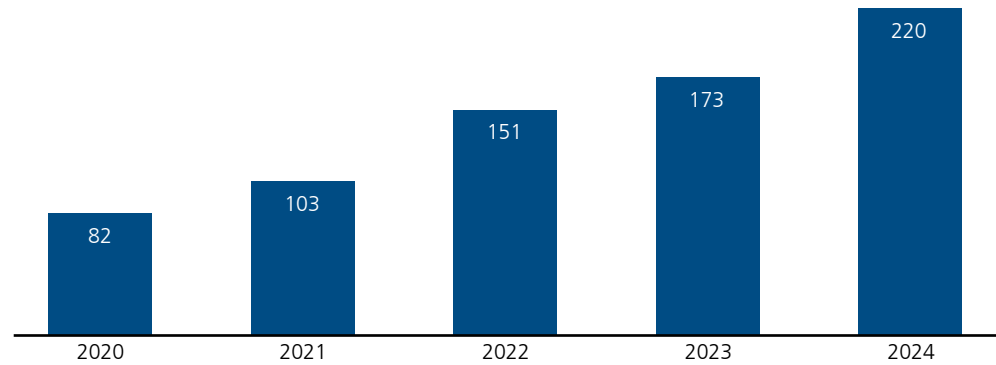
Calculation

Satisfaction with the work of the city administration (or citizens' offices):

$$\frac{\text{Number of satisfied and very satisfied citizens}}{\text{Population}} \times 100$$

Indicator 16-14: Online administration services

Figure 139:
Administration services offered
online (in numbers)



Source: State Capital Stuttgart, Office of Digitalisation, Organisation and IT

The number of administration services available online for citizens almost tripled between 2020 and 2024. While there were 82 services available online in 2020, this figure had risen to 220 by 2024.



This indicator is used to measure SDG target 16.10:
"Ensure public access to information"

Classification / Definition

The indicator describes the number of administration services citizens are already offered online. The deadline for data collection is always 15 June. With the passing of the Online Access Act (OZG), all municipalities are required to offer their administration services via online portals by the end of 2022.²²² The Act Amending the Online Access Act (OZG 2.0) came into force on 24 June 2024. The aim of the OZG is to make administration simple, secure and accessible to citizens from anywhere and at any time through digital services. The aim is to provide a central citizen account with a mailbox and authentication.²²³

The digital provision of administration services gives citizens more efficient access to public information and simplifies interaction between the city administration and citizens.

Calculation

Online administration services:

Number of administration services offered online



Correlation with other SDGs

The governance dimension of sustainability (i.e. the participation of different actors in decision-making processes and their implementation), which relates to decision-making and the political and administrative implementation of measures, indirectly influences all other dimensions of sustainability. Political decisions, including those made at the local level, have a direct impact on social justice (SDG 1 "No poverty", SDG 5 "Gender equality", SDG 10 "Reduced inequalities"), economic development (SDG 8 "Decent work and economic growth", SDG 9 "Industry, innovation and infrastructure"), on urban design (SDG 11 "Sustainable cities and communities"), on environmental and climate protection measures (SDG 2 "Zero hunger", SDG 6 "Clean water and sanitation", SDG 13 "Climate action", SDG 14 "Life below water", SDG 15 "Life on land") and municipal commitment to supporting people and countries in other parts of the world (SDG 17 "Global partnerships for the goals"). However, the scope for these activities depends heavily on the city's capacity to act.

Bolstering institutional capacities and promoting the rule of law are also key components of SDG 16, as they significantly strengthen trust in state and municipal institutions and promote citizen participation. This leads to greater participation in political processes and greater accountability, which improves the quality of decisions and facilitates the implementation of measures in all areas of sustainability. Inclusion and transparency in governance not only contribute to social justice (SDG 1 and SDG 10), but also to sustainable development and good cooperation at all levels (SDG 17), which are essential for tackling global challenges.

The level of debt is significantly influenced by economic development (SDG 8) and support requirements, particularly for residents affected by poverty (SDG 1 "No poverty" and SDG 8 "Decent work

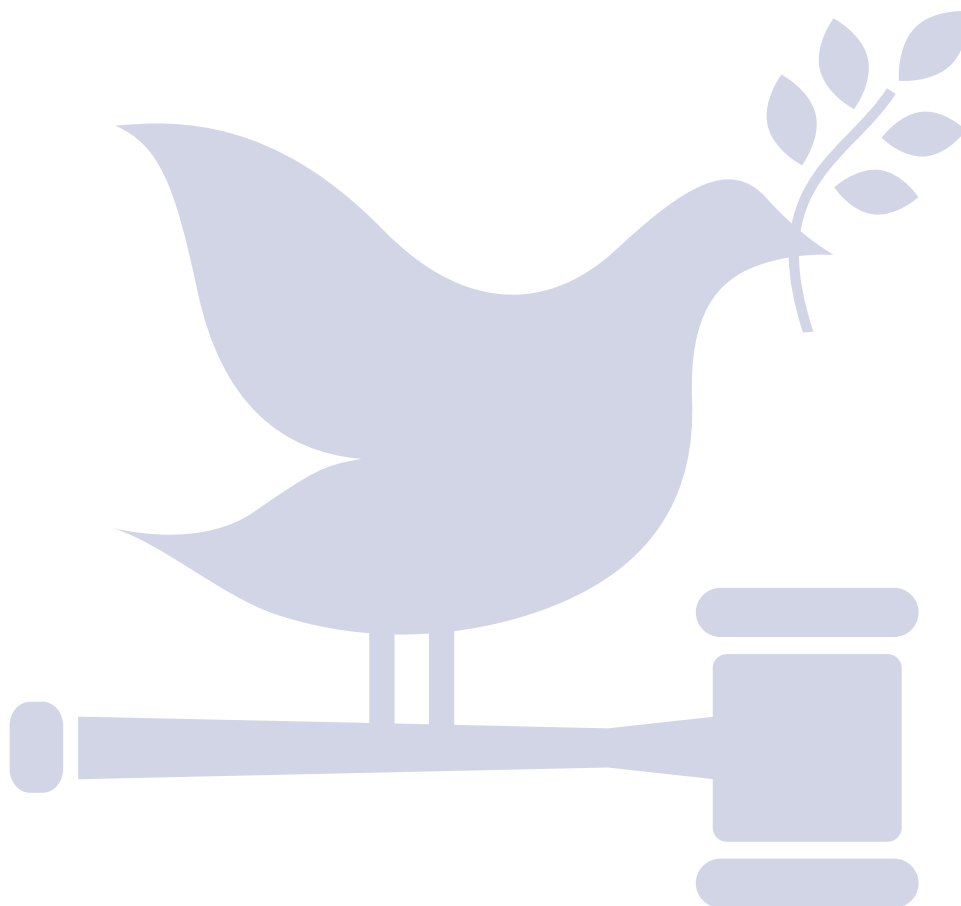
and economic growth"). Fiscal sustainability is closely linked to governance, as effective management and administration of public resources enables the financing of social services, environmental protection measures and public investment. High public debt can limit the city's ability to act and thus impair its ability to achieve goals such as clean water (SDG 6) and climate action (SDG 13). The scope for governance depends on "good" governance, but also on external influences and the long-term consequences of municipal action. Good governance requires consideration of long-term perspectives and policy-making that is capable of reconciling social, economic and environmental goals. The sustainability of decisions is therefore directly linked to the ability to create resilient infrastructure (SDG 9) that secures local water and energy supplies (SDGs 6 and 7), make cities sustainable (SDG 11) and enable all social groups to participate on an equal footing (SDGs 5 and 10). Long-term perspectives also promote the goals of climate action (SDG 13) and biodiversity (SDG 15), as municipalities are better placed to implement climate adaptation strategies and nature conservation measures. These interrelationships give sustainable governance a special significance.

The sustainability goal of "peace, justice and strong institutions" is crucial for shaping the upcoming transformation processes, ensuring public services and social cohesion in the municipality. Strong and fair institutions not only support the implementation of climate policy measures (SDG 13), but also promote social inclusion and the protection of vulnerable groups (SDG 1 and SDG 5). Justice and the rule of law are inextricably linked to the promotion of equal opportunities and social mobility, which are fundamental prerequisites for a just society and have a direct impact on the achievement of the goals for education (SDG 4), health (SDG 3) and the labour market (SDG 8).



The following indicators are also directly relevant to SDG 16 "Peace, Justice and Strong Institutions":

- SDG 3:** "Premature mortality"
- SDG 3:** "Level of organisation in sport"
- SDG 3:** "Perception of loneliness"
- SDG 5:** "Women in the Stuttgart Municipal Council"
- SDG 5:** "Women in municipal management positions"
- SDG 6:** "Barrier-free or low-barrier sanitary facilities"
- SDG 8:** "Gross domestic product"
- SDG 10:** "Meeting points for citizens"
- SDG 10:** "Relative employment rate of people without German citizenship"
- SDG 10:** "Relative poverty rate among recipients of benefits without German citizenship"
- SDG 10:** "Relation of the median salary according to citizenship"
- SDG 10:** "Low-barrier housing"
- SDG 11:** "Allocation of accommodation with municipal occupancy rights to households with urgent housing needs"
- SDG 11:** "Index of District Advisory Board commitment in the context of the Sustainable Development Goals (SDGs)"
- SDG 11:** "Financial burden of housing costs"
- SDG 11:** "Proportion of social housing in the overall rental market"
- SDG 11:** "Accessibility of public transport"





Practical example 25: Mobile working



Context

The creation of modern, flexible working conditions is essential for Stuttgart's appeal as an employer. For many years, Stuttgart has been pursuing the goal of enabling its employees to achieve a good work-life balance and encouraging them to take responsibility. In line with the State Capital's Digital-MoveS strategy, the opportunities offered by digitalisation are also to be used to retain and attract human resources.

Description / Implementation

For several years now, employees have been able to perform part of their work (up to 40% of their individual working hours) from any location, provided that this is compatible with their duties, including data protection and information security requirements. This is possible on the basis of the service agreement on mobile working in State Capital Stuttgart in its current version from 2022. This work model complements the option of teleworking (up to 60% of individual working hours) that has been available since 2004, which differs from mobile working in particular in that an individual agreement is concluded with the respective employee for regular work from home and the home workplace is inspected and (co-) equipped by State Capital Stuttgart. The two models can be combined. There is also a service agreement for this.

State Capital Stuttgart currently employs around 17,000 people. As a result of the further increase in the number of employees, the number of VPN connections has also risen to 9,408. It should be noted that many employees do not work in offices but, for example, in social institutions or in (commercial) technical professions and therefore do not require an (individual) VPN connection.

Experience / Results

The experience with mobile working and teleworking has been very positive. Both options are increasingly being used by employees. Even though the option of mobile working, which mainly takes place in home offices, often means that a teleworking station is considered unnecessary, the number of teleworking stations set up has nevertheless continued to rise (from 250 active stations in 2020 to around 540 stations in 2023). Not all employees have taken full advantage of the option to work from different locations, even though there were no obstacles to doing so in individual cases. It also became apparent that personal communication on site remains important. Nevertheless, it can be assumed that around 70 to 80 percent make at least partial use of the flexibility granted.

The two service agreements from 2022 are currently (2024) being evaluated with the aim of further developing the basic principles accordingly. Important topics will include the amount of time allowed for teleworking and mobile working, as well as the topic of "workation".

Division / Office / Public Undertaking

DO.IT Office of Digitalisation, Organisation and IT
in the General Administration, Culture and
Legal Affairs Division



Practical example 26: Online administration services

Context

The provision of online administration services has been significantly accelerated by the Online Access Act (OZG). State Capital Stuttgart offers citizens the opportunity to apply for administrative services online on various platforms. These include the state platform Service BW and the in-house developments ServiceStuttgart and stuttgart.de.

Description / Implementation

Since 2007, State Capital Stuttgart has been offering the option of applying for services such as civil status certificates online on its own platform, ServiceStuttgart.

The Service BW platform provided by the state offers the option of using application forms very quickly in your own municipality through inter-municipal cooperation. It is also possible to create municipality-specific application forms yourself, such as the rent index calculator in Stuttgart. In this form, a result is calculated immediately based on information about the location and amenities of the apartment or house and displayed clearly.

Another example is the application forms for subsidies for electric cargo bikes for families in Stuttgart. It is possible to apply for both the subsidy and the payment digitally and then, after three years, also apply for a sustainability bonus.

To speed up the processing of applications for travel vouchers for people with severe walking disabilities, internal software products are currently being fully integrated.

Since mid-2023, it has been possible to submit applications for funding under the heat pump programme and the solar initiative via ServiceStuttgart. The entire process has been digitised, from application to payment instruction.

Another project to make it easier for citizens to access the administration is the online appointment system. The registration office and immigration office (service point and eAT issuance, initial registration for Ukrainians) are already up and running.

This year will see the go-live of the Office of Social Welfare and Participation with the areas of insurance office, reception and accommodation, refugees under the Asylum Seekers Benefits Act, and registrations (starting in the third quarter) and the citizen service for construction (starting in the third quarter). Further rollouts of this online service are planned for various citizens' offices in the third and fourth quarters.

Experience / Results

The examples mentioned above have been very well received by citizens. The application process is very accessible, as it only requires a service account, which can be applied for independently. Communication channels on the platforms enable direct contact with the applicant and clarification of any queries. Thanks to the encrypted environments, it is also possible to exchange sensitive personal data securely.

The digital processes allow applications to be processed more quickly and eliminate "manual digitisation processes" such as scanning paper forms or entering data into software.

Another result is that citizens can submit the application themselves at any time without having to go to the relevant office or a citizens' service centre. This leads to greater acceptance among citizens and reduces the internal workload.

Division / Office / Public Undertaking

DO.IT – Office of Digitalisation, Organisation and IT in the eGovernment-Services and IT and eGovernment projects in the General Administration, Culture and Legal Affairs Division.

Further reading / links

<https://service.stuttgart.de/>

<https://www.service-bw.de>

(Last access on 25.10.2024)



Practical example 27: Stuttgart Children's Assembly



Context

Children and young people are involved in a wide range of activities in State Capital Stuttgart, with participation anchored in various departments and agencies. In addition to project- and event-related participation, there are also regular opportunities for children and young people to get involved in the city districts, as well as institutionalised participation through the Stuttgart Youth Councils and the Youth Municipal Council. In 2022, an overall concept for child participation and the further development of youth participation in the Municipal Council were adopted.

The action plan "Child- and Youth-Friendly Municipality 2024–2026" highlights the contribution of the measures to the UN's International Sustainability Goals.

Description / Implementation

In 2020, the Stuttgart Children's Assembly was established in Stuttgart as a regular format for city-wide child participation. Since then, children aged eight to ten have had the opportunity to get together in a so-called "Mitmischgruppe" (participation group) accompanied by an adult. The annual theme is chosen by the children of Stuttgart themselves. After working on the topic during the first half of the school year, the children submit proposals to the city administration outlining what stood out to them, what they would like to do themselves, and what they expect from the administration. At the Stuttgart Children's Assembly itself, all the children's groups meet with city officials in the spring to discuss their concerns and explore possibilities for implementation. Ideally, projects are then implemented by the summer holidays.

Experience / Results

In the first five years of the Stuttgart Children's Assembly, between 15 and 20 groups of children took part each year and submitted around the same number of motions. The annual themes, which were chosen by the children themselves, alternated between "Environment and Nature" and "Play, Leisure and Recreation". The motions dealt with a wide variety of issues, such as cleanliness in the city, playground design, use of the Neckar river, planning of locations in their own district, greening and much more.

After five years, the Stuttgart Children's Assembly will now be evaluated in the 2024/25 school year to identify success factors and weaknesses and adapt the format for the next round.

Division / Office / Public Undertaking

Department for Children's Affairs in the Mayor's Office

Further reading / links

<https://www.stuttgart.de/kinderversammlung>
(Last access on 14.11.2024)



Further practical examples at: www.stuttgart.de/lebenswertes-stuttgart



SDG 17 Partnerships for the Goals

"Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development"

SDG 17 broadly focuses on enhancing the resources for implementing the 2030 Agenda and fostering partnerships for sustainable development across all levels. For municipalities, relevant issues include the establishment and expansion of partnerships and the mobilisation of resources from various sources, both locally and in countries in the Global South.





Overview of the relevant targets

The following targets of SDG 17 are relevant to German municipalities. The focus is on targets that can be directly measured using selected indicators. Additionally, a single indicator may be relevant for multiple targets. These holistic correlations are presented in the sections entitled "Correlation with other SDGs" as well as in Annex II.



17.6 Knowledge sharing and strengthening North-South and South-South cooperation for access to academia, technology and innovation



17.16 Expand the global partnership for sustainable development

The following relevant targets have not yet been represented by indicators:



17.3 Mobilisation of financial resources for developing countries



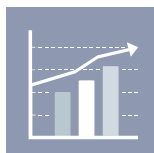
17.14 Enhance political coherence for sustainable development



17.17 Promote effective partnerships



17.18 Increase the availability of reliable data



17.19 Develop measurements of progress on sustainable development

All indicators used to measure the listed targets can also be accessed via the city's own SDG dashboard: <https://sdg.dashboardstr.de/>

Indicator 17-1: Students from the Global South

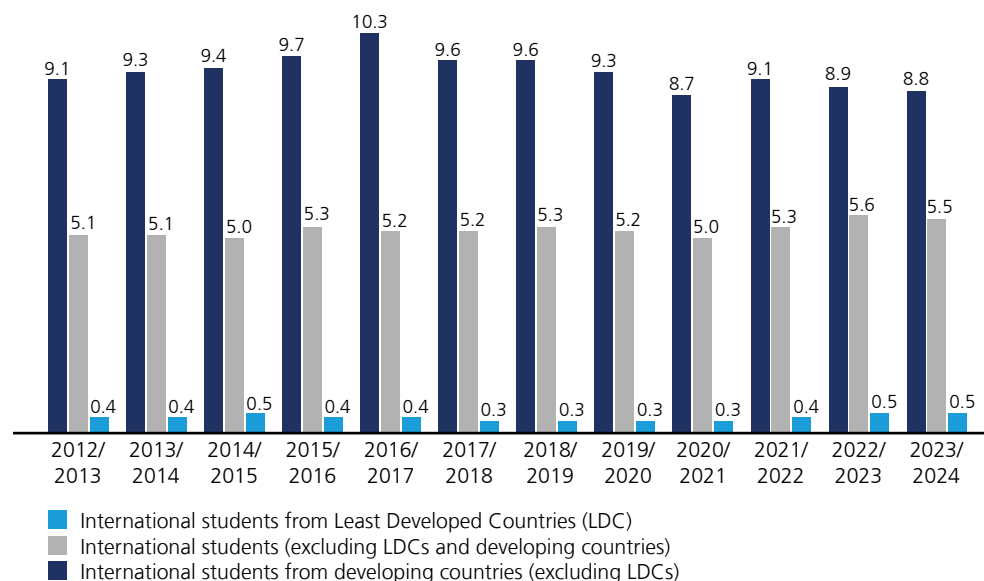


Figure 140:
Proportion of students from the Global South at Stuttgart's colleges and universities (figures in percent)

Source: State Statistical Office Baden-Württemberg, Student Statistics

The proportion of students from developing countries²²⁴ among all students at colleges and universities in Stuttgart fluctuated during the period under review. Initially, the figure rose from 9.1 percent in the 2012/2013 winter semester to a peak of 10.3 percent in the 2016/2017 winter semester. It then fell slightly again, reaching a low of 8.7 percent in the 2020/2021 winter semester due to travel restrictions during the COVID-19 pandemic. In the following winter semester, the proportion rose again to 9.1 per cent, but has since fallen slightly again and stood at 8.8 per cent in the winter semester 2023/2024.

Overall, the proportion of students from developing countries is highest among all foreign students at around 60 per cent, and lowest among those from the least developed countries (LDCs). Throughout the period under review, the proportion of students from LDCs remained relatively constant at between 0.3 and 0.5 percent of the total student population, and at approximately 3 percent in relation to all foreign students. The proportion of foreign students (excluding LDCs and developing countries) among all students also remained relatively stable at around 5 percent during the period under review, accounting for almost 40 percent of all foreign students.



This indicator is used to measure SDG target 17.6:

"Knowledge sharing and strengthening North-South and South-South cooperation for access to academia, technology and innovation"

Classification / Definition

Since the 2017/2018 winter semester, international students from non-EU countries have been required to pay tuition fees of 1,500 euro following a ruling by the state government of Baden-Württemberg. The extent to which this is reflected in the numbers of foreign students is not apparent from the data, as there were also changes in the classification of developing countries and LDCs at that time.

The indicator describes the proportion of foreign students relative to the total number of students at universities and colleges in Stuttgart for the following three groups:

- 1) Proportion of students from Least Developed Countries (LDCs) according to the Organisation for Economic Cooperation and Development (OECD)²²⁵



- 2) Proportion of students from developing countries (excluding LDCs according to OECD)
- 3) Proportion of foreign students (excluding developing countries and LDCs, including other Asian countries, unspecified, stateless with unclear origins).

The classification as a developing country or LDC is made by the Development Assistance Committee (DAC) of the OECD. The list for the current year always applies. As the classification may change over time, the time series are not always fully comparable. For example, there was a change from 2017 to 2018.²²⁶

Calculation

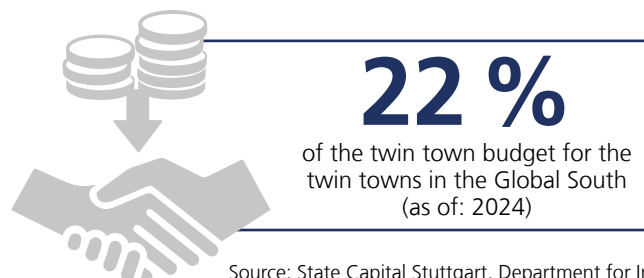
Students from the Global South:

Number of students from developing countries (excluding LDCs); number of students from LDCs; number of foreign students (excluding LDCs and developing countries)

Total number of students at Stuttgart colleges and universities

* 100

Indicator 17-2: Twin towns in the Global South



On average, between 2008 and 2024, expenditure on the three twin cities in the Global South (Mumbai, Cairo, Menzel Bourguiba) remained constant at 20 percent of the twin city budget of the Department for International Relations.



This indicator is used to measure SDG target 17.16:
"Expand the global partnership for sustainable development"

Peace, international understanding and solidarity are driving forces behind the international activities of State Capital Stuttgart. Since 1948, Stuttgart has been cultivating and shaping its relationships with cities and partners in Europe and around the world. This has resulted in ten active town twinning projects on four continents, three of which are in the so-called Global South, as well as a wide range of networks and projects to strengthen partnerships. Since Russia's attack on Ukraine in violation of international law, the partnership with Samara, Russia, has been suspended. In 2023, a solidarity partnership with Khmelnytskyi in Ukraine was launched together with Dresden. Other partnerships include projects in South/South-East Europe and climate and energy partnerships.



In addition, third-party funds and earmarked funds are used to support the solidarity partnership with Ukraine, South/Southeast Europe, climate partnerships and learning dialogues to anchor the international sustainability goals (see also target 17.3). Offers and financial support from the Service Agency for Municipalities in One World (SKEW) were leveraged, making broader participation in various programmes possible.

Cities with international relations make a key contribution to international understanding and are committed to the United Nations' global sustainability goals within the framework of international local government policy. At their core, cities are spaces where diversity and interaction flourish. Especially in light of current crises and Russia's war of aggression against Ukraine, cities can play a key role in fostering dialogue and help shape future-oriented transformation.

Classification / Definition

The "Twin towns in the Global South" indicator covers expenditure in the local communities or for projects launched in the twin towns. These vary in size and content and are organised by the city itself or by civil society organisations.

The expenditure is for programmes in and with the twin towns of Menzel Bourguiba (Tunisia), Cairo (Egypt) and Mumbai (India).

This includes funding for exchange programmes, educational work, town twinning anniversaries, networking and activation events, as well as grants for exchange and participation projects run by third parties (e.g. civil society organisations).

It does not include services provided by other departments for project work with and in countries of the Global South or in international networks, third-party funding, or measures to promote fair trade.

This indicator shows the average amount of funding used for cooperation with and in twin cities in the Global South in relation to the average amount of funding available for twin city work in the Department for International Relations from 2008 to 2024.

Calculation

Twin towns in the Global South:

Funds for cooperation with twin towns in the Global South

/

Free project budget of the
Department for International Relations

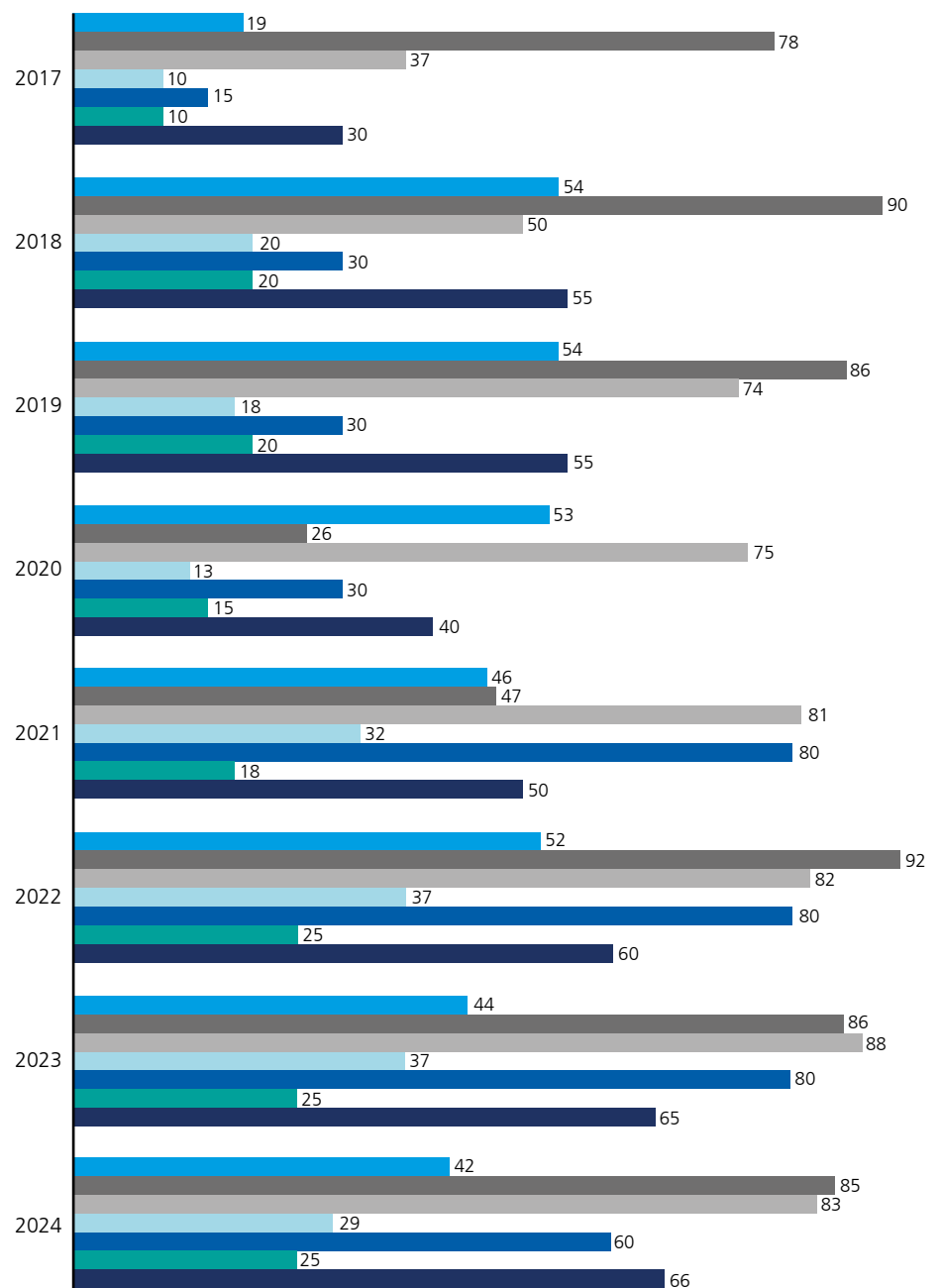
* 100





Indicator 17-3: Projects and counselling services

Figure 141:
Projects and counselling services
(in numbers)



- 1. Launching of the city's own twin town projects
- 2. Counselling and support for externally funded town twinning projects
- 3. Non-monetary support for external town twinning projects / target group-specific advice
- 4. Advice, support and launching of internal and external EUROCITIES projects and measures to strengthen Europe, EU expert advice and acquisition of EU funding
- 5. Non-monetary support for internal and external EUROCITIES projects and measures to strengthen Europe, EU expert advice and acquisition of EU funding / target group-specific advice
- 6. Advice, support and launching of internal and external international sustainability projects and development for implementation at local and international level
- 7. Non-monetary support for internal and external international sustainability projects and development for implementation at both local and international level

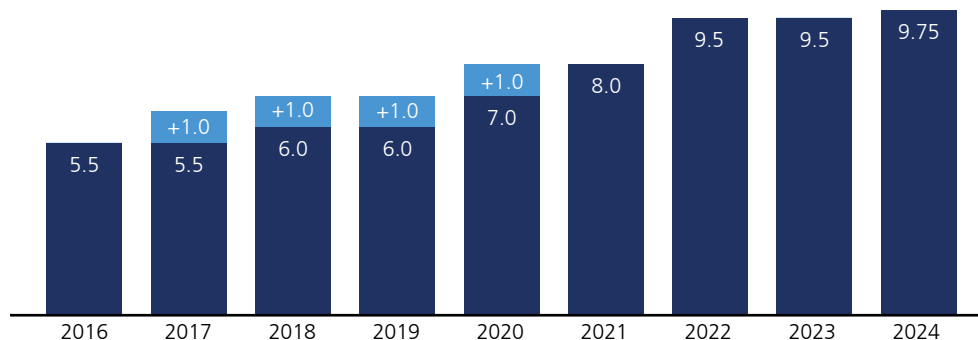
Since 2016, the Department for International Relations has expanded its role as a central service provider and organiser by intensifying interdepartmental and civil society coordination, counselling, implementation, and (financial) support activities. Since 2016, the department's tasks, staff and budget have each grown by around a third.

Alongside the State Capital's own resources, the Department for International Relations has secured approximately 600,000 euro in third-party funding over the past 16 years (since 2008), creating additional opportunities to implement development policy projects in Stuttgart and to strengthen international partnerships.

Since 2021, project implementation – particularly for third-party initiatives – has been gaining momentum again and has now reached or even surpassed pre-COVID-19 pandemic levels. Recent additions include the solidarity partnership with Khmelnytskyi in Ukraine, the climate partnership with Menzel Bourguiba in Tunisia, and learning dialogues within the framework of Urban Diplomacy Exchange on the International Sustainable Development Goals and related topics. These dialogues involve collaboration with British cities such as St Helens and Cardiff, the French city of Strasbourg, and participation in European networks (e.g. the "Governance Peer-Learning Hub") alongside the Estonian capital Tallinn, other European cities, and the EU Commission.



This indicator is used to measure SDG target 17.16:
"Expand the global partnership for sustainable development"



Note: From 2017 to 2020 plus third-party funded project position "Global Development Goals"

Source: State Capital Stuttgart

Figure 142:
 Number of positions
 according to staffing plan
 (in number of positions)

Close partnership and town twinning, European networking, and international sustainability and development are the guiding principles of the work carried out by the Department for International Relations. State Capital Stuttgart is actively addressing pressing existing and current challenges, such as the climate crisis, the consequences of the COVID-19 pandemic, and Russia's war of aggression against Ukraine. State Capital Stuttgart is broadening and deepening its international commitment overall, wherever opportunities arise. Through its European and international involvement, the State Capital is seeking to actively embrace global responsibility and achieve both sustainable action and solidarity.

State Capital Stuttgart is one of the municipal pioneers in Germany and internationally in anchoring the United Nations' 2030 Agenda for the international sustainability goals (SDGs). This is being promoted, among other things, through the permanent establishment of a coordination position for International Sustainability and Development, which heads an interdisciplinary working group. This working group is chaired by the Department for International Relations and the Statistics Office.



The focus on UN Sustainable Development Goals concerns all departments. Stuttgart also leverages collaboration with twin cities as well as third-party projects and programmes to encourage international exchange and cooperation on the international sustainability goals to achieve the priorities of the 2030 Agenda.

Stuttgart's award of the Council of Europe's 2021 Medal of Honour is testimony to its notable efforts towards spreading the European idea and its outstanding commitment to strengthening a united Europe. Stuttgart is committed to a strong and diverse Europe and lives the European idea. In the year of the 2024 European elections, Stuttgart declared 2024 to be the European Year and organised or supported several European events, such as the European Action Day of the State Ministry of Baden-Württemberg in May in cooperation with its twin city Strasbourg. This included a "Europabus" organised by the SSB-AG in the run-up to the European elections, launched on 10 May to encourage people to vote. In June, State Capital Stuttgart held the first Stuttgart Europe Talks in cooperation with Europe Direct Stuttgart and the Embassy of the Kingdom of Belgium. The Stuttgart Europe Talks are held annually to showcase the current EU Council Presidencies and initiatives such as the urban dimension within the EU. Here, Stuttgart is actively promoting European dialogue and European integration as the foundation for peaceful coexistence.

Stuttgart has a long-standing tradition of engaging in city diplomacy through its partnerships and collaborations with international institutions and networks like EUROCITIES. State Capital Stuttgart supports the initiative founded by the capitals Bratislava, Budapest, Prague and Warsaw to promote freedom, human dignity, democracy, equality, the rule of law, social justice, tolerance and cultural diversity, and joined the "Pact of Free Cities" in 2021.

Since 2018, the city administration has been committed to strengthening exchange and dialogue with Southern and South-Eastern Europe. In line with the 2030 Agenda's goal of expanding international partnerships and collaborations, support is being given to projects by Stuttgart-based organisations that focus on empowering people in and from South-Eastern Europe. 2023 saw the launch of a citizens' project involving residents from Srebrenica focused on EU perspectives and municipal cooperation. In collaboration with just human e.V., a joint integration project in Athens targeting vulnerable groups (refugee women with children and LGBTIQ refugees) also sought to promote sustainability goals.

An increasing number of municipalities, especially in industrialised countries, feel responsible for actively contributing towards achieving global climate targets. Climate protection and climate adaptation are being systematically integrated into State Capital Stuttgart's municipal partnership initiatives, supported in part by a newly established part-time role focused on climate partnerships.

In the spirit of solidarity, State Capital Stuttgart is keen to establish a long-term friendship with a Ukrainian city. This would include measures that gain relevance as reconstruction unfolds.

Recent examples illustrating the expansion of global partnerships include:

- town twinning meeting 2023 in collaboration with the Office of Cultural Affairs on "New Perspectives in Cultural Work", including culture and sustainability in the run-up to the Urban Future Conference 2023 in Stuttgart;
- town twinning meeting 2024 in collaboration with the Environmental Protection Office for climate protection and climate adaptation;

- solidarity partnership 2023 with Khmelnytskyi, approved by the Municipal Council, to be coordinated and implemented bilaterally and jointly within a tripartite alliance with State Capital Dresden;
- signing of a Memorandum of Understanding 2023 focusing on the UN Sustainable Development Goals as part of the 75th anniversary of the town twinning with St Helens;
- Urban Diplomacy Exchange 2023 with St Helens and Cardiff on anchoring the International Sustainability Goals (supported by the Federal Foreign Office, German Association of Cities; implemented by Engagement Global); regular learning dialogues at expert level in 2024 on topics such as climate neutrality and social cohesion;
- learning dialogues as part of the Urban Future Conference 2023 in Stuttgart and the EUROCITIES Task Force, as well as learning dialogues in 2024 with Tallinn and other European cities on municipal sustainability management based on the international sustainability goals;
- mid-term review 2024 event "Stuttgart together for the international sustainability goals" with representatives from all specialist units of State Capital Stuttgart along with international experts;
- participation in the World Urban Forum 12 (WUF12) in Cairo, Stuttgart's twin city. Active participation in the German pavilion with a focus on the topic of "social cohesion" and the related SDGs, SDG 17 and the question of how this can be used to promote other goals, such as sustainable urban development, including a presentation of the Stuttgart SDG dashboard;
- Trip in 2024 to Menzel Bourguiba for the Climate Partnership: Delegation to Menzel Bourguiba for the climate partnership with participation from Stuttgart Waste Management, Offices for Environmental Protection and Parks, Cemeteries and Forestry, Department for International Relations and the Fraunhofer Institute for Interfacial and Bioengineering IGB. The focus was on further planning for upcoming projects in the areas of energy, water, green spaces and waste;
- 2024 Trip to Mumbai: High-level delegation trip to Mumbai as part of the 20th anniversary of the "Stuttgart meets Mumbai" networking platform. Participation by Deputy Mayor Fuhrmann, Municipal Council, Stuttgart Hospital, Department for International Relations, Communications Department, Economic Development Department. Topics: Health (establishing a clinic and care partnership; attracting skilled workers), economy (start-up ecosystem) and town twinning initiatives (school exchanges, community projects);
- presentations on Stuttgart's experiences, ongoing dialogue and advocacy by European cities on municipal anchoring and monitoring of the UN's international sustainability goals (Sustainability Governance Peer-Learning Hub, led by Tallinn; EUROCITIES SDG Task Force).

Classification / Definition

The "Projects and counselling services" indicator includes counselling and support services in the core areas of the Department for International Relations, aligned with the budget indicators. These include our own projects in town twinning, European networks and support initiatives, and global sustainable development, as well as projects launched by civil society partners such as schools, associations, and artists. The scope and duration of the projects vary.

Areas 1 to 4 in the bar chart (see Figure 141) have been systematically recorded in the budget with key figures since 2019; the figures for previous years are based on subsequent counts.

Calculation

The indicator shows the number of counselling and support services provided in the core areas of the Department for International Relations for the budget years from 2016 to 2024.



Correlation with other SDGs

Municipal sustainability is embedded at a global level. This global integration is embodied in cross-border and cross-continental partnerships, as well as collaborations with a diverse range of local stakeholders. SDG 17 plays a cross-cutting role for all SDGs, as it forms the basis for the implementation and achievement of all sustainable development goals. Global partnerships facilitate the development and sharing of joint solutions for complex challenges such as climate change, social inequality and the scarcity of resources.

As an example, the local social situation (see SDGs 1, 2, 3, 4, 5, 10, 16) and the local environmental situation (see SDGs 6, 7, 13, 14, 15) are also influenced by the global context and vice versa. Global trade relations, economic policies and technological developments have a direct impact on local production processes, labour markets and access to resources. Conversely, local innovations and best practices can be exchanged globally through partnerships and networks, fostering positive connections between global and local sustainability efforts. For instance, local measures for clean energy (SDG 7) or sustainable agriculture (SDG 2) can be strengthened through international partnerships. Local production and consumption patterns are integral to the global economy (see SDGs 8, 9, 11, 12, 13, 14, 15), and fall within the responsibilities of the municipalities. By encouraging responsible consumption and waste reduction (SDG 12) as well as advancing renewable energy (SDG 7), municipalities help reduce global greenhouse gas emissions (SDG 13) while boosting the local economy by creating green jobs and supporting local sustainable businesses. On the same note, developing sustainable infrastructure (SDG 9) is also crucial, as it can build on strong global cooperation.

The influx of refugees also means that the local situation is directly influenced by global developments. Global crises such as wars, persecution or environmental disasters lead to an increase in migration and affect local social systems, educational resources and the local economic situation (SDG 1, SDG 5, SDG 10). The equitable integration of refugees and migrants not only fosters social cohesion (SDG 16), it also enhances the city's cultural diversity and economic prosperity. Supporting migrants and refugees can also strengthen local labour markets (SDG 8) and contribute to global solidarity (SDG 10). By integrating people from around the world, local authorities tackle challenges related to economic transformation and

social cohesion on both local and global levels. Promoting integration and embracing diversity helps achieve peace, justice, and strong institutions (SDG 16). This fosters peaceful coexistence while enhancing social trust and cohesion (SDG 10). This also encourages effective and equitable governance that can resolve conflicts and boost resilience in the face of global crises.

Through partnerships with business, civil society and academia, municipalities are actively shaping the transformation processes needed to meet global challenges and mobilising citizens to jointly implement the global development goals. Collaboration among public, private, and civil society stakeholders (SDG 17), along with the transfer of knowledge and innovation from research (SDG 9), plays a crucial role in this context. Collaboration at both regional and international levels encourages mutual learning and reinforces the role of municipalities in strategically anchoring the 2030 Agenda.

The 17 SDGs, with their interdependencies and conflicting goals, affect all areas of municipal action and can only be achieved through strong partnerships at all levels. SDG 17 highlights the importance of cooperation both within a country and across international borders. Global collaboration is crucial for addressing environmental challenges like climate change (SDG 13) and biodiversity loss (SDG 15). Through the exchange of knowledge, technologies and innovations, municipalities all over the world can drive sustainable development that delivers benefits at both local and global levels.

The following indicators are also directly relevant to SDG 17 "Global Partnerships for the Goals":

- SDG 1:** "At-risk-of-poverty rate"
- SDG 4:** "Educational programmes for sustainable development (ESD)"
- SDG 8:** "Gross domestic product"
- SDG 9:** "Research and development in the economy"
- SDG 10:** "Relative poverty rate among recipients of benefits without german citizenship"
- SDG 12:** "Sustainable procurement"
- SDG 12:** "Fair trade schools"

Practical example 28:

Solidarity partnership between Khmelnytskyi and Stuttgart and "Tripartite Solidarity Partnership" between Khmelnytskyi, Dresden and Stuttgart



Context

On 24 February 2022, the Russian Federation launched a large-scale invasion across Ukraine, unleashing a devastating war that caused extensive damage to civilian and critical infrastructure, immense suffering among the population, and the displacement of over eight million refugees into Europe.

In the spirit of solidarity, State Capital Stuttgart is extending its support for Ukraine beyond existing partnerships and short- to medium-term initiatives. Commitments include aid shipments organised in collaboration with twin cities Łódź and Brno, having provided temporary accommodation for 100,000 and 25,000 Ukrainian refugees respectively – as well as support for orphanages in the twin city of Łódź, now home to Ukrainian refugee children. Examples include knowledge sharing, vehicles and heated boxes for delivering food aid. Another aim is to establish a long-term friendly relationship with a Ukrainian city. This also includes measures that may be needed in the course of reconstruction.

Description / Implementation

With the support of the Service Agency for Municipalities in One World (SKEW), State Capital Stuttgart has identified the city of Khmelnytskyi for a so-called "solidarity partnership". Several German cities have chosen this path, for example Hanover with the city of Mykolaiv and Dortmund with Zhytomyr.

Khmelnytskyi is the capital of the eponymous oblast between Lviv and Kyiv and the economic, scientific and cultural centre of the oblast. The city is characterised by strong European and international engagement – it is the winner of the Council of Europe's 2021 European Prize. Khmelnytskyi, among other initiatives, has implemented a Green City Action Plan and an urban development strategy for 2025.

On 2 March 2023, Stuttgart Municipal Council approved the solidarity partnership by a large majority in the presence of the Deputy Mayor of Khmelnytskyi, Mykola Vavryshchuk. This will be conducted in a tripartite alliance with State Capital Dresden.

The partnership goes beyond emergency aid and reconstruction assistance, focusing on mutual learning and guiding Khmelnytskyi on its path toward European integration. The partnership defined the following key areas of collaboration:

- citizen participation and EU citizenship
- political awareness and youth participation
- economy
- school and education
- transport and urban mobility
- waste management and climate protection

On 5 March 2024, the "Tripartite Solidarity Partnership" was signed in Dresden by the mayors of the three participating cities. The agreement had already been signed on 7 November 2023 during a video conference.

Experience / Results

The "Tripartite Solidarity Partnership" not only strengthens European and German solidarity and cooperation with Ukraine, but also intensifies German-German cooperation. State Capital Stuttgart will be responsible for coordination. This unique tripartite approach enables each city to bring its particular strengths to the partnership. Cooperation and the exchange of expertise can be strategically coordinated, organised and distributed, and Khmelnytskyi can be provided with targeted support.

Since the Municipal Council resolution, several projects have already been successfully implemented, including the following examples:

- four aid transport missions delivered relief supplies from Stuttgart to Khmelnytskyi.
- a civil society exchange between Stuttgart and Khmelnytskyi is also ongoing. In 2023 and 2024, runners from Khmelnytskyi achieved great results in the Stuttgart Run.
- in June 2023, Mayor Mykola Vavryshchuk and members of the Youth Council participated in the annual Stuttgart town twinning meeting focused on "New Perspectives in Cultural Work", with two other colleagues attending the Urban Future Conference.
- on 19 June 2023, the first school partnership within our solidarity partnership was established between Eberhard-Ludwigs-Gymnasium and the 2nd Educational Complex Khmelnytskyi.
- in July 2023 and September 2024, female cyclists from Khmelnytskyi had the opportunity to experience and enjoy the traditional "Pretzel Race" in Stuttgart.



- in mid-October 2023, a youth group from Khmelnytskyi spent several days in Stuttgart to gain insights into the workings of the city administration and local civil society. Whilst in the city, they had the opportunity to engage in various activities that provided them with a deep understanding of our locality and its values.
- in November 2023, the German-Ukrainian Municipal Partnership Conference was held in Leipzig, with Stuttgart, Dresden, and Khmelnytskyi participating at working level.
- also in November 2023, the Khmelnytskyi fire brigade and a colleague from Dresden visited the Stuttgart fire brigade to exchange knowledge and collaborate on disaster management. In July 2024, the Khmelnytskyi fire brigade travelled to Stuttgart once again for a joint training week.
- in May 2024, Khmelnytskyi joined the EUROCITIES network of cities. All three cities participated at the working level in the association's annual conference in Cluj-Naca, Romania.
- in June 2024, Mayor Vasyl Nowatschok and Head of the Youth and Sport Department Vasyl Holowatjuk visited Stuttgart and held expert talks with their Stuttgart colleagues on the topics of sport, youth, green space design, tree care and urban development. This has sparked numerous ideas for professional exchanges and workshops involving two or all three cities.
- in July 2024, the Stuttgart and Khmelnytskyi fire departments met for a week of training at the Training Centre for Rescue and Assistance (TCRH) in Mosbach. The Stuttgart Fire Department donated search and rescue equipment and fire protection clothing, while the Süßen Volunteer Fire Department donated a set of lifting bags to Khmelnytskyi.
- in 2024, Stuttgart and Dresden also took part in the GIZ project "Civil Protection and Reconstruction in Ukraine," through which they were able to provide Khmelnytskyi with equipment for nursery schools as well as a minibus equipped with a wheelchair ramp.

Division / Office / Public Undertaking

Department for International Relations in the Administrative Coordination, Communication and International Relations Division

Further reading / links

GRDRs 113/2023



Further practical examples at: www.stuttgart.de/lebenswertes-stuttgart



Overall process and perspectives

The sections that follow describe the methodological approach for drawing up the SDG Voluntary Local Review (VLR), present new elements of the current VLR and offer a perspective on future developments. The mid-term review of the implementation of the sustainability goals in Stuttgart is also addressed.

Methodological approach and further development of the VLR

Genesis and new instruments

In 2019, Stuttgart – as a pilot city nationwide – partnered with the Bertelsmann Foundation and the German Institute for Urban Affairs to conduct a VLR based on SDG Indicators for Municipalities. The Municipal Council has passed a resolution that this will be updated every two years. State Capital Stuttgart is set to present its fourth VLR in 2025. This marks a further development of the reporting system. The catalogue of indicators has been expanded, and those indicators developed by State Capital Stuttgart itself have been fine-tuned. The third VLR incorporates a number of new indicator proposals from the third edition of the Wegweiser für Kommunen [Community Guide] and from the joint statistics portal of the Federal and State Statistics Offices.²²⁷ The fourth VLR includes a higher number of new indicators, developed internally in State Capital Stuttgart and tailored specifically to the local context. A new index to measure the commitment of the district advisory councils has also been developed.

With the inclusion of this index and other activities, such as a project to link existing urban development instruments with the SDGs,²²⁸ which is being promoted jointly by State Capital Stuttgart (Urban Renewal Department, Statistics Office, Department for International Relations), the Stuttgart District Advisory Council Münster and the Urban Development Institute of the University of Stuttgart, State Capital Stuttgart is among the first municipalities in Germany to raise awareness of the issue of sustainability monitoring at district level and to actively promote it.²²⁹ In addition, data at city district level was presented for the first time for certain indicators in the fourth VLR. This provides the district advisory councils with additional, more detailed information for analysing local needs and potentials.

At city level, the indicators and practical examples presented in the report provide a cross-sectoral view of the implementation of the 2030 Agenda in Stuttgart and State Capital's progress in terms of the 17 sustainability goals over recent years. The cross-sectoral VLR supplements the detailed individual reports from the specialist units (e.g. social monitoring, education monitoring, climate protection monitoring).

Recommendations taken from earlier VLRS and current requirements create the basis for advancing both the VLR and the dashboard. The selection and analysis of indicators is a complex process that calls for expert knowledge and an interdisciplinary approach. All specialist units of the Stuttgart city administration played an active and committed role in compiling this fourth VLR "Stuttgart – A Livable City – The Global 2030 Agenda at Local Level". Alongside the VLR, the SDG dashboard provides a compact overview of target achievement based on key figures, while the SDG barometer also makes it possible to assess development trends.



SDG dashboard

The city's own SDG dashboard offers an interactive and easy-to-use tool to transparently track sustainable developments in Stuttgart and support data-based decisions. It supports a systematic analysis of topics and indicators, facilitates the tracking of progress and offers electronic data download capabilities. The Statistics Office developed the dashboard in 2024 and launched it online as a public resource. It complements the printed version of the VLR "Stuttgart – A Livable City". However, the interactive presentation of all indicators unlocks new possibilities for visualising and using data. One example is the display of percentage changes in indicator values relative to the previous year. As in the fourth edition of the VLR, the dashboard will also provide more small-scale data at the city district level in the future (<https://sdg.dashboardstr.de/>).

SDG barometer

For the mid-term review of the 2030 Agenda, Stuttgart developed an SDG barometer to systematically measure the current status of sustainable development at local level. This innovative monitoring tool, based on the methodology of Eurostat and Statistics Austria, assesses the average annual growth rate of the SDG indicators (further information can be found at <https://lmy.de/tApyo>).

The SDG barometer also offers other municipalities a transferable assessment framework for analysing their own sustainability indicators. The methodology highlights key trends in the indicators over time and provides a clear overview of priority areas for achieving the goals.

Creation process

The first step in compiling this VLR and earlier ones involved analysing which sustainability dimensions, SDGs and related targets were still inadequately represented by indicators. The results prior to the fourth VLR showed that most indicators (around 66 percent) could be assigned to the social dimension, around 22 percent to the economic dimension and the fewest indicators (around 13 percent) to the environmental dimension.²³⁰ This is partly because the SDGs themselves assign nearly twice as many goals to the social dimension compared to the other two dimensions. Nonetheless, the ecological and economic dimensions have remained underrepresented so far. Even after incorporating new indicators into the 2025 VLR, this underrepresentation was not fully corrected in the fourth VLR. Currently, approximately 68 percent of the indicators can be assigned to the social dimension, around 10 percent to the ecological dimension, and just under 22 percent to the economic dimension.

The assignment of the SDGs to the three sustainability dimensions according to Rockström and Sukhdev (2016) is made from the perspective of the protected resource – i.e. which needs to be preserved. It is important to bear in mind that human activities can adversely impact the ecological dimension. Intuitively, certain indicators such as "ecological agriculture" or "nitrogen surplus" would be assigned to the ecological dimension, as they measure the target of "sustainable food production and resilient agricultural methods". However, this target focuses primarily on the social dimension rather than the environmental one. This means the main priority is to guarantee sustainable agriculture that provides food for people while minimising harm to the environment. Ultimately, this target is about meeting human needs without overburdening nature. The perspective of the protected resource is therefore crucial for assigning sustainability goals and indicators to the three sustainability dimensions.



Of the 125 targets identified as relevant for German municipalities in the "Community Guide", only 48 were covered in the 2021 VLR or were able to be directly measured using the selected indicators. This was partly because the federal project had only provided partial indicator proposals for the remaining 77 targets not covered at that time, and data was not always available for them. The aim of the 2023 and 2025 VLRs was therefore to close these gaps to the greatest possible extent. Of the 125 targets, 60 are now covered. The increasing number of covered targets demonstrates that State Capital Stuttgart is making an ongoing methodological contribution to the nationwide project by developing new indicator proposals for previously uncovered targets.²³¹

To further develop the fourth VLR, cross-sectoral workshops and surveys were held in early 2024 under the leadership of the Department for International Relations and the Statistics Office. The existing indicators and additional indicator proposals from the departments were discussed, partially adapted, supplemented and finally selected. This allowed additional areas of municipal action to be linked to the SDGs in the fourth Stuttgart VLR and supported with indicators. The focus was on indicators that close the gaps identified and, in doing so, cover new targets for instance.

In another step, the specialist units concerned provided the necessary quantitative data, proposed texts and supplementary information for updating existing indicators and implementing new ones. Qualitative data from the specialist units in the form of descriptive texts on selected current practical examples were also compiled.

In a third step, the indicators, which had been reprocessed by the Statistics Office and supplemented with additional basic information, were reviewed by the specialist units and possible reasons for the changes documented over the period under review were identified. Reference was made to areas where the data available for certain developments also allowed a correlation with the COVID-19 pandemic or Russia's war of aggression against Ukraine.

This approach not only brought together detailed expertise from all specialist units with an understanding of cross-sectoral interrelationships, it also enabled the use of additional data sources within the municipal administration.

Data basis, contribution and limitations

The indicator catalogue provided by the nationwide project "SDG Indicators for Municipalities" also served as the foundation for the fourth VLR of State Capital Stuttgart (<https://sdg-portal.de>).

Targets

A target is deemed covered if it can be measured directly by an indicator. Although not through direct measurement, certain indicators may apply to or be relevant for several targets. These links to various targets are highlighted at several points in the report to emphasise a holistic approach to the Sustainable Development Goals: both in the explanations "Correlation with other SDGs" in the respective concluding chapter for each SDG and in a table in Annex II of the report.

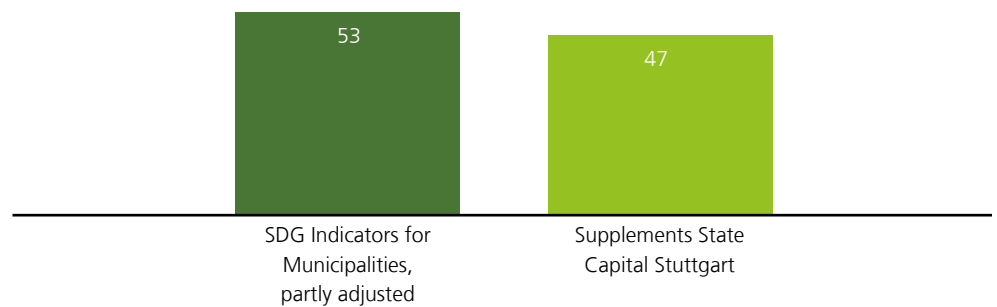


The assignment of indicators to targets is partly based on the federal project "Community Guide", and partly broken down further for State Capital Stuttgart in a comprehensive discussion, with internal coordination of locally developed indicators. For a few indicators, the link between the indicator and the target was unclear. In these cases, the explanation for understanding the targets was also described in the section entitled "Classification/Definition".

Indicators

A total of 27 new indicators were included in the VLR for 2023 – 17 of these were developed internally and 10 were taken from the "SDG Indicators for Municipalities".²³² Sixteen additional indicators developed in State Capital Stuttgart were included in the 2025 VLR (see Figure 144). Besides these new indicators, 13 indicators were revamped due to new data sources or other factors (see Annex II). During the in-depth examination of the indicators in the preparation of the report, it also became clear that minor further developments, adjustments or additions to existing SDG indicators were necessary in some cases in order to better measure the actual target. In such cases, the time series presented in the 2025 report may differ from those in the 2023 report. In addition, minor deviations may occur if data sources differ from those used in the previous report, for example by prioritising municipal data and data from direct official sources (in particular Federal and State Statistics Offices and the Federal Employment Agency). Due to a lack of available data, one indicator was also removed from the VLR.

Figure 143:
Sources of the indicators
(in percent)



Source: internal representation

The criteria for selecting the SDG indicators for State Capital Stuttgart, which were determined in the cross-sectoral workshops, were:

- the valid recording of the SDGs and targets,
- the relevance for State Capital Stuttgart and
- the availability of the latest data for the period under review (usually 2010 to 2023 or 2024).



For practical purposes, the total number of indicators must be kept at a manageable level. This being the case, preference was given to indicators covering several SDGs or targets. As the indicators were further developed, their number grew from 77 in the 2019 pilot report to 103 in the third VLR and 118 in the fourth. Of these, 53 percent came from the federal project "SDG Indicators for Municipalities" and 47 percent were developed by State Capital Stuttgart itself (see Figure 143). Some of the supplementary indicators for State Capital Stuttgart come from other sources, such as the joint statistics portal of the federal and state governments,²³³ or are based on suggestions from individual departments of State Capital Stuttgart and the Baden-Württemberg State Statistics Office.

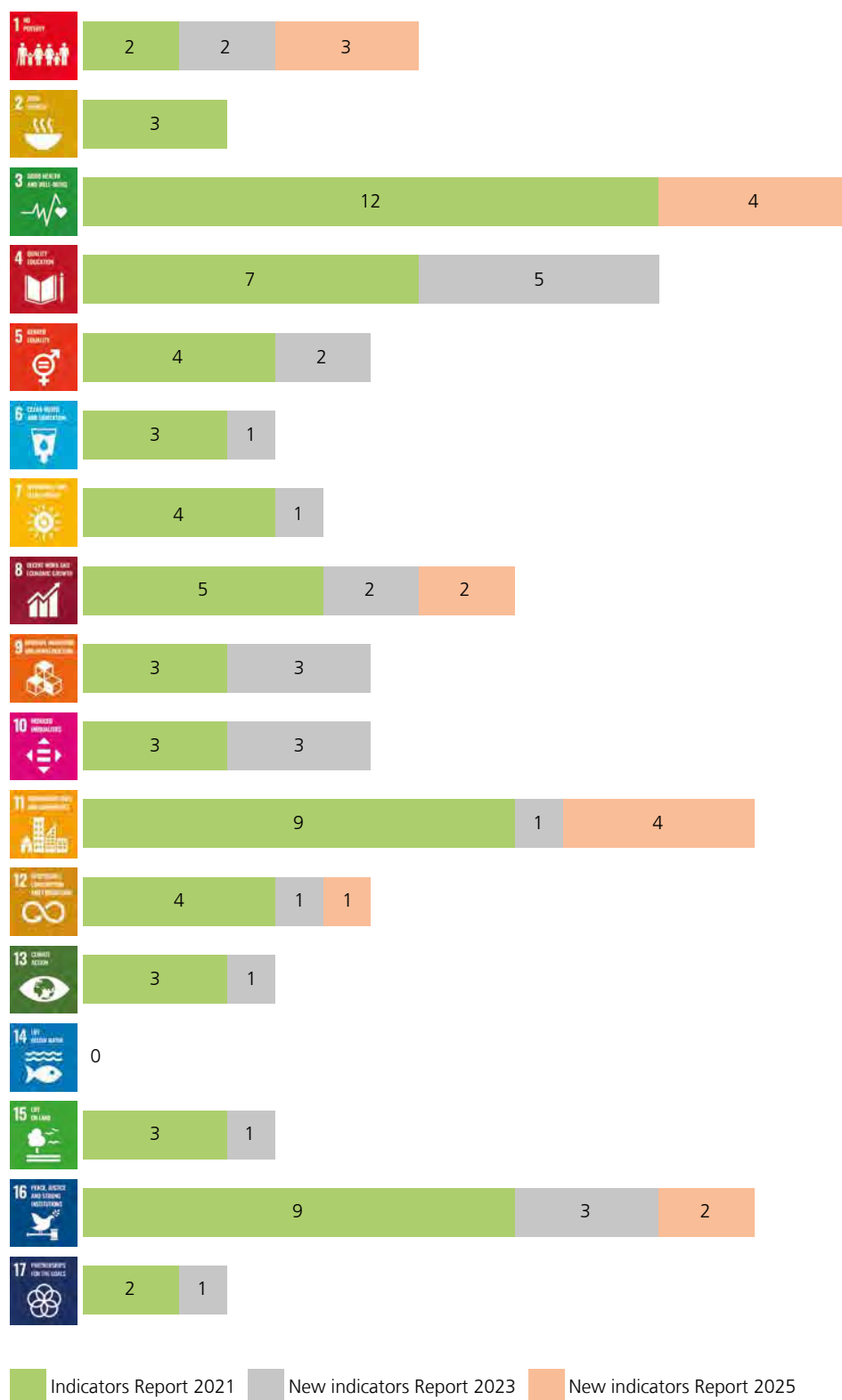
Similar to the VLRs for 2021 and 2023, a uniform starting point for the time frame was selected. The data series begin in 2010, i.e. in the wake of the global financial and economic crisis of 2008/2009, and generally cover a period of 13 to 14 years depending on data availability. Adjustments to the start of the time series were made if data were only available from later years or if displaying the full series in complex charts (with multiple columns for example) proved impractical.

For reasons of methodology, with just a few exceptions, all the data used and processed by the Statistics Office of State Capital Stuttgart, were sourced from State Capital or the Federal and State Statistics Offices. Where the population is used as a reference value, this is generally based on the municipal population figures published by the Statistics Office in Stuttgart on the basis of the population register. This figure differs from the official population count, which is determined and annually updated by the State Statistics Office based on the 1987 census and the 2011 and 2022 national censuses. Due to this difference, there may be slight discrepancies with the figures in other nationwide publications on occasion.

Although the indicators were further developed and supplemented in the third and fourth VLRs, their distribution across the SDGs (see Figure 144) still shows imbalances. For the SDGs in question, this is primarily due to a lack of suitable indicators with reliable data availability. Most indicators can be found in SDG 3 ("Public Health and Well-Being"), SDG 4 ("Quality Education"), SDG 11 ("Sustainable Cities and Communities") and SDG 16 ("Peace, Justice and Strong Institutions"). Gaps were closed primarily in SDG 1 ("No Poverty"), SDG 5 ("Gender Equality"), SDG 9 ("Industry, Innovation and Infrastructure") and SDG 10 ("Reduced Inequalities"). Indicators relating to the environmental dimension, such as SDG 13 ("Climate action"), SDG 15 ("Life on Land") and SDG 14 ("Life Below Water"), as well as SDG 2 ("Zero Hunger"), SDG 6 ("Clean Water and Sanitation") and SDG 17 ("Partnerships for the Goals") remain under-represented. However, it should be noted that this only applies to the direct measurement of an indicator's contribution to an SDG. These issues are indirectly covered by links to other SDGs and also by other indicators. There are also gaps in themes such as culture and LGBTIQ which, although not represented by separate SDGs, are equally important for sustainable development.



Figure 144:
Overview of the indicators in
the 2021, 2023 and 2025 VLRs
according to SDG
(in number of indicators)



Source: Internal representation



Limitations

Many sustainability goals are interrelated and mutually influential, though some can be at odds with one another. Not all developments – if there are any significant changes at all – can be described and explained using the indicators. This applies not only to content, but also to location. Significant sustainability-related developments and framework conditions at other levels (EU, federal, state) also impact changes in Stuttgart, and vice versa. Systematically pinpointing the specific municipal role in shaping certain developments was beyond the scope of this report. This would necessitate a thorough analysis of the various impacts at municipal level across the various sustainability dimensions. The focus is on gaining an insight into the situation in the State Capital rather than comparing it with other municipalities.

Such an inter-municipal comparison is made possible by the SDG portal of the federal project www.sdg-portal.de, which is currently being developed into a "Platform for sustainable municipalities". The State Capital is participating as a pilot municipality.²³⁴

However, it should be noted that the results of the indicators from the federal project are not directly comparable with the indicators from the VLR of State Capital Stuttgart, even though many indicators originate from the federal project. This is mainly because data are sourced from different places. While the VLR mainly uses data owned by the city (especially municipal population figures), the SDG portal is generally based on other public data sources, such as the statistics offices of the states or the federal government (official population figures).

As in previous SDG reports, the quantitative indicator values are supplemented by selected goals, strategies and measures for effectively shaping sustainability at the local level, described as practical examples based on qualitative data. New practical examples were selected for the fourth VLR, although the examples from previous VLRs remain relevant. All practical examples can also be found on the homepage and will be updated on a regular basis: www.stuttgart.de/lebenswertes-stuttgart

Further development

The VLR will undergo further methodological development for future indicator updates. This will enable the indicators to focus more closely on SDGs and targets that have been underrepresented to date, as well as on gaps in themes. In addition, the plan is to increasingly implement indicators at a more localised level, depending on data availability. Data on this will also be available on the city's own SDG dashboard in the future.

The VLR is based on the structure of the 2030 Agenda and the 17 SDGs that apply for reporting to the UN. In the future, the VLR will also be made more compatible with other forms of sustainability reporting. The report content can be made comprehensibly transferable, particularly with regard to the basic logic and fields of action of the Sustainable Municipality Reporting Framework (BNK)²³⁵.

Going forward, State Capital Stuttgart is working on closer integration of SDG indicators and budget figures in order to use them for sustainable financial monitoring.



This fourth report further consolidates the data and calculation basis for the future regular updating of the VLR. The new indicators selected for the various VLRs of State Capital Stuttgart are listed in Annex II. Additional indicator proposals from the State Capital are listed in Annex III as a further methodological contribution for future VLRs and for other municipalities.

All practical examples, the 2019 pilot report and the subsequent VLRs for 2021 and 2023, also in English, can be found on the website of State Capital Stuttgart at: www.stuttgart.de/lebenswertes-stuttgart

Mid-term review of the International Sustainability Goals in Stuttgart

The United Nations' 2030 Agenda for Sustainable Development is used in a multi-level system (UN, EU, federal government, state, local government) as a holistic and cross-sectoral orientation framework to support the necessary transformation processes. The SDGs also provide municipalities with a tool to prioritise and guide their objectives and resource allocation in line with sustainable development.

Since 2017, the State Capital has created important tools and structures to expand the scope and depth of the anchoring of the international sustainability goals (see a detailed description of the process and learning experiences in "Stuttgart – A Livable City 2023", <https://www.stuttgart.de/lebenswertes-stuttgart>).²³⁶ The network of stakeholders has steadily expanded, and a multitude of strategies, concepts and practical measures based on the UN 2030 Agenda make the added value of this framework tangible for the specialist units and the city as a whole. The regularly published VLR "Stuttgart – A Livable City" (since 2019), the SDG dashboard (since 2024, <https://sdg.dashboardstr.de/>) and closer integration with budget planning play a pivotal role here.

The working group for "Anchoring International Sustainability Goals in State Capital Stuttgart" forms a platform and interface within the administration for communication and information between the divisions and directly subordinate specialist units. The working group members appointed by the divisions as representatives act as multipliers to bring practical measures, ideas and needs from the departments to the working group. Conversely, they support the implementation of the working group's recommendations within the divisions (e.g. reporting on the basis of the international sustainability goals on the specialist committees).

The process of anchoring the international sustainability goals raises the question of how the prerequisites that have been met can be used even more effectively to achieve additional reach and impact for the implementation of the sustainability goals.

This is the background against which the working group supported the 2024 event "Stuttgart Together for the International Sustainability Goals – Network Meeting at the Halfway Point of UN 2030 Agenda Implementation" in the State Capital. The purpose of the cross-sectoral event at City Hall was to review progress and reinforce community spirit around implementing the sustainability goals in Stuttgart. The focus was on discussing where the State Capital stands, what is needed to strengthen the anchoring process, what Stuttgart can learn from international and urban examples, and how the stakeholders can support one another. Building on this, further solutions were to be developed jointly.



Drawing on a city-wide online questionnaire, the outcomes of dialogue groups at the network meeting and guidance from the coordinator for international sustainability and development, momentum was generated for advancing the anchoring of the international sustainability goals in Stuttgart. This includes internal and external communication and participation, knowledge management, platforms for knowledge sharing, further training, digitalisation and alignment with national and EU taxonomies.²³⁷

The participants advocate a more radical change of perspective and exploring new, creative avenues such as:

- having the regular and strategic use of existing instruments become a normal part of the routine tasks,
- creating additional platforms for sharing information, networking, meeting up and support,
- supporting cross-functional thoughts and actions,
- creating environments to collectively develop and implement ideas,
- actively fostering partnerships, broadening the implementation together with the various stakeholder in the city's community and
- strengthening mutual international learning, representation of interests and cooperation between municipalities.

Building on this, the specialist units and the "International Sustainability Goals" working group have nurtured numerous specific links tailored to the needs of the specialist units. Including:

- extending the integration of international sustainability goals into budget planning to other departments (child-friendly Stuttgart, economic development),
- stronger links between international sustainability goals and Municipal Council proposals, and regular reporting based on SDG indicators,
- participation as a pilot municipality in the nationwide project "Digital Platform for Sustainable Municipalities",
- events organised by the cross-city 2030 Agenda Alliance with representatives of the new Municipal Council,
- cooperation with the Stuttgart Network for Education for Sustainable Development,
- the Urban Diplomacy Exchange with twin cities (Cardiff and St Helens) on social cohesion,
- exchange on reporting and anchoring the international sustainability goals with representatives of the EU Commission, the EUROCITIES network and major European cities such as Strasbourg, Ghent and Helsinki as part of the Sustainability Governance Peer Learning Hub in Tallinn,
- Stuttgart's contribution to the UN-Habitat World Urban Forum 2024 in Cairo in the German Pavilion – "Stuttgart Drives SDG 17: Building a Sustainable Future through Partnerships for Our Cities", using the example of combating poverty and urban renewal through SDG monitoring,
- impetus for creating a Voluntary Local Government Review for the UN, in addition to the German government's Voluntary National Review 2025.²³⁸

Overall, the German Association of Cities is advocating for a stronger focus on sustainability management at the municipal level. The federal and state governments are being urged to lend cities the support they need to achieve this aim. This involved making the commitment of the cities visible and ensuring the measurement and comprehensive reporting of reliable development based on international sustainability indicators. The Sustainable Municipalities Reporting Framework, compatible with multiple reporting formats – including UN reporting – is a valuable tool for this purpose. This is why, at its meeting on 13 and 14 March 2024, the Presidium of the German Association of Cities decided to strengthen municipal sustainability management. The idea was for every city to develop its own strategy to reflect sustainable development.



In light of this, the Presidium also advocates establishing a digital platform for sustainable municipalities with the German Association of Cities and important sustainability stakeholders, serving as a central hub for knowledge, training, collaboration, and visibility.

The State Capital's current participation as a pilot municipality in this nationwide "Digital Platform for Sustainable Municipalities" offers the opportunity to create additional synergies with the impetus provided by the mid-term review of State Capital Stuttgart.

State Capital Stuttgart maintains transparency and precision in its local actions with the regularly published VLR "Stuttgart – A Livable City", the interactive SDG dashboard developed by the Statistics Office, and the SDG barometer that systematically tracks sustainable development.²³⁹

These monitoring tools not only showcase progress and challenges but also act as a model for other municipalities aiming to effectively advance the 2030 Agenda. Since 2018, Stuttgart has been involved as a pilot municipality in various nationwide projects to anchor the international sustainability goals, which are supported by the German Association of Cities, the Bertelsmann Foundation, the German Institute for Urban Affairs (Difu), the Municipal Community Centre for Administrative Management (KGSt) and other supporting organisations. It regularly submits the present "Stuttgart – a Livable City" as a Voluntary Local Review to the High Level Political Forum of the UN. State Capital Stuttgart is therefore playing a nationwide role and, through international learning dialogues and networks with other municipalities, helping to advance the process of anchoring 2030 Agenda at all levels.

The combination of budget planning, indicators and practical measures, based on the international sustainability goals, offers Stuttgart new opportunities for impact-oriented sustainability management. The global 2030 Agenda, with its transparent, interconnected goals, provides Stuttgart with an orientation framework for further developing its own objectives in collaboration with politics, administration and urban society. This not only establishes additional foundations and outlooks for a focused, strategically reach for sustainable transformation within and through Stuttgart, it also integrates Stuttgart into a global initiative extending beyond 2030.

Awards (Selection)



Since 2013 Fairtrade-Town

Since 2018 Local authorities signing the model resolution "2030 Agenda for Sustainable Development"

2019 EU Fair and Ethical Trade Award, special award in recognition of "Monitoring for Impact"

2021, German Sustainability Award 2022 in the "Big Cities" category

2021 Plaque of Honour of the Council of Europe

2023 "National Award for Education for Sustainable Development (ESD)" by UNESCO

2024 Top Ten German Big Cities in the Smart City Index



Municipal Council documents ("GRDs") with reference to international sustainability

[A selection, see further GRDs of the specialist units and budget resolutions in the present VLR at the respective indicators and practical examples, as well as via the website of State Capital Stuttgart.]

GRDs 821/2015

Internationalisation strategy
(including Europe)

GRDs 987/2017

South/South-East Europe

GRDs 1058/2018; GRDs 690/2019;

GRDs 396/2019; GRD 522/2021

Strengthening Europe; EU funding strategy;
increasing the participation of State Capital Stuttgart in
EU projects on urban development and sustainability

GRDs 206/2018; GRDs 202/2018

Signing of the model resolution of the German Association
of Cities on the implementation of 2030 Agenda at local
level

GRDs 755/2019; GRDs 531/2021; GRDs 146/2019;

Town twinning, Urban Diplomacy

GRDs 1074/2019; GRDs 899/2021 GRDs 608/2023

"Stuttgart – A Livable City. VLR based on indicators to
implement the Sustainable Development Goals (SDGs)" –
holistic, cross-sectoral indicator system; monitoring tool to
measure and orientate administrative action towards the
guiding principle of sustainable development; dovetailing
with budget planning (see process of developing an
integrated financial control system by the Division of
Economic Affairs, Finances and Public Undertakings);
resolution in the two-year budget 2019/20 for regular
updating the VLR

GRDs 1246/2019

Resolution in the two-year budget 2020/21 to permanently
establish a coordination position for International
Sustainability and Development

GRDs 394/2019

Council of Europe Flag of Honour – recognition of State
Capital Stuttgart's work on town twinning, European,
international and global affairs (2nd level of the Council
of Europe's European Prize)

GRDs 1034/2020; GRDs 304/2021; GRDs 804/2021

Integrated financial control system, geared towards the
goals of the UN 2030 Agenda; analysis of resource
allocation according to SDGs and assignment to product
areas

GRDs 554/2021

Resolution in the two-year budget 2021/22 on the perma-
nent allocation of funds for international sustainability and
development and on the regular updating of the
"Stuttgart – A Livable City" VLR based on indicators for
implementing the Sustainable Development Goals (SDGs)

GRDs 329/2021

Council of Europe Medal of Honour: recognition of State
Capital Stuttgart's work on town twinning, European,
international and global affairs (3rd level of the Council
of Europe's European Prize)

2022: Project assignment

Management of the anchoring of the UN 2030 Agenda in
State Capital Stuttgart (25.03.2022) with project steering
group of representatives of all divisions at management
level. Goal: To permanently anchor the UN 2030 Agenda
in accordance with Municipal Council resolutions as a
cross-sectoral orientation framework for sustainable urban
development through mandatory structures and measures
within the city administration.

GRDs 218/2023

Action plan for child-friendly community

GRDs 236/2023

Smart City Stuttgart concept

GRDs 325/2023

Resolution on further strategy: integrated financial control
system and comprehensive integration of international
sustainability goals.

GRDs 434/2023

Framework concept – naturally sustainable Stuttgart

2023: Recommendation "Reporting on international
sustainability goals in State Capital Stuttgart" for regular
and effective use of the results of the "Stuttgart – A
Livable City" VLR through appropriate reporting and
referencing by the specialist units in the Municipal Council
and on the committees.

**2024: Ongoing task for the cross-sectoral working
group (WG)** "Anchoring the International Sustainability
Goals in State Capital Stuttgart" based on the previous
project mandate (of 25.03.2022; ongoing task since
21.02.2024).



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Notes and references

- ¹ Note: Wording based on the publication "Earth for All Deutschland – Aufbruch in eine neue Zukunft für Alle" (Wuppertal Institute and Club of Rome, 2024). In addition, the following sources provide basic background information on the foreword and on the topic of sustainability: (1) Current information on sustainable development in State Capital Stuttgart and a detailed description of the process and lessons learned in "Stuttgart – A Livable City 2023" (Landeshauptstadt Stuttgart, 2023b) and on the SDG Barometer for Stuttgart (Landeshauptstadt Stuttgart, 2024a); (2) Current information on sustainable development in municipalities and districts in Germany via the "Portal für nachhaltige Kommunen" [Portal for Sustainable Municipalities] (Deutsches Institut für Urbanistik, 2025); (3) Information on the implementation of the SDGs at the global level through the United Nations Sustainable Development Report (United Nations, 2024a), or comments on the mid-term review of implementation progress (UNRIC, 2024) and (Council for Sustainable Development, 2023).
- ² See United Nations, 2024a.
- ³ See Riedel et al., 2022.
- ⁴ See Riedel et al., 2022.
- ⁵ Note: The general wording of the targets originally comes from the SDG federal project, Bertelsmann, Association of Cities, see reports 1 and 2.
- ⁶ Note: The targets used in the German report are freely translated from English and are based on the official Target Media Cards of the United Nations (Project Everyone, 2025).
- ⁷ Note: Due to a revamp of the microcensus, no data is available for the 2020 reporting year. Moreover, the comparability of values before and after 2020 is limited, as the data basis and publication practice changed slightly this year as a result of a redesign of the microcensus. This applies to all data based on the microcensus; however, distortions are more pronounced in some subject areas. (<https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Haushalte-Familien/Methoden/mikrozensus-2020.html#605844>) (accessed on 16.12.2024).
- ⁸ See Enderer & Hundenborn, 2019.
- ⁹ See Heinsohn, 2020.
- ¹⁰ See Statistisches Landesamt Baden-Württemberg, 2024.
- ¹¹ See Manager Magazin, 2022.
- ¹² Note: According to the EU definition, people are considered at risk of poverty if they have less than 60 percent of the median net equivalent income of the total population at their disposal. This measurement of poverty risk is based on a definition of relative poverty, which states that people have such limited resources that they are excluded from the minimum standard of living compared to the social environment in the respective EU member state. The definition of absolute poverty, on the other hand, describes a state in which people cannot afford to meet their basic economic and social needs. According to the World Bank's definition, people are considered to be living in absolute poverty if they have less than 2.15 US dollars per day at their disposal. See also <https://www.bmz.de/de/service/lexikon/armut-14038> (accessed on 19.09.2024).
- ¹³ See Hradil, 2012.
- ¹⁴ See Gunderlach, 2017.
- ¹⁵ See Achatz et al., 2013.
- ¹⁶ See Hübgen, 2020.
- ¹⁷ See Bader, Hanke, Pott, 2018.
- ¹⁸ See Bertelsmann Stiftung, 2015.
- ¹⁹ See Bertelsmann Stiftung, 2017.
- ²⁰ See Heinsohn, 2024.
- ²¹ See Statistisches Bundesamt, 2024. Note: However, the data for State Capital Stuttgart has been wholly reliable since the survey began.
- ²² See Die Bundesregierung, 2024.
- ²³ See Heinsohn, 2022.
- ²⁴ See Statistisches Bundesamt, 2024.
- ²⁵ See Bundesministerium für Wohnen, Stadtentwicklung und Bauwesen, 2024.
- ²⁶ See Heinsohn, 2022.
- ²⁷ See Statistisches Bundesamt, no date c.
- ²⁸ See Söldner, 2022.
- ²⁹ See Galante-Gottschalk et al., 2016.
- ³⁰ See International Science Council, 2015.
- ³¹ See Die Bundesregierung, 2022.



³² See Wilke, 2023.

Note: According to findings of the "Umweltamt Sachsen" [Environmental Authority Saxony], "Agricultural crops [...] absorb only small amounts of nitrogen in autumn and winter. The mineral (mobile) nitrogen detected in autumn sampling can be washed out with the leachate and enter groundwater, water bodies and near-natural habitats – consequently impairing drinking water and exceeding environmental quality standards. However, the residual nitrate content of the soil is influenced by the weather conditions during the vegetation period, the exploitation of the yield potential, the soil type and the climatic conditions" (see Sächsisches Landesamt für Umwelt, Landwirtschaft und Geologie, 2018) – available at <https://www.landwirtschaft.sachsen.de/restnitrat-imboden-39857.html> (Last access on: 17.03.2025).

³³ See Wilke, 2024b.

³⁴ See Die Bundesregierung, 2022.

³⁵ See Häußermann, Dreisbach, Bach & Breuer, (unpublished).

³⁶ See Schwäbische Tafel Stuttgart e.V., no date.
Note: In 2022, the figure was still 2,000 people per day. The Schwäbische Tafel attributes the increase to the effects of Russia's war of aggression against Ukraine.

³⁷ See Practical example 23.

³⁸ See Ministerium für Soziales, Gesundheit und Integration Baden-Württemberg, 2024.

³⁹ See Ministerium für Soziales, Gesundheit und Integration Baden-Württemberg, 2024.

⁴⁰ See Robert Koch Institute, 2021.

⁴¹ See Bundesministerium für Gesundheit, 2022.

⁴² See Ministerium für Soziales, Gesundheit und Integration Baden-Württemberg, 2024.

⁴³ See Ministerium für Soziales, Gesundheit und Integration Baden-Württemberg, 2024.

⁴⁴ Note: A Voluntary Local Review in January 2021 showed that not all sports and clubs were affected by a decline in members due to the pandemic. At the time of data collection it could be seen that the pandemic had resulted in a decrease in the number of members, in particular in sport clubs with an active member base. For less active members who may not have participated

in events, the lockdown measures were less relevant, which is why they presumably did not leave the club (see Engelbrecht/Heinsohn, 2021). In addition, it became apparent that clubs with an above-average number of children and young people among their members suffered the greatest losses. Large clubs with sports centres were also mainly affected. Traditional team sports were only marginally affected overall. By contrast, there was an increase in membership in outdoor and no-contact sports, which were able to resume their activities earlier due to the lifting of restrictions.

⁴⁵ See Landeshauptstadt Stuttgart (Amt für Sport und Bewegung), 2018.

⁴⁶ See Zimpfer, no date.

⁴⁷ See Hausmann et al., 2008. Note: There are no comprehensive analyses examining the causes and triggers of suicide mortality specifically among men or in comparison between genders, although numerous individual studies exist. Key influencing factors include, in particular, social and emotional isolation. Traditional gender roles also contribute to the problem: Many men are underdiagnosed for depression; there is a lack of acceptance of mental illness and comprehensive support services. While women are more likely to seek help in difficult life situations, men tend to view conflicts as personal failures and equate professional failures with social failure. There is a proven tendency to try to cope with depression through alcohol consumption, which leads to an increased risk of suicide. It is not the conflict situations themselves that lead to suicide, but rather the inability to deal with these situations.

⁴⁸ See Radeloff et al., 2022.

⁴⁹ See Landeshauptstadt Stuttgart, 2021.

⁵⁰ See Heinsohn et al., 2024.

⁵¹ See Heinsohn et al., 2024.

⁵² See Luhmann, 2022.

⁵³ See Holt-Lunstad et al., 2010.

⁵⁴ See Schobin, 2018.

⁵⁵ See Landeshauptstadt Stuttgart, no date e.

⁵⁶ See Heinsohn et al., 2024.

⁵⁷ See Bundesministerium für Familie, Senioren, Frauen und Jugend, 2024.



- ⁵⁸ See De Jong-Gierveld et al., 2006.
- ⁵⁹ See Niekusch, 2024.
- ⁶⁰ See Frisoli & Mäding, 2021.
- ⁶¹ See Landeshauptstadt Stuttgart (Stuttgart-Umfrage [Stuttgart survey]), 2023.
- ⁶² Note: Analysis by the Association of Statutory Health Insurance Physicians in Baden-Württemberg, based on the resolution of the State Committee of Physicians and Health Insurance Funds for Baden-Württemberg pursuant to Section 90 of the German Social Code, Book V (SGB V), on the continuation of needs planning dated 23 October 2024.
- ⁶³ See Landeshauptstadt Stuttgart (Stuttgart-Umfrage [Stuttgart survey]), 2023.
- ⁶⁴ See Schütt, 2023.
- ⁶⁵ See FOSSGIS e.V., no date.
- ⁶⁶ See Bundesamt für Kartographie und Geodäsie, 2024.
- ⁶⁷ See infas 360., no date.
- ⁶⁸ See Gunderlach, 2017.
- ⁶⁹ See Landesanstalt für Umwelt Baden-Württemberg, no date.
- ⁷⁰ See Landeshauptstadt Stuttgart (Bürgerumfrage [citizen survey]), 2021; Landeshauptstadt Stuttgart (Bürgerumfrage [citizen survey]), 2023.
- ⁷¹ See Landeshauptstadt Stuttgart (Bürgerumfrage [citizen survey]), 2021; Landeshauptstadt Stuttgart (Bürgerumfrage [citizen survey]), 2023.
- ⁷² See Statistisches Amt, 2024.
- ⁷³ See Frisoli & Mäding, 2021.
- ⁷⁴ See Landeshauptstadt Stuttgart (Bürgerumfrage [citizen survey]), 2021; Landeshauptstadt Stuttgart (Bürgerumfrage [citizen survey]), 2023.
- ⁷⁵ See Heinsohn, 2024.
- ⁷⁶ See Walker, 2016.
- ⁷⁷ See Landesinstitut für Schulentwicklung, 2013.
- ⁷⁸ See Hufnagel, 2019.
- ⁷⁹ See Günster, 2018.
- ⁸⁰ Note: "Inclusion means that everyone participates in society equally and with autonomy. For schools and teaching, this means that pupils with disabilities no longer have to integrate and adapt to the school environment; instead, the environment is designed and equipped from the outset to enable everyone to live and learn on an equal footing, regardless of how different they are. The ideal of inclusion is that the distinction between "disabled" and "non-disabled" is no longer relevant." (Staatliches Schulamt Stuttgart, Stuttgart, no date).
- ⁸¹ See Staatliches Schulamt Stuttgart, no date.
- ⁸² Note: Legal information system for the Federal Republic of Germany – School Act for Baden-Württemberg (SchG) – Section 83 Fulfilment of the entitlement to special needs education, parental choice in primary and secondary education I.
- ⁸³ See Deutscher Städtetag, 2016.
- ⁸⁴ See Landeshauptstadt Stuttgart (Stuttgart-Umfrage [Stuttgart survey]), 2023.
- ⁸⁵ See Heinsohn, 2024.
- ⁸⁶ Note: Governance refers to a system for regulating and coordinating a state, municipality, administration or other organisational unit. This goes beyond the concept of government, as it involves coordinating the negotiations, decisions and implementations of multiple actors from politics, business, organisations and civil society. More information: Deutsches Institut für Urbanistik, 2018: Was ist eigentlich ... Governance? [What actually is ... Governance?] <https://difu.de/nachrichten/was-ist-eigentlich-governance> (Last access on 12.09.2024).
- ⁸⁷ See Deutsche Rentenversicherung, no date.
- ⁸⁸ See Die Bundesregierung, 2022.
- ⁸⁹ See Statistisches Bundesamt, no date b.
- ⁹⁰ See Riedel et al., 2022.
- ⁹¹ See Hillerich-Sigg, 2023.
- ⁹² See Statistisches Bundesamt, 2023a.
- ⁹³ See Statistisches Bundesamt, 2023a.
- ⁹⁴ See Statistisches Bundesamt, no date a.
- ⁹⁵ Note: Father participation represents the proportion of children whose fathers received parental allowance in relation to all children in a birth cohort for whom parental allowance was received. The figures shown are based on completed parental allowance payments for children born in a specific year. This means that the figures can only be calculated two years after the end of the respective birth year of the children. (Statistisches Bundesamt, 2022)
- ⁹⁶ See Reichert, 2023.
- ⁹⁷ See Landeshauptstadt Stuttgart, 2024.
- ⁹⁸ See Die Bundesregierung, 2022.



- ⁹⁹ See Riedel et al., 2022.
- ¹⁰⁰ Note: LGBTQIA+: Lesbian, Gay, Bisexual, Transgender, Queer or Questioning, Intersex, Asexual, and others.
- ¹⁰¹ Note: Queer: Collective term for sexual orientations that are not heterosexual, as well as gender identities that are non-binary or non-cisgender.
- ¹⁰² See Landeshauptstadt Stuttgart, 2022.
- ¹⁰³ See Landeshauptstadt Stuttgart, 2022.
- ¹⁰⁴ See Süddeutsche Zeitung, 2023.
- ¹⁰⁵ See tegut, 2024.
- ¹⁰⁶ See EnBW, 2023.
- ¹⁰⁷ See Landeshauptstadt Stuttgart, (Referat Städtebau, Wohnen und Umwelt), 2023 & Ministerium für Umwelt, Klima und Energiewirtschaft Baden-Württemberg, 2024.
- ¹⁰⁸ See Landeshauptstadt Stuttgart, (Referat Städtebau, Wohnen und Umwelt), 2023.
- ¹⁰⁹ See Verein Deutscher Ingenieure e.V., 2023.
- ¹¹⁰ See Landeshauptstadt Stuttgart, 2016.
- ¹¹¹ See Landeshauptstadt Stuttgart, (Amt für Umweltschutz), 2024.
- ¹¹² See Landeshauptstadt Stuttgart, (Amt für Umweltschutz), 2024.
- ¹¹³ See Die Bundesregierung, 2024a.
- ¹¹⁴ See Tagesschau 2023.
- ¹¹⁵ See Wilke, 2024a.
- ¹¹⁶ See Verein Deutscher Ingenieure e.V., 2023.
- ¹¹⁷ See Held & Strauß, 2024.
- ¹¹⁸ See Amt für Umweltschutz, Elektrizitätsanwendung und Energiebeschaffung für städtische Liegenschaften [Electricity use and energy procurement for municipal properties], no date.
- ¹¹⁹ See Die Bundesregierung, 2022.
- ¹²⁰ See Verband der Automobilindustrie e.V., 2024.
- ¹²¹ See Landeshauptstadt Stuttgart (Stuttgart-Umfrage [Stuttgart survey]), 2023.
- ¹²² See Held, 2023.
- ¹²³ See Münzenmaier, 2018.
- ¹²⁴ See Statista, 2023.
- ¹²⁵ See Die Bundesregierung, 2022.
- ¹²⁶ See Landeshauptstadt Stuttgart, 2024c.
- ¹²⁷ See prognos, 2024.
- ¹²⁸ See Söldner, 2020.
- ¹²⁹ See Manager Magazin, 2022.
- ¹³⁰ See Staatsministerium Baden-Württemberg, 2022.
- ¹³¹ See Baden-Württemberg, 2022.
- ¹³² See Manager Magazin, 2022.
- ¹³³ See Landeshauptstadt Stuttgart (Stuttgart-Umfrage [Stuttgart survey]), 2023.
- ¹³⁴ See Die Bundesregierung, 2022.
- ¹³⁵ See IHK Region Stuttgart, 2024.
- ¹³⁶ See Obermaier et al., 2020.
- ¹³⁷ See Bundesagentur für Arbeit, no date.
- ¹³⁸ See Bundesministerium für Arbeit und Soziales, no date.
- ¹³⁹ See Deutsche Gesetzliche Unfallversicherung, 2021.
- ¹⁴⁰ See Deutsche Gesetzliche Unfallversicherung, no date.
- ¹⁴¹ See Region Stuttgart, 2025.
- ¹⁴² See Umweltbundesamt, no date.
- ¹⁴³ Note: STEM refers to the fields of science, technology, engineering and mathematics.
- ¹⁴⁴ See Biermann, 2021.
- ¹⁴⁵ See John, 2008.
Note: Economic sectors are a group of companies or businesses that are similar due to their economic activity, the production process or the products manufactured and are thus divided into these economic sectors and industries. The 2008 classification of economic sectors is currently used for official statistics in Germany. (See explanation of economic sectors: Classification of economic sectors, available at: <https://www.destatis.de/DE/Methoden/Klassifikationen/Gueter-Wirtschaftsklassifikationen/klassifikation-wz-2008.html> – Last access on 17.03.2025)
- ¹⁴⁶ Note: At this time, the previous combined survey of school and vocational education was divided into separate characteristics. This resulted in various adjustment effects during the transition period, including a significantly higher proportion of unknown qualifications. This has probably cut the rate of academic qualifications. This is not a specific Stuttgart phenomenon; these effects had a nationwide impact in the respective period.
- ¹⁴⁷ See Statistisches Landesamt Baden-Württemberg, 2024b.
- ¹⁴⁸ See Statistisches Landesamt Baden-Württemberg, 2024b.
- ¹⁴⁹ See Statistisches Landesamt Baden-Württemberg, 2024a.
- ¹⁵⁰ See Statistisches Landesamt Baden-Württemberg, 2024b.
- ¹⁵¹ See Statistisches Landesamt Baden-Württemberg, 2024b.
- ¹⁵² See Einwiller, 2022.
- ¹⁵³ See Stifterverband, no date.
- ¹⁵⁴ See Bundesnetzagentur, 2024.



- ¹⁵⁵ Note: In addition to the citizenship criterion, an examination of poverty rates according to migration background would be informative for the estimation of integration strived for by the target. However, only data differentiated by citizenship is available.
- ¹⁵⁶ Note: In West Germany, the income threshold is 7,100 euro
- ¹⁵⁷ See Bundesagentur für Arbeit, 2022.
- ¹⁵⁸ See Held et al., 2025.
- ¹⁵⁹ Landeshauptstadt Stuttgart, 2023a.
- ¹⁶⁰ See Federal Government Commissioner for Matters relating to People with Disabilities, no date.
- ¹⁶¹ See Deutz, 2021.
- ¹⁶² See Statista Research Department, 2025.
- ¹⁶³ See Landeshauptstadt Stuttgart (Bürgerumfrage [citizen survey]), 2021; Landeshauptstadt Stuttgart (Bürgerumfrage [citizen survey]), 2023.
- ¹⁶⁴ See Statistisches Bundesamt, 2023b.
- ¹⁶⁵ See Held et al., 2021.
- ¹⁶⁶ See Landeshauptstadt Stuttgart, 2023b.
- ¹⁶⁷ See Gieck, 2019.
- ¹⁶⁸ See Niedergesäss, 2022.
- ¹⁶⁹ See Die Bundesregierung, 2024b.
- ¹⁷⁰ See Fraunhofer Institute for Building Physics IBP, 2013.
- ¹⁷¹ See Landeshauptstadt Stuttgart (Stuttgart-Umfrage [Stuttgart survey]), 2023.
- ¹⁷² See Held et al., 2023.
- ¹⁷³ See Die Bundesregierung, 2024b.
- ¹⁷⁴ See Landeshauptstadt Stuttgart, 2022.
- ¹⁷⁵ See Die Bundesregierung, 2024c.
- ¹⁷⁶ See Landeshauptstadt Stuttgart (Stuttgart-Umfrage [Stuttgart survey]), 2023.
- ¹⁷⁷ See Rudat, 2023.
- ¹⁷⁸ See Held et al., 2024.
- ¹⁷⁹ See Fairtrade Deutschland e.V., no date c.
- ¹⁸⁰ See Landeshauptstadt Stuttgart, no date f.
- ¹⁸¹ See Fairtrade Deutschland e.V., no date b.
- ¹⁸² See Fairtrade Deutschland e.V., no date, a.
- ¹⁸³ See Wilke, 2024c.
- ¹⁸⁴ See Statistisches Bundesamt, 2023b.
- ¹⁸⁵ See UNFCCC, United Nations Framework Convention on Climate Change, 1997.
- ¹⁸⁶ See Statistisches Landesamt, 2023.
- ¹⁸⁷ See Riedel/Vollmer, 2020.
- ¹⁸⁸ See NABU, 2024.
- ¹⁸⁹ See Forstliche Versuchs- und Forschungsanstalt Baden-Württemberg, 2023.
- ¹⁹⁰ See NABU, no date.
- ¹⁹¹ See Riedel et al., 2022.
- ¹⁹² See Deutz, 2022.
- ¹⁹³ See Strauß, 2024.
- ¹⁹⁴ See Die Bundesregierung, no date.
- ¹⁹⁵ See Landeshauptstadt Stuttgart, no date c.
- ¹⁹⁶ See Landeshauptstadt Stuttgart, no date c.
- ¹⁹⁷ See Landeshauptstadt Stuttgart (Stuttgart-Umfrage [Stuttgart survey]), 2023.
- ¹⁹⁸ See Landeshauptstadt Stuttgart, 2023; Die Webzeitung, 2023; Stuttgarter Nachrichten, 2019.
- ¹⁹⁹ See Tiefbauamt Stuttgart, 2020.
- ²⁰⁰ See Westrich et al., 2000.
- ²⁰¹ See Detzel, 1998.
- ²⁰² Note: The information is contained in the "Artenschutzkonzept" [Species Protection Concept] of State Capital Stuttgart, 2018.
- ²⁰³ See Bienenschutz Stuttgart e.V., 2024.
- ²⁰⁴ See Landeshauptstadt Stuttgart, no date b.
- ²⁰⁵ See Meunier, 2019.
- ²⁰⁶ See Umweltbundesamt, no date a.
- ²⁰⁷ See Meunier, 2021.
- ²⁰⁸ See Landeshauptstadt Stuttgart, no date d.
- ²⁰⁹ See Landeshauptstadt Stuttgart, no date d.
- ²¹⁰ See Landeshauptstadt Stuttgart, 2024b.
- ²¹¹ See Oberwittler et al., 2021.
- ²¹² See Bundeskriminalamt, no date.
- ²¹³ See Die Bundesregierung, 2022.
- ²¹⁴ See Landeshauptstadt Stuttgart (Stuttgart-Umfrage [Stuttgart survey]), 2023.
- ²¹⁵ See Transparency International Deutschland e.V., no date.
- ²¹⁶ See Gies et al., 2021.
- ²¹⁷ See Landeshauptstadt Stuttgart, 2024d.
- ²¹⁸ See Landeshauptstadt Stuttgart, 2025b.
- ²¹⁹ See Bürgerhaushalt Stuttgart [Participatory Budget Stuttgart], no date a.
- ²²⁰ See Landeshauptstadt Stuttgart, 2025a.



²²¹ See Landeshauptstadt Stuttgart (2025c, 2025d).

²²² See Bundesministerium des Innern und für Heimat, no date a.

²²³ See Bundesministerium des Innern und für Heimat, no date b.

²²⁴ Note: The expression "developing countries" as defined by the DAC (Development Assistance Committee of the OECD) is actually only used for statistical purposes; otherwise, the term "Global South" is used.

²²⁵ See OECD, no date.

²²⁶ Note: Town twinning of State Capital Stuttgart: St Helens, Great Britain, since 1948; Cardiff, Great Britain, since 1955; St Louis, USA, since 1960; Strasbourg, France, since 1962; Mumbai, India, since 1968; Menzel Bourguiba, Tunisia, since 1971; Cairo, Egypt, since 1979; Lodz, Poland, since 1988; Brno, Czech Republic, since 1989; Samara, Russia, since 1992.

²²⁷ See Statistische Ämter des Bundes und der Länder – Gemeinsames Statistikportal [Joint statistics portal], no date a.

²²⁸ Note: See practical example 24 of the Stuttgart - A Livable City Voluntary Local Review 2023.

²²⁹ See Riedel, 2024.

²³⁰ Note: The classification of SDGs in three sustainability dimensions was made according to Rockström, J. & Sukhdev, P. (2016). How Food Connects All the SDGs. Stockholm Resilience Centre.

²³¹ Note: In contrast to the Wegweiser für Kommunen [Community Guide], the targets are not split into subgoals. Furthermore, three additional targets relevant to Stuttgart have been added.

²³² See Riedel et al., 2022.

²³³ See Statistische Ämter des Bundes und der Länder – Gemeinsames Statistikportal [Joint statistics portal], 2025.

²³⁴ See SDG-Portal [SDG portal], 2025.

²³⁵ See Rat für nachhaltige Entwicklung, 2024.

²³⁶ See, inter alia, municipal council documents GRDRs 206/2018, GRDRs 1246/2019, GRDRs 1074/2019, GRDRs 899/2021, GRDRs 608/2023, presentations on the "mid-term review" on 10 April 2024.

²³⁷ See, for example, "Berichtsrahmen Nachhaltige Kommune", the New Urban Agenda, and the EU Corporate Sustainability Reporting Directive.

²³⁸ Note: In 2025, the German government will report to the United Nations for the third time on the progress made in implementing 2030 Agenda in Germany. This Voluntary National Review (VNR) also documents activities at the subnational level, albeit to a limited extent. The cities of Stuttgart, Mannheim, Bonn and Hamburg have therefore taken the initiative to produce an accompanying municipal report in cooperation with municipal umbrella organisations and other bodies, under the leadership of the Deutsches Institut für Urbanistik [German Institute for Urban Affairs], with the participation of all municipalities and districts nationwide that have so far submitted a Voluntary Local Review to the UN. This Voluntary Local Government Review (VLGR, also known as Voluntary Subnational Review (VSR) without the state level) is intended to provide a comprehensive overview of the broad spectrum of sustainability activities and progress in municipalities.

²³⁹ Note: Midway through the 2030 Agenda, the Statistical Office compiled the SDG Barometer. This innovative monitoring tool, based on the methodology of Eurostat and Statistics Austria, assesses the average annual growth rate of SDG indicators, see: <https://www.domino1.stuttgart.de/web/komunis/komunissde.nsf/de1cd7a463d6760ac1257b0c004db0f7/d405542dd8d8faa3c1258b250022e18e?OpenDocument> (Last access on 13.02.2025)



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Appendix I – Overview of the 17 UN Sustainable Development Goals with 169 targets

Adopted on 25 September 2015 by 193 Heads of State and Government

Goal 1 End poverty in all its forms everywhere

- 1.1** By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day
 - 1.2** By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
 - 1.3** Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable
 - 1.4** By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance
 - 1.5** By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters
-
- 1.a** Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions
 - 1.b** Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions

- 2.1** By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round
 - 2.2** By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons
 - 2.3** By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment
 - 2.4** By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality
 - 2.5** By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed
-
- 2.a** Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries

Goal 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture



2.b Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round

2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility

Goal 3 Ensure healthy lives and promote well-being for all at all ages

3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births

3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births

3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and wellbeing

3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents

3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes

3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate

3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all

3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States

3.d Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks

Goal 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education

4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university



- 4.4** By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship
- 4.5** By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations
- 4.6** By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy
- 4.7** By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development

-
- 4.a** Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all
 - 4.b** By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries
 - 4.c** By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States

Goal 5 Achieve gender equality and empower all women and girls

- 5.1** End all forms of discrimination against all women and girls everywhere

- 5.2** Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation
- 5.3** Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation
- 5.4** Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate
- 5.5** Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life
- 5.6** Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences

-
- 5.a** Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws
 - 5.b** Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women
 - 5.c** Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

Goal 6 Ensure availability and sustainable management of water and sanitation for all

- 6.1** By 2030, achieve universal and equitable access to safe and affordable drinking water for all
- 6.2** By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations



6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

6.a By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies

6.b Support and strengthen the participation of local communities in improving water and sanitation management

Goal 7 Ensure access to affordable, reliable, sustainable and modern energy for all

7.1 By 2030, ensure universal access to affordable, reliable and modern energy services

7.2 By 2030, increase substantially the share of renewable energy in the global energy mix

7.3 By 2030, double the global rate of improvement in energy efficiency

7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology

7.b By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States and landlocked developing countries, in accordance with their respective programmes of support

Goal 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries

8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors

8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services

8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training

8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms



8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products

8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all

8.a Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-related Technical Assistance to Least Developed Countries

8.b By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization

9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending

9.a Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States

9.b Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities

9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries

9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets

9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

Goal 10 Reduce inequality within and among countries

10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average

10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard

10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality

10.5 Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations



10.6 Ensure enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions

10.7 Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies

10.a Implement the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with World Trade Organization agreements

10.b Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programmes

10.c By 2030, reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 per cent

Goal 11 Make cities and human settlements inclusive, safe, resilient and sustainable

11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums

11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage

11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities

11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning

11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels

11.c Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials

Goal 12 Ensure sustainable consumption and production patterns

12.1 Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries



12.2 By 2030, achieve the sustainable management and efficient use of natural resources

12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses

12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle

12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

12.a Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production

12.b Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products

12.c Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities

Goal 13 Take urgent action to combat climate change and its impacts*

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

13.2 Integrate climate change measures into national policies, strategies and planning

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

13.a Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible

13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities

* Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.

Goal 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development

14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans



14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels

14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics

14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information

14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation*

14.7 By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism

14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries

14.b Provide access for small-scale artisanal fishers to marine resources and markets

14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the Sea, which provides the legal framework for

the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of “The future we want”

* Taking into account ongoing World Trade Organization negotiations, the Doha Development Agenda and the Hong Kong ministerial mandate.

Goal 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world

15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species

15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed



15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products

15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species

15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts

15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems

15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation

15.c Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities

Goal 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

16.1 Significantly reduce all forms of violence and related death rates everywhere

16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children

16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all

16.4 By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime

16.5 Substantially reduce corruption and bribery in all their forms

16.6 Develop effective, accountable and transparent institutions at all levels

16.7 Ensure responsive, inclusive, participatory and representative decisionmaking at all levels

16.8 Broaden and strengthen the participation of developing countries in the institutions of global governance

16.9 By 2030, provide legal identity for all, including birth registration

16.10 Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements

16.a Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime

16.b Promote and enforce non-discriminatory laws and policies for sustainable development

Goal 17 Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

Finance

17.1 Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection



17.2 Developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of gross national income for official development assistance (ODA/GNI) to developing countries and 0.15 to 0.20 per cent of ODA/GNI to least developed countries; ODA providers are encouraged to consider setting a target to provide at least 0.20 per cent of ODA/GNI to least developed countries

17.3 Mobilize additional financial resources for developing countries from multiple sources

17.4 Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress

17.5 Adopt and implement investment promotion regimes for least developed countries

Technology

17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism

17.7 Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed

17.8 Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology

Capacity-building

17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the Sustainable Development Goals, including through North-South, South-South and triangular cooperation

Trade

17.10 Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organization, including through the conclusion of negotiations under its Doha Development Agenda

17.11 Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020

17.12 Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with World Trade Organization decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access

Systemic issues

Policy and institutional coherence

17.13 Enhance global macroeconomic stability, including through policy coordination and policy coherence

17.14 Enhance policy coherence for sustainable development

17.15 Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development



Multi-stakeholder partnerships

- 17.16** Enhance the Global Partnership for Sustainable Development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the Sustainable Development Goals in all countries, in particular developing countries
- 17.17** Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

Data, monitoring and accountability

- 17.18** By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts
- 17.19** By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries

Source: United Nations (UN), 2015: Transforming our world: the 2030 Agenda for Sustainable Development; Resolution of the General Assembly, adopted on 25. September 2015 (<https://sdgs.un.org/2030agenda>; last access 28.09.2021).



Appendix II – Selected SDG indicators for State Capital Stuttgart

The overview below shows the 118 indicators selected for the 4th Stuttgart SDG Voluntary Local Review (VLR). They are allocated to the respective SDGs or their targets. Cross-references are inserted for indicators covering several SDGs.

Indicator	Calculation	Source of the Indicator
SDG 1: No Poverty (end poverty in all its forms everywhere)		
SDG 1.1: By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day		
Twin towns in the Global South	See <i>SDG 17</i>	
SDG 1.2: By 2030, reduce by at least half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions		
At-risk-of-poverty rate	(Number of households with an income < 60 % of the median net equivalent income in Stuttgart / Total number of private households) * 100	Statistics portal (modified State Capital Stuttgart 2025)
Children with overweight (at school enrolment examination)	See <i>SDG 2</i>	
Perception of loneliness	See <i>SDG 3</i>	
Gross domestic product	See <i>SDG 8</i>	
SDG 1.3: Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable		
Receiving minimum social security benefits	((Number of people entitled to benefits under SGB II and SGB XII + number of persons receiving standard benefits under the Asylum Seekers Benefits Act) / population) * 100	SDG indicators for municipalities (modified State Capital Stuttgart 2021)
Child poverty	((Number of people entitled to benefits under SGB II under the age of 15 + number of people not entitled to benefits under SGB II under the age of 15 living in households with people entitled to benefits under SGB II) / Population (under 15 years of age)) * 100	SDG indicators for municipalities (modified State Capital Stuttgart 2025)



Indicator	Calculation	Source of the Indicator
Poverty among adolescents and young adults	$((\text{Number of people entitled to benefits under SGB II between the ages of 15 and 17} + \text{number of people not entitled to benefits between the ages of 15 and 17 living in households with people entitled to benefits under SGB II}) / \text{Population (15–17 years)}) * 100$	SDG indicators for municipalities (modified State Capital Stuttgart 2025)
Poverty among single parents	$(\text{Number of single parents receiving benefits under SGB II} / \text{Number of single parents}) * 100$	Supplement State Capital Stuttgart 2019
Poverty in old age	$(\text{Number of people receiving benefits under SGB XII from the age of 65} / \text{Population (from 65 years)}) * 100$	SDG indicators for municipalities (modified State Capital Stuttgart 2025)
Dental health in children	See SDG 3	
Childcare	See SDG 4	
School leavers by school-leaving qualification	See SDG 4	
Relative poverty among women	See SDG 5	
Unemployment	See SDG 8	
People increasing earnings	See SDG 8	
Income distribution: Households with low income	See SDG 10	
Relative poverty rate among recipients of benefits without German citizenship	See SDG 10	
Allocation of accommodation with municipal occupancy rights to households with urgent housing needs	See SDG 11	
Financial burden of housing costs	See SDG 11	
Proportion of social housing in the overall rental market	See SDG 11	



Indicator	Calculation	Source of the Indicator
SDG 1.4: By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance		
Homelessness	(Number of homeless people in sheltered accommodation / Population) * 100	SDG indicators for municipalities 2020 (modified State Capital Stuttgart 2025)
Vaccination coverage	See SDG 3	
Infant mortality	See SDG 3	
Perception of loneliness	See SDG 3	
Dental health in children	See SDG 3	
Financial burden of housing costs	See SDG 11	
SDG 1.5: By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters		
"Municipal climate adaptation" index	See SDG 13	
SDG 1.b: Ensure significant mobilisation of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions		
Twin towns in the Global South	See SDG 17	

SDG 2: Zero Hunger (end hunger, achieve food security and improved nutrition and promote sustainable agriculture)

SDG 2.1: By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round

Poverty in old age	See SDG 1	
Poverty among single parents	See SDG 1	
Poverty among adolescents and young adults	See SDG 1	



Indicator	Calculation	Source of the Indicator
Child poverty	See SDG 1	
Homelessness	See SDG 1	
SDG 2.2: By 2030, end all forms of malnutrition, including by achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons		
Children with overweight (at school enrolment examination)	(Number of overweight children in a school entry cohort / Total number of children examined in school entry cohort) * 100	SDG indicators for municipalities
Promotion of physical activity in nursery schools	See SDG 3	
Infant mortality	See SDG 3	
Dental health in children	See SDG 3	
Educational programmes for sustainable development	See SDG 4	
SDG 2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality		
Organic farming (land use and farm operations)	(Area used for organic farming / Total area used for agricultural purposes) * 100 (Number of organically managed farms / Total number of agricultural farms) * 100	SDG indicators for municipalities (modified State Capital Stuttgart 2021)
Nitrogen surplus	(Nitrogen surplus in kilogrammes / Agricultural land in hectares) * 100	SDG indicators for municipalities (modified State Capital Stuttgart 2025)
Quality of running water	See SDG 6	
Sustainable procurement	See SDG 12	
Environmental protection investments in the manufacturing sector	See SDG 12	
Greenhouse gas emissions	See SDG 13	
Soil index	See SDG 15	



Indicator	Calculation	Source of the Indicator
Biodiversity	See SDG 15	
SDG 2.a: Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries		
Fair trade schools	See SDG 12	
Sustainable procurement	See SDG 12	
Environmental protection investments in the manufacturing sector	See SDG 12	

SDG 3: Good Health and Well-being (ensure healthy lives and promote well-being for all at all ages)

SDG 3.2: End all preventable deaths under the age of 5

Infant mortality	$\left(\frac{\text{Number of deaths of under 1-year-olds}}{\text{Number of all live births}} \right) * 1,000$	Supplement State Capital Stuttgart 2025
Domestic violence against children and adolescents	See SDG 16	
Violent deaths	See SDG 16	

SDG 3.3: Combat communicable diseases

Vaccination coverage at school enrolment examination (tetanus, polio, measles, rubella)	$\left(\frac{\text{Number of children with basic immunisation per disease at school enrolment examination}}{\text{Total number of children at the school enrolment examination}} \right) * 100$	Supplement State Capital Stuttgart 2025
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SDG 3.4: By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

Children with conspicuous screening of gross motor skills (at school enrolment examination)	$\left(\frac{\text{Number of children in a school enrolment cohort with conspicuous screening of gross motor skills}}{\text{Total number of examined children of a school enrolment cohort}} \right) * 100$	Supplement State Capital Stuttgart 2021
Level of organisation in sports	$\left(\frac{\text{Number of people organised in sports clubs by life phase}}{\text{Total number of residents by life phase}} \right) * 100$	Supplement State Capital Stuttgart 2021



Indicator	Calculation	Source of the Indicator
Urban physical activity spaces	(Sports areas accessible to all in square metres / Population) * 100	Supplement State Capital Stuttgart 2021
Promotion of activity in nursery schools	Number of Physical Activity Passport nursery schools and certified specialists for the Physical Activity Passport	Supplement State Capital Stuttgart 2021
Suicide mortality	(Number of suicides among men / Population) * 100,000 (Number of suicides among women / Population) * 100,000	SDG indicators for municipalities
Perception of loneliness	(Number of people feeling lonely / Total number of respondents) * 100	Supplement State Capital Stuttgart 2025
Homelessness	See SDG 1	
Children with overweight (at school enrolment examination)	See SDG 2	
Relative poverty rate among women	See SDG 5	
Unemployment	See SDG 8	
Occupational safety	See SDG 8	
Long-term unemployment	See SDG 8	
Low-barrier housing	See SDG 10	
Recreational areas	See SDG 11	
Trees in public spaces	See SDG 13	
Forest areas	See SDG 13	
Biodiversity	See SDG 15	
Mobile working	See SDG 16	
SDG 3.6: By 2020, halve the number of global deaths and injuries from road traffic accidents		
Traffic casualties	(Number of persons injured or killed through traffic accidents / Population) * 1,000	SDG indicators for municipalities
Bicycle traffic	See SDG 11	
Cycle paths	See SDG 11	



Indicator	Calculation	Source of the Indicator
Transport means for getting to work	See SDG 11	
Car density	See SDG 11	
SDG 3.8: Achieve universal health coverage, including financial risk protection, access to quality essential health care services and access to safe, effective, quality and affordable essential medicines and vaccines for all		
Dental health in children	(Number of nursery school children with naturally healthy teeth and school children with naturally healthy permanent teeth / Total number of nursery school children and school children examined by dentists) * 100	Supplement State Capital Stuttgart 2025
Premature mortality	(Number of fatalities under 65 years of age / Population (under 65 years of age)) * 1,000	SDG indicators for municipalities
Medical care	(Number of general practitioners, primary care physicians and physicians without a specialty / Population) * 100,000	SDG indicators for municipalities
Primary care close to home – GP practice	Linear distance to the nearest GP practice weighted by residents	SDG indicators for municipalities 2020
Places in nursing homes	(Number of places available in nursing homes / Number of residents 65 years and older) * 1000	SDG indicators for municipalities
Gross domestic product	See SDG 8	
SDG 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination		
Air quality	Annual average nitrogen dioxide pollution: permissible level of NO ₂ > 40µg / m ³	SDG indicators for municipalities (modified State Capital Stuttgart 2019)
	Number of days per year with a particulate matter average of PM10 > 50µg / m ³ : permissible number of days 35	SDG indicators for municipalities (modified)
Noise pollution	Day / evening / night noise over 24 hours: (Number of people affected by 24-hour weighted road traffic noise exposure above 65 dB(A) / Population) * 100	Supplement State Capital Stuttgart 2019 (modified State Capital Stuttgart 2025)
	Night noise: (Number of people affected by night-time road traffic noise exposure above 55 dB(A) / Population) * 100	Supplement State Capital Stuttgart 2019 (modified State Capital Stuttgart 2025)
Wastewater treatment	See SDG 6	
Occupational safety	See SDG 8	



Indicator	Calculation	Source of the Indicator
Bicycle traffic	See SDG 11	
Transport means for getting to work	See SDG 11	
Car density	See SDG 11	
Environmental protection investments in the manufacturing sector	See SDG 12	
Greenhouse gas emissions	See SDG 13	

SDG 4: Quality education (ensure inclusive and equitable quality education and promote lifelong learning opportunities for all)

SDG 4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

Transition from primary school	(Number of transitions to the respective type of school / Number of primary school children in final year) * 100	Supplement State Capital Stuttgart 2021
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SDG 4.2: By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre primary education so that they are ready for primary education

Childcare	Care ratio for under 3-year-olds: (Number of children under 3 in daycare facilities / Number of children under 3) * 100	SDG indicators for municipalities
	Provision ratio for under 3-year-olds: (Number of places for children under 3 / Number of children under 3) * 100	Supplement State Capital Stuttgart 2021
	Care ratio for 3 to 6-year-olds: (Number of 3 to 6-year-olds in daycare facilities / Number of 3 to 6-year-olds) * 100	SDG indicators for municipalities
	Provision ratio for 3 to 6-year-olds: (Number of places for 3 to 6-year-olds / Number of children from 3 to 6 years of age) * 100	Supplement State Capital Stuttgart 2021
Children with speech impediments	(Number of children with an abnormal speech screening result according to HASE / Total number of children examined in school enrolment cohort) * 100	Supplement State Capital Stuttgart 2021
Children with overweight	See SDG 2	



Indicator	Calculation	Source of the Indicator
Promotion of physical activity in nursery schools	See SDG 3	
Children with conspicuous screening of gross motor skills	See SDG 3	
Dental health in children	See SDG 3	
SDG 4.3: By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university		
School leavers by school-leaving qualification	<i>Qualification:</i> (Number of school leavers by qualification / Total number of school leavers) * 100	Supplement State Capital Stuttgart 2021 (modified State Capital Stuttgart 2025)
	<i>Gender:</i> (Number of school leavers by qualification / Total number of school leavers (female and male)) * 100	Supplement State Capital Stuttgart 2022 (modified State Capital Stuttgart 2025)
	<i>German nationality:</i> (Number of school leavers by qualification (German nationality) / Total number of school leavers (German nationality)) * 100	Supplement State Capital Stuttgart 2025
	<i>Foreign nationality:</i> (Number of school leavers by qualification (foreign nationality) / Total number of school leavers (foreign nationality)) * 100	Supplement State Capital Stuttgart 2025
	<i>Migration background:</i> Number of school leavers by qualification (migration background) / Total number of school leavers (migration background)) * 100	Supplement State Capital Stuttgart 2025
Students	Total number of students (Number of female or male students / Number of students per winter semester) * 100	Supplement State Capital Stuttgart 2023
SDG 4.4: By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship		
School leavers without a qualification	See indicator "School leavers by school-leaving qualifications"	



Indicator	Calculation	Source of the Indicator
Vocational qualifications	<p><i>Percentage with vocational qualification:</i> (Number of people with an academic degree or apprenticeship/vocational training or technical college degree (25–65 years) / Number of people with vocational qualification (25–65 years)) * 100</p> <p><i>Percentage without vocational qualification:</i> (Number of people with academic qualification or apprenticeship/vocational training or technical college degree or without vocational qualification (25–65 years) / Population (25–65 years)) * 100</p>	Supplement State Capital Stuttgart 2023
SDG 4.5: By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including people with disabilities, indigenous peoples and children in vulnerable situations		
All-day primary schools	(Number of public all-day primary schools / Total number of primary schools) * 100	Supplement State Capital Stuttgart 2021
Inclusively educated pupils	(Number of pupils receiving inclusive education by type of school / Number of all pupils with special educational needs) * 100	Supplement State Capital Stuttgart 2023
Digital devices at municipal schools	(Pupils at municipal schools with digital devices / Total number of pupils at municipal schools) * 100	Supplement State Capital Stuttgart 2023
SDG 4.7: By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development		
Educational programmes for sustainable development	(Annual number of preschool children and schoolchildren (primary and secondary schools and special educational and counselling centres (SBBZ) participating in ESD programmes that were supported or offered by the municipality / Total annual number of preschool children and schoolchildren (at primary and secondary schools and SBBZ)) * 100	Supplement SDG indicators for municipalities (modified State Capital Stuttgart 2025)
Media collection of the Stuttgart City Library	Number of media / Population	Supplement State Capital Stuttgart 2023
Culture budget	Culture budget in euro / Population	Supplement State Capital Stuttgart 2021
Perception of loneliness	See SDG 3	
Transport means for getting to work	See SDG 11	



Indicator	Calculation	Source of the Indicator
Biodiversity	See SDG 15	
Participation of adolescents	See SDG 16	
Stuttgart participatory budgeting	See SDG 16	
Informal citizen participation	See SDG 16	
SDG 4.a: Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, nonviolent, inclusive and effective learning environments for all		
Inclusively educated pupils	See SDG 4	

SDG 5: Gender equality (achieve gender equality and empower all women and girls)

SDG 5.1: End all forms of discrimination against all women and girls everywhere

Employment rates	<i>Ratio of full-time employment rate of women to that of men:</i> $\left(\frac{\text{Number of women ssc at the place of residence}}{\text{Total number of women}} \right) / \left(\frac{\text{Number of men ssc* at the place of residence}}{\text{Total number of men}} \right) * 100$	SDG indicators for municipalities
	<i>Part-time employment rate among women and men:</i> $\left(\frac{\text{Number of women ssc at the place of residence in part-time employment}}{\text{Total number of women ssc at the place of residence}} \right) * 100$ $\left(\frac{\text{Number of men ssc at the place of residence in part-time employment}}{\text{Total number of men ssc at the place of residence}} \right) * 100$	Supplement State Capital Stuttgart 2021
Relative poverty rate among women	$\left(\frac{\text{Number of women entitled to benefits under SGB II and SGB XII}}{\text{Total number of women 15 years and older}} \right) / \left(\frac{\text{Number of men entitled to benefits under SGB II and SGB XII}}{\text{Total number of men 15 years and older}} \right) * 100$	Supplement State Capital Stuttgart 2019 (modified State Capital Stuttgart 2025)
Pay gap between women and men	$\left(\frac{\text{Median income of women ssc in full-time employment}}{\text{Median income of men ssc in full-time employment}} \right) * 100$	SDG indicators for municipalities 2022 (modified State Capital Stuttgart 2023)



Indicator	Calculation	Source of the Indicator
Poverty among single parents	See SDG 1	
Children with overweight (at school enrolment)	See SDG 2	
Start-ups	See SDG 9	
Digital municipality	See SDG 16	
Mobile working	See SDG 16	
SDG 5.2: Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation		
Crimes	See SDG 16	
Domestic violence against children and adolescents	See SDG 16	
Violent deaths	See SDG 16	
SDG 5.4: Recognise and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate		
Fathers benefiting from parental allowance	(Number of fathers receiving parental allowance / Total number of people receiving parental allowance) * 100	SDG indicators for municipalities 2022 (modified State Capital Stuttgart 2025)
Childcare	See SDG 4	
SDG 5.5: Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life		
Women in the Stuttgart Municipal Council	<i>Proportion of women:</i> (Number of women with a seat on the Municipal Council / Total seats on the Municipal Council) * 100 <i>Proportion of female candidates:</i> (Number of female candidates in Municipal Council Elections / Total number of female and male candidates) * 100	SDG indicators for municipalities
Women in municipal management positions	(Number of women in municipal management positions / Total number of employees in municipal management positions) * 100	Supplement State Capital Stuttgart 2021



Indicator	Calculation	Source of the Indicator
SDG 5.b: Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women		
Mobile working	See SDG 16	
SDG 6: Clean water and sanitation (ensure availability and sustainable management of water and sanitation for all)		
SDG 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all		
Wastewater treatment	See SDG 6	
Consumption of drinking water	See SDG 6	
Environmental protection investments in the manufacturing sector	See SDG 12	
SDG 6.2: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations		
Barrier-free or low-barrier sanitary facilities	<i>Barrier-free:</i> (Number of barrier-free public sanitary facilities / Total number of public sanitary facilities) * 100 <i>Low-barrier:</i> (Number of low-barrier public sanitary facilities / Total number of public sanitary facilities) * 100	Supplement State Capital Stuttgart 2023
Low-barrier housing	See SDG 10	
SDG 6.3: By 2030, improve water quality by reducing pollution, eliminating dumping and minimising the release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally		
Wastewater treatment	(Wastewater volume treated by denitrification and the elimination of phosphorus / Total wastewater volume) * 100	SDG indicators for municipalities
Organic farming	See SDG 2	
Environmental protection investments in the manufacturing sector	See SDG 12	



Indicator	Calculation	Source of the Indicator
SDG 6.4: By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity		
Consumption of drinking water	(Annual drinking water consumption (private households and small businesses) / Population) * days per year	SDG indicators for municipalities
SDG 6.6: By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes		
Consumption of drinking water	See SDG 6	
Renaturation measures of watercourses	See SDG 15	
Quality of running water	(Watercourses with at least quality class II in km / Total watercourses in km) * 100	SDG indicators for municipalities

SDG 7: Affordable and clean energy (ensure access to affordable, reliable, sustainable and modern energy for all)

SDG 7.2: By 2030, increase substantially the proportion of renewable energy in the global energy mix

Proportion of renewable energy in final energy consumption	(Final energy supply from renewable resources / Gross final energy consumption (climate-adjusted)) * 100	SDG indicators for municipalities (modified)
Power from photovoltaics	Installed photovoltaic power / Number of residents	Supplement State Capital Stuttgart 2021
Production of renewable energies in the city area	Annual heat and electricity generation from renewable energies in the city area (GWh/a)	Supplement State Capital Stuttgart 2019
Air quality	See SDG 3	
Quality of running water	See SDG 6	
Completed residential buildings with renewable energy	See SDG 11	
Environmental protection investments in the manufacturing sector	See SDG 12	



Indicator	Calculation	Source of the Indicator
SDG 7.3: By 2030, double the global rate of improvement in energy efficiency		
Final energy consumption	Consumption of final energy by industry, commerce, trade and services (climatically adjusted) / Number of employees subject to social security contributions	Supplement State Capital Stuttgart 2019
	Final energy consumption in the transport sector (climate-adjusted) / Number of residents	Supplement State Capital Stuttgart 2019
	Final energy consumption by private households (climate-adjusted) / Number of residents	Supplement State Capital Stuttgart 2019
	Final energy consumption for the city as a whole (climate-adjusted)	Supplement State Capital Stuttgart 2019
Energy productivity	Gross domestic product / Final energy consumption by the city as a whole	SDG indicators for municipalities
Passenger cars with electric drive	See SDG 11	
Environmental protection investments in the manufacturing sector	See SDG 12	
SDG 7.a: By 2030, promote investment in energy infrastructure and clean energy technology		
Charging station infrastructure	<p><i>Charging station infrastructure per 1000 residents:</i> (Number of publicly accessible standard and fast charging points starting at 3.7 kW / Number of residents) * 1,000</p> <p><i>Charging station infrastructure per 100 electric cars:</i> (Number of publicly accessible standard and fast charging points starting at 3.7 kW / Number of cars with electric drive (incl. plug-in hybrids)) * 100</p>	SDG indicators for municipalities 2022 (modified State Capital Stuttgart 2025)
Passenger cars with electric drive	See SDG 11	
Environmental protection investments in the manufacturing sector	See SDG 12	



Indicator	Calculation	Source of the Indicator
SDG 8: Decent work and economic growth (promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)		
SDG 8.1: Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 percent gross domestic product growth per annum in the least developed countries		
Gross domestic product	Gross domestic product / Population	SDG indicator, SDG indicators for municipalities
SDG 8.2: Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors		
Final energy consumption	See SDG 7	
Energy productivity	See SDG 7	
Start-ups	See SDG 9	
Highly qualified people	See SDG 9	
Digital municipality	See SDG 16	
SDG 8.4: Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10 Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead		
Consumption of drinking water	See SDG 6	
Amount of waste	See SDG 12	
EMAS-certified sites	See SDG 12	
Sustainable procurement: Proportion of sustainable procurement measures	See SDG 12	
	Index: See SDG 12	
Environmental protection investments in the manufacturing sector	See SDG 12	
Greenhouse gas emissions	See SDG 13	



Indicator	Calculation	Source of the Indicator
SDG 8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value		
Unemployment	<i>Total unemployment:</i> (Registered unemployed people / (Total civilian labour force + Registered unemployed people)) * 100	SDG indicators for municipalities
	<i>Unemployment among adolescents and young adults:</i> (Registered unemployed people under 25 / (Total civilian labour force under 25 + Registered unemployed people under 25)) * 100	SDG indicators for municipalities
Long-term unemployment	(Registered unemployed people with a duration of unemployment > 1 year / (Total civilian labour force + Registered unemployed people)) * 100	SDG indicators for municipalities
Employment rate	(Number of employees ssc at the place of residence aged between 15 and 64 years / Population (15–64 years)) * 100	SDG indicators for municipalities
People increasing earnings	(Number of universal basic income recipients who are in employment / Total number universal basic income recipients who are capable of gainful employment) * 100	SDG indicators for municipalities
Marginal employment	(Number of employees in marginal employment only / Number of employees subject to ssc + employees in marginal employment only) * 100	Supplement State Capital Stuttgart 2023
Perception of loneliness	See SDG 3	
School leavers by school-leaving qualification	See SDG 4	
Employment rates among women and men	See SDG 5	
Proportion of social housing in the overall rental market	See SDG 11	
Financial burden of housing costs	See SDG 11	
Trade tax rate	See SDG 16	



Indicator	Calculation	Source of the Indicator
SDG 8.6: By 2020, substantially reduce the proportion of youth not in employment, education or training		
Poverty among adolescents and young adults	See SDG 1	
School leavers from public and private general education by qualification	See SDG 4	
Vocational qualifications	See SDG 4	
Students	See SDG 4	
Unemployment among adolescents and young adults	See SDG 8	
SDG 8.8: Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment		
Occupational safety	<i>Accidents at work (total number of cases):</i> Number of notifiable accidents at work reported by industrial employers' liability insurance associations and public sector accident insurance institutions <i>Accidents at work (cases per 100 inhabitants aged between 15 and 64):</i> $\frac{\text{Number of notifiable accidents at work}}{\text{Population (15-64 years)}} \times 100$	Supplement State Capital Stuttgart 2025
SDG 8.9: By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products		
Accommodation places	<i>Accommodation places</i> Number of beds offered <i>Occupancy rate:</i> $\frac{\text{Number of beds used}}{\text{Total number of beds offered}} \times 100$	Supplement State Capital Stuttgart 2025
SDG 9: Industry, innovation and infrastructure (build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation)		
SDG 9.1: Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all		
Medical care	See SDG 3	



Indicator	Calculation	Source of the Indicator
Primary care close to home	See SDG 3	
Charging station infrastructure	See SDG 7	
Cycle paths	See SDG 11	
Allocation of accommodation with municipal occupancy rights to households with urgent housing needs	See SDG 11	
SDG 9.4: By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities		
Organic farming	See SDG 2	
Energy productivity	See SDG 7	
Charging station infrastructure	See SDG 7	
Heat and power generation from renewable energy in the urban area	See SDG 7	
Power from photovoltaics	See SDG 7	
Occupational safety	See SDG 8	
Bicycle traffic	See SDG 11	
Transport means for getting to work	See SDG 11	
Passenger cars with electric drive	See SDG 11	
EMAS-certified sites	See SDG 12	
Final energy consumption: trade, commerce, services and industry	See SDG 12	
Sustainable procurement: Share of sustainable procurement programmes	See SDG 12	



Indicator	Calculation	Source of the Indicator
Sustainable procurement: Sustainable procurement index	See SDG 12	
Environmental protection investments in the manufacturing sector	See SDG 12	
Greenhouse gas emissions	See SDG 13	
Soil index	See SDG 15	
Biodiversity	See SDG 15	
Digital municipality	See SDG 16	
SDG 9.5: Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending		
Start-ups	<i>Total start-ups (commercial enterprises):</i> (Number of commercial start-ups / Population) * 1,000	SDG indicators for municipalities
	<i>Proportion of female start-up founders among all founders:</i> (Number of female commercial start-up founders / Total number of commercial start-up founders) * 100	Supplement State Capital Stuttgart 2025
Start-up volume	(Number of start-ups with genuine economic activity / Population) * 1,000	Supplement State Capital Stuttgart 2023
Highly qualified people	(Number of employees with an academic vocational qualification at the place of work / Total number of employees subject to social security contributions at the place of work) * 100	SDG indicators for municipalities
Innovation index	The index is calculated from the values of six standardised individual indicators. Further information is available on the website of Baden-Württemberg the State Statistical Office	State Statistical Office Baden-Württemberg, Supplement State Capital Stuttgart 2023
Research and development resources in the economy	<i>R&D employees in the economy working in Stuttgart:</i> (R&D employees in the economic sector of Stuttgart / Number of employees subject to social security contributions) * 100	State Statistical Office Baden-Württemberg, Supplement State Capital Stuttgart 2023
	<i>R&D expenditure of the economy in Stuttgart:</i> Internal R&D expenditure in the economic sector of Stuttgart in billions of euro	State Statistical Office Baden-Württemberg, Supplement State Capital Stuttgart 2023



Indicator	Calculation	Source of the Indicator
SDG 9.c-1: Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020		
Broadband coverage	<p><i>Broadband coverage for private households:</i> (Number of households with broadband connection > 50 Mbit/s / Total number of households) * 100</p> <p><i>Fibre optical coverage for private households:</i> (Number of households with a fibre optical connection FFTB/H \geq 1000 Mbit/s / Total number of households) * 100</p>	Supplement State Capital Stuttgart 2023
Mobile working	See SDG 16	

SDG 10: Reduced inequalities (reduce inequality within and among countries)

SDG 10.2: By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, gender, disability, race, ethnicity, origin, religion or economic or other status

Relative poverty rate among recipients of benefits without German citizenship	$\frac{((\text{Number of people entitled to benefits under SGB II and SGB XII without German citizenship} + \text{benefit recipients under the Asylum Seekers Benefits Act}) / \text{Total number of people without German citizenship})}{(\text{Number of people entitled to benefits under SGB II and SGB XII with German citizenship} / \text{Total number of people with German citizenship})}$	SDG indicators for municipalities (modified State Capital Stuttgart 2021)
Relative employment rate among people without German citizenship	$\frac{(\text{Number of foreign employees subject to social security contributions (ssc) at place of residence (15 to 64 years)} / \text{Total number of persons without German citizenship (15 to 64 years)})}{(\text{Total number of employees subject to social security contributions at place of residence (15 to 64 years)} / \text{Population (15 to 64 years)})} * 100$	SDG indicators for municipalities
Relation of the median salary according to citizenship	$(\text{Median salary of full-time employees subject to social security contributions without German citizenship} / \text{Median salary of full-time employees subject to social security contributions with German citizenship}) * 100$	Supplement State Capital Stuttgart 2023
Meeting points for citizens	$(\text{Number of meeting points for the elderly, district community centres, neighbourhood and family centres} / \text{Population}) * 100,000$	SDG indicators for municipalities (SDG 16; modified State Capital Stuttgart 2021)



Indicator	Calculation	Source of the Indicator
Low-barrier housing	(Number of low-barrier dwellings in Stuttgart / Total number of private households) * 100	Supplement State Capital Stuttgart 2023
Poverty in old age	See SDG 1	
Poverty among single parents	See SDG 1	
Poverty among adolescents and young adults	See SDG 1	
Child poverty	See SDG 1	
Receiving minimum social security benefits	See SDG 1	
Children with overweight	See SDG 2	
Perception of loneliness	See SDG 3	
Dental health in children	See SDG 3	
School leavers by school-leaving qualification	See SDG 4	
Employment rates among women and men	See SDG 5	
Proportion of social housing in the overall rental market	See SDG 11	
Financial burden of housing costs	See SDG 11	
SDG 10.3: Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard		
Poverty among single parents	See SDG 1	
Vaccination coverage	See SDG 3	
Infant mortality	See SDG 3	
Premature mortality	See SDG 3	
School leavers by school-leaving qualification	See SDG 4	
Proportion of inclusively educated pupils	See SDG 4	



Indicator	Calculation	Source of the Indicator
Vocational qualifications	See SDG 4	
Students	See SDG 4	
Employment rates: Part-time employment rates among women and men	See SDG 5	
Relative poverty rate among women	See SDG 5	
Ratio of median income for women and men	See SDG 5	
Occupational safety	See SDG 8	
Proportion of social housing in the overall rental market	See SDG 11	
Financial burden of housing costs	See SDG 11	
SDG 10.4: Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality		
Income distribution (low, medium, high)	<p><i>Low-income households:</i> (Number of households with an equivalent income of less than 60 percent / Total number of households) * 100</p> <p><i>Medium income households:</i> (Number of households with an equivalent income of between 60 to 150 percent / Total number of households) * 100</p> <p><i>High-income households:</i> (Number of households with an equivalent income of over 150 percent / Total number of households) * 100</p>	SDG indicators for municipalities 2020 (modified State Capital Stuttgart 2023)
SDG 10.7: Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies		
Relative poverty rate among recipients of benefits without German citizenship	See SDG 10	



Indicator	Calculation	Source of the Indicator
Relative employment rate among people without German citizenship	See <i>SDG 10</i>	
Relation of the median salary according to citizenship or qualification level	See <i>SDG 10</i>	

SDG 11: Sustainable cities and communities (make cities and human settlements inclusive, safe, resilient and sustainable)

SDG 11.1: By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums

Asking rental rates	Asking rents (net, excluding utilities) per m ² for initial renting and re-renting	SDG indicators for municipalities
Financial burden of housing costs	(Number of households with gross rent, excluding utilities (basic rent and "cold" operating costs) > 40 % of net household income / Total number of rental households) * 100	SDG indicators for municipalities 2025
Proportion of social housing in the overall rental market	(Number of social housing units / Overall rental market) * 100	Supplement State Capital Stuttgart 2025
Allocation of accommodation with municipal occupancy rights to households with urgent housing needs	<i>Allocation of units with municipal occupancy rights (quota):</i> (Number of households placed / Total number of households in the municipal registration file) * 100	Supplement State Capital Stuttgart 2019
	<i>Waiting list:</i> Average time in the registration file for a unit – by household size	Supplement State Capital Stuttgart 2019 (modified State Capital Stuttgart 2025)
Homelessness	See <i>SDG 1</i>	
Medical care	See <i>SDG 3</i>	
Places in nursing homes	See <i>SDG 3</i>	
Primary care close to home	See <i>SDG 3</i>	
Low-barrier housing	See <i>SDG 10</i>	



Indicator	Calculation	Source of the Indicator
SDG 11.2: By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons		
Transport means for getting to work (including walking)	(Number of people travelling to work or training on foot, by bike, e-bike or public transport / Total number of people travelling to work or training) * 100	SDG indicators for municipalities (modified State Capital Stuttgart 2021)
Car density	(Number of private cars / Population over 18) * 1,000	SDG indicators for municipalities 2020
Bicycle traffic	(Number of counted bike trips / Population) * 100	Supplement State Capital Stuttgart 2021
Passenger cars with electric drive	(Number of registered passenger cars with electric drive / Total number of registered passenger cars) * 100	SDG indicators for municipalities 2020
Cycle paths (bicycle traffic facilities)	Total kilometres of cycle paths	Supplement State Capital Stuttgart 2025
Accessibility of public transport	(Number of accessible bus stops / Total number of bus stops) * 100	SDG indicators for municipalities (modified State Capital Stuttgart 2021)
Charging station infrastructure	See SDG 7	
SDG 11.3: By 2030, enhance inclusive and sustainable urbanisation and capacity for participatory, integrated and sustainable human settlement planning and management in all countries		
Land use	<i>Annual land use:</i> Residential and transport areas in hectares – Residential and transport areas for the previous year in hectares	SDG indicators for municipalities
Index of District Advisory Board commitment in the context of the Sustainable Development Goals (SDGs)	(Number of criteria met within the municipality (answers with yes) / Total number of criteria to be evaluated (9)) * 100	Supplement State Capital Stuttgart 2025
Urban physical activity spaces	See SDG 3	
Perception of loneliness	See SDG 3	
Culture budget	See SDG 4	
Media collection of the Stuttgart City Library	See SDG 4	



Indicator	Calculation	Source of the Indicator
Soil index	See SDG 15	
Biodiversity	See SDG 15	
Conservation areas	See SDG 15	
Digital municipality	See SDG 16	
Informal citizen participation	See SDG 16	
Mobile working	See SDG 16	
Cash surplus / deficit for long-term fulfilment of tasks	See SDG 16	
SDG 11.5: By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations		
"Municipal Climate Adaptation" index	See SDG 13	
SDG 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management		
Noise pollution	See SDG 3	
Air quality	See SDG 3	
Occupational safety	See SDG 8	
Accommodation places	See SDG 8	
Amount of waste	See SDG 12	
Environmental protection investments in the manufacturing sector	See SDG 12	
Greenhouse gas emissions – industry, commerce, trade and services, transport and private households	See SDG 13	



Indicator	Calculation	Source of the Indicator
SDG 11.7: By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities		
Recreational areas	Green areas and recreational spaces / Population	SDG indicators for municipalities
Perception of loneliness	See SDG 3	
Barrier-free or low-barrier sanitary facilities	See SDG 6	
Accessibility of public transport	See SDG 11	
Recreational areas	See SDG 11	
Trees in public spaces	See SDG 13	
Crimes	See SDG 16	
SDG 11.b: By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels		
Completed residential buildings with renewable energy	(Number of completed residential buildings with renewable primary heating energy / Total number of completed residential buildings) * 100	SDG indicators for municipalities 2020
Energy productivity	See SDG 7	
"Municipal Climate Adaptation" index	See SDG 13	

SDG 12: Responsible consumption and production (ensure sustainable consumption and production patterns)

SDG 12.1: Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries

Fair trade schools	(Number of fair trade schools / Total number of schools) * 100	SDG indicators for municipalities 2020
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Indicator	Calculation	Source of the Indicator
SDG 12.2: By 2030, achieve sustainable management and efficient use of natural resources		
Nitrogen surplus	See <i>SDG 2</i>	
Noise pollution	See <i>SDG 3</i>	
Air quality	See <i>SDG 3</i>	
Wastewater treatment	See <i>SDG 6</i>	
Consumption of drinking water	See <i>SDG 6</i>	
Energy productivity	See <i>SDG 7</i>	
Power from photovoltaics	See <i>SDG 7</i>	
Heat and power generation from renewable energy in the urban area	See <i>SDG 7</i>	
Accommodation places	See <i>SDG 8</i>	
Completed residential buildings with renewable energy	See <i>SDG 11</i>	
Environmental protection investments in the manufacturing sector	See <i>SDG 12</i>	
Greenhouse gas emissions	See <i>SDG 13</i>	
Biodiversity	See <i>SDG 15</i>	
SDG 12.3: By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses		
Organic farming	See <i>SDG 2</i>	
Amount of waste: Proportion of recyclable material	See <i>SDG 12</i>	
Environmental protection investments in the manufacturing sector	See <i>SDG 12</i>	



Indicator	Calculation	Source of the Indicator
SDG 12.4: By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment		
Organic farming	See SDG 2	
Nitrogen surplus	See SDG 2	
Air quality	See SDG 3	
Wastewater treatment	See SDG 6	
Quality of running water	See SDG 6	
Occupational safety	See SDG 8	
Sustainable procurement: Share of sustainable procurement programmes	See SDG 12	
Environmental protection investments in the manufacturing sector	See SDG 12	
Greenhouse gas emissions	See SDG 13	
Biodiversity	See SDG 15	
Soil index	See SDG 15	
SDG 12.5: By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse		
Amount of waste	<i>Total:</i> Total amount of waste in kg / Population	SDG indicators for municipalities
	<i>Proportion of recyclable material:</i> (Amount of recyclable material, as well as green and organic waste in kg / Total amount of waste in kg) * 100	Supplement State Capital Stuttgart 2019
Environmental protection investments in the manufacturing sector	See SDG 12	



Indicator	Calculation	Source of the Indicator
SDG 12.6: Encourage companies, especially large and transnational companies, to adopt sustainable practices and integrate sustainability information into their reporting cycle		
EMAS-certified sites	Number of EMAS-certified sites	SDG indicators for municipalities
Environmental protection investments in the manufacturing sector	Environmental protection investment in the manufacturing sector by environmental area in millions of euro	Supplement State Capital Stuttgart 2025
SDG 12.7: Promote public procurement practices that are sustainable, in accordance with national policies and priorities		
Sustainable procurement	$(\text{Number of sustainable procurement procedures} / \text{Total number of procurement procedures}) * 100$	SDG indicators for municipalities 2020
	$(\text{Number of measures for sustainable procurement implemented in the municipality (answers with yes)} / \text{Total number of measures under review (10)}) * 100$	SDG indicators for municipalities 2020
SDG 12.8: By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature		
Educational programmes for sustainable development	See SDG 4	

SDG 13: Climate action (take urgent action to combat climate change and its impacts)

SDG 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

Trees in public spaces	$\text{Number of trees in public spaces} / \text{Total area of public space in hectares}$	Supplement State Capital Stuttgart 2019
"Municipal Climate Adaptation" index	$(\text{Number of criteria met within the municipality (answers with yes)} / \text{Total number of criteria to be evaluated (10)}) * 100$	Additional indicator proposal, SDG indicators for municipalities 2020
Forest area	$(\text{Forest area in Stuttgart} / \text{Total area of Stuttgart}) * 100$	Additional indicator proposal, SDG indicators for municipalities
Land use	See SDG 11	
Recreational areas	See SDG 11	



Indicator	Calculation	Source of the Indicator
SDG 13.2: Integrate climate change measures into national policies, strategies and planning		
Greenhouse gas emissions	CO ₂ equivalents of emissions from <i>trade, commerce, services and industry</i> / Employees in trade, commerce, services and industry subject to social security contributions	SDG indicators for municipalities (modified State Capital Stuttgart 2019)
	CO ₂ equivalent of emissions from <i>traffic</i> / Population	SDG indicators for municipalities (modified State Capital Stuttgart 2019)
	CO ₂ equivalent of emissions from <i>private households</i> / Population	SDG indicators for municipalities (modified State Capital Stuttgart 2019)
	<i>Entire city:</i> CO ₂ equivalent of emissions from all sectors	SDG indicators for municipalities (modified State Capital Stuttgart 2019)
Organic farming	See SDG 2	
Proportion of renewable energy in final energy consumption	See SDG 7	
Energy productivity	See SDG 7	
Accommodation places	See SDG 8	
Bicycle traffic	See SDG 11	
Cycle paths	See SDG 11	
Completed residential buildings with renewable energy	See SDG 11	
Passenger cars with electric drive	See SDG 11	
Final energy consumption industry, commerce, trade and services traffic and private households	See SDG 12	
Environmental protection investments in the manufacturing sector	See SDG 12	



Indicator	Calculation	Source of the Indicator
Soil index	<i>See SDG 15</i>	
Biodiversity	<i>See SDG 15</i>	
SDG 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning		
Educational programmes for sustainable development	<i>See SDG 4</i>	

SDG 14: Life below water (conserve and sustainably use the oceans, seas and marine resources for sustainable development)

SDG 14.1: By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

Wastewater treatment	<i>See SDG 6</i>	
Quality of running water	<i>See SDG 6</i>	
Environmental protection investments in the manufacturing sector	<i>See SDG 12</i>	
Greenhouse gas emissions – industry, commerce, trade and services	<i>See SDG 13</i>	
Greenhouse gas emissions – private households	<i>See SDG 13</i>	
Greenhouse gas emissions – traffic	<i>See SDG 13</i>	
Renaturation measures of watercourses	<i>See SDG 15</i>	

SDG 14.c: Enhance the conservation and sustainable use of the oceans and their resources

Quality of running water	<i>See SDG 6</i>	
Sustainable procurement: Share of sustainable procurement programmes	<i>See SDG 12</i>	



Indicator	Calculation	Source of the Indicator
Sustainable procurement: Sustainable procurement index	See SDG 12	
Biodiversity	See SDG 15	

SDG 15: Live on land (protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss)

SDG 15.1: By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

Renaturation measures of watercourses	(Length of renaturalised watercourses (category II) / Length of watercourses originally engineered and canalised (category II)) * 100	Supplement State Capital Stuttgart 2019
Organic farming	See SDG 2	
Nitrogen surplus	See SDG 2	
Quality of running water	See SDG 6	
Proportion of renewable energy in final energy consumption	See SDG 7	
Land use	See SDG 11	
Soil index	See SDG 15	

SDG 15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

Air quality	See SDG 3	
Trees in public spaces	See SDG 13	
Greenhouse gas emissions	See SDG 13	
Forest area	See SDG 13	



Indicator	Calculation	Source of the Indicator
SDG 15.3: By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world		
Soil index	Land area in hectares * Quality level in figure/hectares	Supplement State Capital Stuttgart 2019
Organic farming	See SDG 2	
Nitrogen surplus	See SDG 2	
SDG 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species		
Biodiversity	Biodiversity A: Wild bee species by endangerment status according to the Red List Baden-Württemberg	Key indicator, SDG indicators for municipalities (modified State Capital Stuttgart 2019)
	Biodiversity B: Locust species by endangerment status according to the Red List Baden-Württemberg	
	Biodiversity C: Amphibian species by endangerment status according to the Red List Baden-Württemberg	
Conservation areas	(Total conservation areas in Stuttgart / Total area of Stuttgart) * 100	SDG indicators for municipalities 2018
Noise pollution	See SDG 3	
Educational programmes for sustainable development	See SDG 4	
Recreational areas	See SDG 11	
Environmental protection investments in the manufacturing sector	See SDG 12	
SDG 15.9: By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts		
All poverty indicators	See SDG 1	



Indicator	Calculation	Source of the Indicator
SDG 15.a: Mobilise and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems		
Environmental protection investments in the manufacturing sector	See SDG 12	
Biodiversity	See SDG 15	
Conservation areas	See SDG 15	
SDG 15.b: Mobilise significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation		
Environmental protection investments in the manufacturing sector	See SDG 12	
Trees in public spaces	See SDG 13	
Forest area	See SDG 13	

SDG 16: Peace, justice and strong institutions (promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels)

SDG 16.1: Significantly reduce all forms of violence and related death rates everywhere

Violent deaths	(Number of violent deaths per year / Population) * 100,000	Supplement State Capital Stuttgart 2025
Premature mortality	See SDG 3	

SDG 16.2: Protect children against abuse, exploitation, trafficking and violence

Domestic violence against children and adolescents	(Number of reported cases of domestic violence against minors per year / Population (under 18)) * 1,000	Supplement State Capital Stuttgart 2025
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SDG 16.4: By 2030, combat all forms of organised crime

Crimes	(Number of crimes reported to the police / Population) * 1,000	SDG indicators for municipalities
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Indicator	Calculation	Source of the Indicator
SDG 16.5: Substantially reduce corruption and bribery in all their forms		
"Corruption prevention" index	(Number of criteria met within the municipality (answers with yes) / Total number of criteria to be evaluated (11)) * 100	SDG indicators for municipalities 2022
SDG 16.6: Develop effective, accountable and transparent institutions at all levels		
Mobile working	(Mobile devices with VPN at State Capital Stuttgart / Number of employees with e-mail address) * 100	Supplement State Capital Stuttgart 2021
Total municipal debt	Debt of the municipality in all partial budgets / Population	SDG indicators for municipalities
Trade tax rate	(Trade tax revenue minus trade tax levy / Ordinary income) * 100	Supplement State Capital Stuttgart 2021
Cash surplus / deficit	Balance of cash inflows and outflows from ongoing administrative activities	Supplement State Capital Stuttgart 2021
"Digital municipality" index	(Number of criteria met within the municipality (answers with yes) / Total number of criteria to be evaluated (16)) * 100	SDG indicators for municipalities 2020, New Urban Agenda (NUA) indicator catalogue
Gross domestic product	See SDG 8	
Proportion of social housing in the overall rental market	See SDG 11	
Financial burden of housing costs	See SDG 11	
Index of District Advisory Board commitment in the context of the Sustainable Development Goals (SDGs)	See SDG 11	
SDG 16.7: Ensure responsive, inclusive, participatory and representative decision-making at all levels		
Participation of adolescents	<i>Districts with youth councils:</i> (Number of districts with a youth council) / (Total number of districts) * 100	SDG indicators for municipalities (modified)
	<i>Participation in youth council elections:</i> (Number of voters in the youth council election) / (Total number of eligible voters in the youth council election) * 100	SDG indicators for municipalities (modified)



Indicator	Calculation	Source of the Indicator
Registered users at "Stuttgart – meine Stadt"	(Number of registered users on www.stuttgart-meine-stadt.de / Population (over 16 years)) * 100	Supplement State Capital Stuttgart 2021
Stuttgart participatory budgeting	<i>Participation quota:</i> (Number of participants in Stuttgart's participatory budgeting / Population) * 100 <i>Evaluations:</i> Number of positive and negative evaluations / Number of participants	Supplement State Capital Stuttgart 2021
Satisfaction with the work of the city administration / citizens' offices	(Number of satisfied and very satisfied citizens / Population) * 100	Supplement State Capital Stuttgart 2023
Level of organisation in sports	See SDG 3	
Perception of loneliness	See SDG 3	
Women in management positions	See SDG 5	
Women in the Stuttgart Municipal Council	See SDG 5	
Meeting points for citizens	See SDG 10	
SDG 16.10: Ensure public access to information		
Online administration services	Number of administration services offered online	Supplement State Capital Stuttgart 2023
Digital municipality	See SDG 16	
SDG 16.b: Promote and enforce non-discriminatory laws and policies for sustainable development		
Barrier-free or low-barrier sanitary facilities	See SDG 6	
Low-barrier housing	See SDG 10	
Relative poverty rate among recipients of benefits without German citizenship	See SDG 10	



Indicator	Calculation	Source of the Indicator
Relative employment rate among people without German citizenship	See SDG 10	
Relation of the median salary according to citizenship or qualification level	See SDG 10	
Accessibility of public transport	See SDG 11	

SDG 17: Partnerships for the Goals (strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development)

SDG 17.6: Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge-sharing on mutually agreed terms

Students from the Global South	(Number of students from developing countries (excluding LDCs); number of students from LDCs; number of foreign students (excluding LDCs and developing countries) / Total number of students at Stuttgart colleges and universities) * 100	Statistics portal, Supplement State Capital Stuttgart 2023
SDG 17.16: Enhance the Global Partnership for Sustainable Development, complemented by multi-stakeholder partnerships that mobilise and share knowledge, expertise, technology and financial resources, to support the achievement of the Sustainable Development Goals in all countries, in particular developing countries		
Twin towns in the Global South	(Funds for cooperation with twin towns in the Global South / Free project budget of the Department for International Relations) * 100	Supplement State Capital Stuttgart 2019
Projects and counselling services	Number of advisory and support services carried out in the core area of the Department for International Relations	Supplement State Capital Stuttgart 2021
At-risk-of-poverty rate	See SDG 1	
Relative poverty rate among recipients of benefits without German citizenship	See SDG 10	



Indicator	Calculation	Source of the Indicator
Sustainable procurement: Share of sustainable procurement programmes	<i>See SDG 12</i>	
Sustainable procurement: Sustainable procurement index	<i>See SDG 12</i>	
SDG 17.17: Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships		
Educational programmes for sustainable development	<i>See SDG 4</i>	
Fair trade schools	<i>See SDG 12</i>	
Twin towns in the Global South	<i>See SDG 17</i>	
Projects and counselling services	<i>See SDG 17</i>	
SDG 17.19: By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product		
Gross domestic product	<i>See SDG 8</i>	



Appendix III – Catalogue of additional indicator proposals

As part of updating the last SDG Voluntary Local Reviews the participants also proposed and discussed indicators that were not included in the current Voluntary Local Review. These are listed below by SDG and are intended to provide further suggestions for mapping the SDGs for future Voluntary Local Review of the State Capital and the further development of SDG indicators for municipalities as a whole.

SDG	Target	Discussed indicator (year)
SDG 1: End poverty in all its forms everywhere	1.3	Deprivation index (2021)
	1.3	Rate of recipients of basic social security benefits under SGB II (2025)
	1.3	Total benefits for accommodation from the job centre in the reference year (change in need of assistance) (2025)
	1.4	Ownership quota (2025)
	1.4	People in Stuttgart who do not have a computer/internet connection, by age (2025)
SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	2.1	Number of people who shop at the Tafel Stuttgart per day/year (2025)
	2.4	Proportion of organic products in canteens (2025)
SDG 3: Ensure healthy lives and promote well-being for all at all ages	3.3	HIV incidence (2025)
	3.4	Swimming proficiency (2023)
	3.4	Intercultural integration of older migrants (2023)
	3.4	Death caused by heat (2025)
	3.6	Safe cycling (2023)
	3.11	Pregnancy rate among women aged 15-19 years (2025)
	3.a	Proportion of smokers (2023)
	3.d	Coronavirus key figures: Wastewater monitoring (2025)



SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

- 4.2** Lunch provision rate for children in all types of nursery schools (2025)
- 4.2** Children with parenting support (2021)
- 4.3** Early School Leavers (2021)
- 4.3** Adult education (2021)
- 4.6** Illiteracy rate among the population (2025)
- 4.7** Educational programmes in nature (with a practical component) (2025)
- 4.7** Training in children's rights (2023)
- 4.a** Proportion of accessible school buildings related to the total number of school buildings (accessible school buildings, including learning environment) (2021)
- 4.a** Proportion of fully-networked municipal school buildings related to the total number of all municipal school buildings (2021)
- 4.a** Proportion of school buildings with voice alarm systems related to the total number of municipal school buildings (safe school buildings) (2021)

SDG 5: Achieve gender equality and empower all women and girls

- 5.1** Proportion of women in workplace health promotion programmes (2023)
- 5.1** Quota of single parents with child(ren) under 18 (2025)
- 5.2** Number of murdered women, victims of gender-based violence (2025)
- 5.2** Number of counselling sessions regarding domestic violence (2025)

SDG 6: Ensure availability and sustainable management of water and sanitation for all

- 6.3** Nitrate in groundwater (2023)
- 6.3** Phosphorus in groundwater (2023)
- 6.4** Mains water consumed by municipal services (2025)
- 6.4** Urban rainwater utilisation (number of cisterns at cemeteries, etc.) (2025)
- 6.6** Phosphorus in groundwater (2025)



SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all	7.1	Energy costs (2023)
	7.a.1	Households connected to heating networks (2025)
	7.a.2	Expense for the municipal development of renewable energies (2023)
SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	8.2	Ability to work (2023)
	8.5	Wage levels (2023)
	8.8	Number of work-related illnesses (2025)
SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation	9.1	Start-ups – immigrant economy (2023)
	9.5	Patent volume (2023)
	9.5	Scientific staff (2023)
SDG 10: Reduce inequality within and among countries	10.2	Immigrant economy (2023)
	10.3	Qualification level according to migration background (2025)
SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable	11.b	Quota of energy-efficient refurbishment of buildings (2021)
	11.b	Heating renovation programme (number of heating systems funded in the context of the programme) (2021)
	11.2	Digital public transport services (2021)
	11.2	Operational mobility management (Implementation and significance in the company, possibly through a position anchored in the staffing plan) (2025)
	11.2	Carsharing passenger cars (2021)
	11.2	Company charging points (2021)
	11.2	Total length of footpath network (Length of dedicated footpath network) (2021)
	11.2	Main pedestrian routes (number and length) (2021)
	11.6	Amount of waste per capita (2025)
	11.6	Ventilation and greening of neighbourhoods (2021)



	11.7	Playgrounds and physical activity spaces for children, adolescents and families (by number of residents in age groups / number of families) (2021)
	11.7	Recreation and meeting facilities for children, adolescents and families (by number of residents in age groups / number of families) (2021)
SDG 12: Ensure sustainable consumption and production patterns	12.3	Food used by the Tafel Stuttgart that comes from food waste (2025)
	12.3	Canteens - discarded food in kg (2025)
	12.3	Foodsharing initiatives (2025)
	12.5	Recycling quota (2021)
	12.6	Locations with accounting by welfare economics (2021)
	12.6	Companies reporting on their sustainability performance (2023)
SDG 13: Climate action (take urgent action to combat climate change and its impacts)	13.1	Public green spaces (2021)
	13.1	Surface area of the water surfaces of decorative fountains (2025)
	13.1	Number of multifunctional fountains in schools, open schoolyards (2025)
	13.1	Retention areas (2023)
	13.1	Permeable areas (2023)
	13.1	Green roofs (2023)
	13.2	Companies with greenhouse gas balancing (2023)
	13.3	Workplace health promotion (WHP) measures: sustainable orientation index (2023)
	13.3	Staff in municipal climate protection (2023)
SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development	14.1	Export of plastic waste (2023)
	14.1	Nutrient contamination in watercourses (2023)
	14.c.1	Certified fish in the canteen or proportion of endangered edible fish species (2023)



SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	15.1	Degree of soil sealing (2023)
	15.1	Use of pesticides (2023)
	15.2	Forest condition (2023)
	15.5	Biodiversity of birds (2023)
	15.5	Landscape quality (2023)
	15.5	Primary/secondary vegetation (2023)
	15.8	Invasive species (2023)
SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	16.7	Children in young people's homes (2021)
	16.7	"People with a migration background in the city, municipal or county council" indicator (2021)
	16.7	Intercultural awareness in the city administration – staff recruitment, Stuttgart by profession and multilingualism (2023)
	16.7	Council of religions (2023)
SDG 17: Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development	17.6	Foreign direct investment, official development assistance and South-South cooperation in relation to gross national income (2025)
	17.16	Projects involving migrant organisations (2021)

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