

# Stuttgart – a Livable City

The global 2030 Agenda at a local level

3<sup>rd</sup> Voluntary Local Review

# 2023



STUTTGART





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## The global 2030 Agenda at a local level

3<sup>rd</sup> Voluntary Local Review

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## Foreword

### For a livable Stuttgart in tomorrow's world!

All over the world, cities are faced with major transformation tasks to address structural change, climate change and social issues, along with current crisis management of the consequences of the COVID-19 pandemic and the Ukraine war. Stuttgart has realised the need and the opportunity to understand our local actions in a global context.

In 2022, at mid-term of their 2030 Agenda, the United Nations (UN) announced the Decade of Action to implement the 17 Sustainable Development Goals, SDGs. As early as 2018, the Municipal Council in Stuttgart passed the resolution to actively implement the 2030 Agenda of the UN. The representative citizen survey among local residents showed, with an approval of nearly 90 per cent, just how important or even very important sustainability is for the urban society.

Within the administration, all specialist units of the State Capital Stuttgart make a contribution in anchoring the 2030 Agenda. This process is also promoted by the permanent establishment of a coordinating position for International Sustainability and Development, as well as a cross-sectoral steering group in the Administrative Coordination, Communication and International Relations Division.

The present, already third citywide Voluntary Local Review (VLR) "Stuttgart – a Livable City" plays a special role to cover and accompany developments in Stuttgart. This review, which is based on indicators for the depiction of the international sustainability goals, will also be presented to the High-Level Political Forum on Sustainable Development (HLPF) of the UN via the Association of German Cities and Towns. With the review, Stuttgart is making a methodical contribution to the nationwide project "SDG Indicators for Municipalities", as well as to the international learning dialogue to anchor the 2030 Agenda.

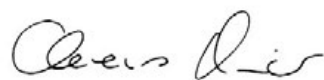
The VLR is drawn up under the auspices of the Department for International Relations and the Statistics Office in cooperation with all specialist units and will be adapted on a constant basis to meet the demands of the State Capital. The results, for instance, are used for reporting at the Stuttgarter Armutskonferenz [Stuttgart Poverty Conference], and the overall city indicators are also made tangible for the district levels via co-creative measures.

Anchoring the 2030 Agenda of the UN at a local level is a dynamic process. There is no "blueprint" for it. Thanks to the committed engagement of all specialist units and together with diverse partners, we have been interlinking goals, indicators and budget planning increasingly and improving them constantly.

The developments, target conflicts and correlations depicted in "Stuttgart – a Livable City" create a databased fundament for further strategic orientation and impact-oriented shaping of local transformation processes.

We would like to thank all parties involved and invite them to use this well-founded information for their actions.

For a livable Stuttgart in tomorrow's world!



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## Structure and explanation

In the following chapters, the developments in the State Capital Stuttgart are presented as a time series for the selected indicators for the respective SDGs.

The structure of the individual SDG chapters is as follows:

- Short formulation of the respective SDG,
- Overview of the relevant topics according to the nationwide "SDG Indicators for Municipalities" project,
- Presentation of the targets relevant to German municipalities plus description, which targets are covered by indicators,
- Depiction and description of the development of the respective indicator,
- Classification plus definition and calculation basis, partly with methodical notes,
- Presentation of correlations with other SDGs and references to other indicators that are relevant to the respective SDG and explained under other SDGs,
- Presentation of selected new practical examples of the State Capital Stuttgart drawn up by the specialist units.

As a rule, the time series of the indicators covers the years 2010 to 2021 or 2022, depending on the availability of data. In the present VLR, the latest updated data is presented, which was available at the editorial deadline. New 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 is provided by the Statistics Office and other offices and departments of the State Capital Stuttgart. In some cases, data was 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 2021, insofar as the indicators were adopted. Definitions and calculation formulae originating from the nationwide project "SDG Indicators for Municipalities"<sup>1</sup> were partly adapted against the background of the Stuttgart context.<sup>2</sup> Appropriate definitions and calculation bases were formulated for the indicators contributed by the State Capital itself.

Overall, for each indicator an even stronger link to the targets<sup>3</sup> has been established. These are listed in a short description in the margin of the indicator. Some indicators can be assigned to several targets. This is presented in the Overview of Indicators in Appendix II. At first sight, some of the targets do not always seem custom-fit. This is due to the fact that global goals have been broken down to fit the municipal context in Germany. The targets relevant to German municipalities (with some exceptions) were adopted from the nationwide "SDG Indicators for Municipalities" project and presented in a shortened version. If targets are not covered by indicators, this is in most cases due to the insufficient availability of indicators or data.

As a new element, additional **information** is presented, each highlighted in colours, with the aim to provide additional context information on the individual indicators from scientific studies or other relevant literature (such as results from the latest citizen survey among the local residents).

i

The exact methodical procedure and the data basis are explained in more detail in the final chapter "Overall process and perspectives", as is the anchoring of international sustainability goals in Stuttgart.

Overviews of the 17 UN Sustainable Development Goals 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 the Appendices I, II and III.

A list of figures follows the bibliography.



The responsibility for practical examples lies with the specialist units or offices. Therefore, there may be differences in the presentation and the texts. The practical examples from previous VLRs are still relevant and can be found at the following link:

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



For further information on the anchoring of the 2030 Agenda in Stuttgart go to: [www.stuttgart.de/global-und-nachhaltig](https://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 quality education and promote lifelong learning opportunities for all



**SDG 5 – Gender Equality**  
Achieve gender equality and empower all women and girls to self-determination



**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 sustainable 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 sustainably use the oceans, seas and marine resources for sustainable development



**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



**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 and are already covered in the VLR by indicators:



**1.2** Reduce poverty at least by half



**1.3** Implement social protection systems and programmes for all



**1.4** The same 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** Strengthening resilience towards ecological, economic and social catastrophes



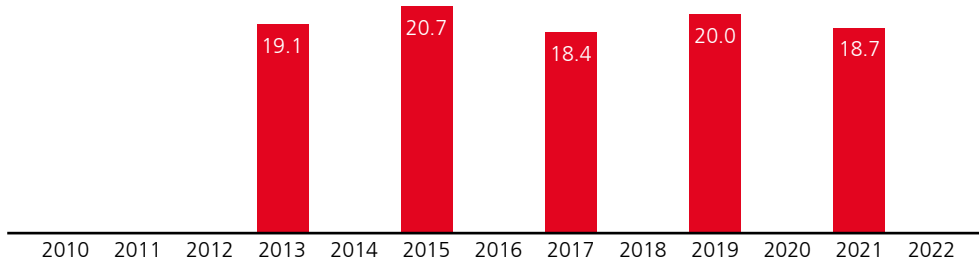
**1.b** Establishing a political framework that is oriented to fighting poverty and to gender equality





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

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



“Reduce poverty at least by half”  
(Target 1.2)

Sources: State Capital Stuttgart, Statistics Office (citizen surveys)

Since the beginning of data collection in 2013, the number of households with an income of less than 60 per cent of the median of the equivalised income of Stuttgart’s private households has remained relatively constant between 18 and 21 per cent.

**Classification / Definition**

This new indicator was introduced in 2023 and is to be continually updated. It describes the number of households with an income of less than 60 per cent of the median of the equivalised income of households in Stuttgart. By definition, people with an income lower than the 60-per cent threshold are affected by relative poverty. So, the indicator makes a direct contribution to target 1.2 that, according to the national definition, focuses on the reduction of the number of people living in poverty.

For the calculation of the at-risk-of-poverty rate, the income information is related to the household size and weighted in accordance with the age of its members. Weighting is based on the scale of the Organisation for Economic Cooperation and Development (OECD). Household income is comparable via this calculation method, however, it should be noted that information on income is often incomplete, since a lower or irregular percentage of income is frequently not specified. This is why the value of the equivalised income is underrated.<sup>4</sup> Classifying income into income classes can also lead to unclear results, because shifting the class thresholds can result in a higher or lower at-risk-of-poverty rate.

**Calculation**

At-risk-of-poverty rate:

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

**Income distribution and problem perception in Stuttgart**



The breakdown of the results of the 2019 citizen survey according to the distribution of income and the perception of different problems in Stuttgart shows the following situation: on average, people at risk of poverty assess many other problems as more serious than population groups not at risk of poverty. This applies in particular to areas affecting economically weaker groups, such as homelessness, poverty, unemployment or taxes, fees and charges. These issues are regarded as a major problem by people with low income more often than by people not at risk of poverty. When it comes to mobility, road traffic and public transport, the situation is different: here, people at risk of poverty consider the problem as minor compared to persons not at risk of poverty. The study comes to the conclusion that a differentiated consideration of the problem perception according to income in Stuttgart provides important insights, but further areas such as childcare and care plus additional criteria are to be considered in future studies.<sup>4</sup>



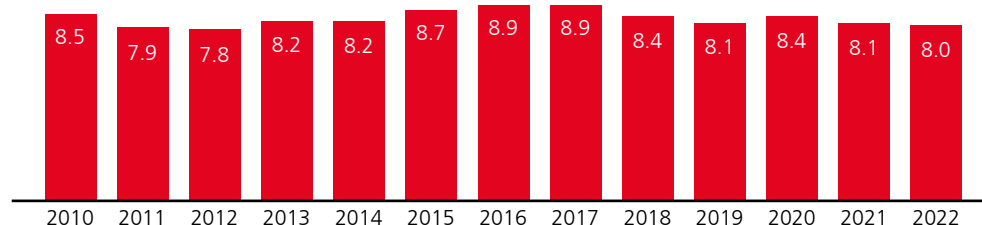
## Indicator 1-2:

**Recipients of minimum social security benefits**

“Implement social protection systems and programmes for all”

(Target 1.3)

**Figure 2:** Recipients of minimum social security benefits (in per cent)



Sources: Federal and State Statistical Offices; State Capital Stuttgart, Statistics Office (Population register)

In the period under review, the percentage of recipients of minimum social security benefits is between 7.8 and almost 9 per cent. In the years from 2011 to 2016, it rises steadily and remains at a peak of some 9 per cent in 2016 and 2017. The increase since 2014 can be explained by the influx of refugees in 2015/16, which also increased the number of those receiving standard benefits under the Asylum Seekers Benefit Act. This, in turn, increased the proportion of people receiving minimum social security benefits. In 2018, the proportion drops again for the first time by 0.5 percentage points to 8.4 per cent. In 2022, with 8.0 per cent the value drops again to the lows of 2011 and 2012.

### Classification / Definition

Recipients of minimum social security benefits include SGB II/ SGB XII benefits and the standard benefit under the Asylum Seekers Benefit Act. The indicator describes the level of the need for help within the municipality. The focus is on the financial, but also possible psychological burdens of those affected. The sustainable development goal in this regard should be that the benefits for the people in need are sufficient that they can finance their own lives. The appropriate measures for municipal planning are transfer benefit densities and minimum social security rates, as they reflect the local need for state support to achieve a standard of living.

The indicator reflects the proportion of people actually receiving benefits. A problem arises from the unrecorded cases of people who are actually entitled to benefits but do not apply for them. Reasons for this include ignorance, shame or lack of self-confidence in dealing with authorities. The State Capital Stuttgart counteracts this by advising on how to apply and through outreach work.

Furthermore, the indicator refers only to income poverty, although there are different definitions of poverty. Today, poverty is often understood as a multidimensional concept not only referring to income or material poverty, but also to social, political, educational and cultural poverty. Often, but not necessarily, these different forms of poverty concur.

The number of recipients of minimum social security benefits is directly dependent on the general and local economic situation. The recession in 2009 was directly reflected in higher poverty rates. The economic recovery in the following years led to a slight reduction in the rate of poverty.

The indicator calculates the proportion of people receiving benefits pursuant to SGB II and SGB XII or standard benefits pursuant to the Asylum Seekers Benefit Act in relation to the number of residents. Taking into account the benefits from the Asylum Seekers Benefit Act, the calculation deviates from that of the 2019 VLR. The deadline of the data collection is 31 December.

### Calculation

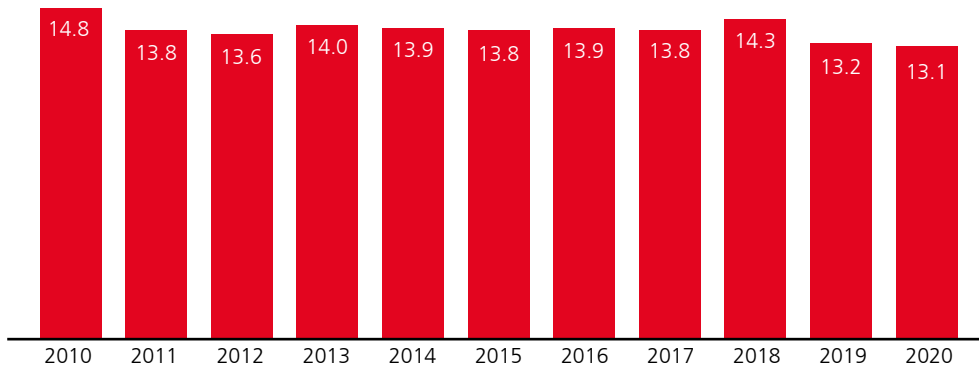
Recipients of minimum social security benefits:

$$\frac{\begin{array}{l} \text{Number of benefit recipients pursuant} \\ \text{to SGB II and SGB XII} \\ + \\ \text{Number of standard benefits pursuant} \\ \text{to the Asylum Seekers Benefit Act} \\ / \\ \text{Number of residents} \end{array}}{\times 100}$$



Indicator 1-3:  
**Poverty among children, adolescents and young adults,  
 the elderly and single parents**

**Figure 3:** Child poverty (in per cent)

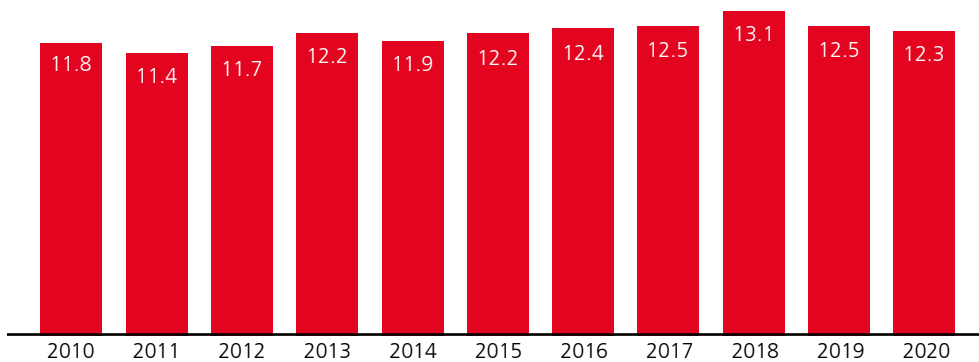


Source: Community Guide of the Bertelsmann Foundation; State Statistical Office Baden-Württemberg, State Capital Stuttgart, Statistics Office

“Implement social protection systems and programmes for all”  
 (Target 1.3)

From 2010 to 2020, child poverty varies between 13.1 and 14.8 per cent. Higher values are found in 2010 and 2018. The latter can be attributed to the increased influx of refugees in this period. Since 2018, the figure has been falling and reaches 13.1 per cent in 2020, the lowest level in the period under review.

**Figure 4:** Poverty among adolescents/young adults (in per cent)

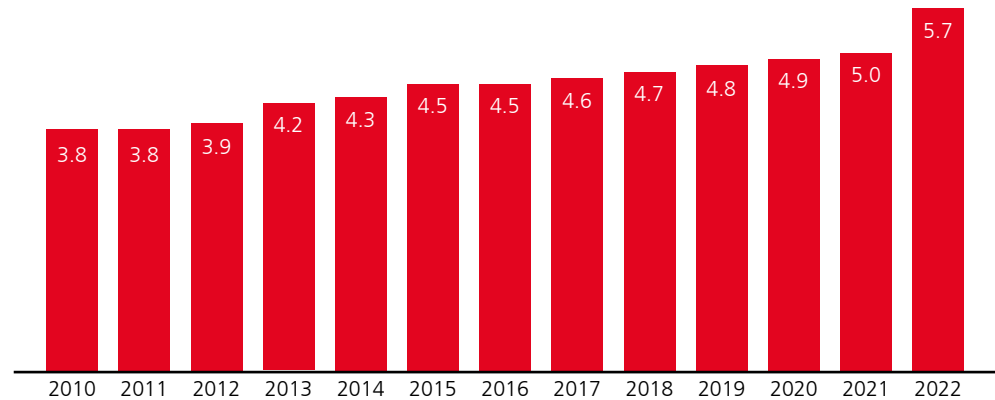


Source: Community Guide of the Bertelsmann Foundation; State Statistical Office Baden-Württemberg, State Capital Stuttgart, Statistics Office

The proportion of adolescents and young adults jeopardised by poverty has been around 12 per cent since 2010 and is thus slightly lower than the proportion of children jeopardised by poverty. However, the number of jeopardised adolescents has been rising steadily since 2014, with its peak at 13.1 per cent in 2018; however, since 2019 this figure has been declining again.



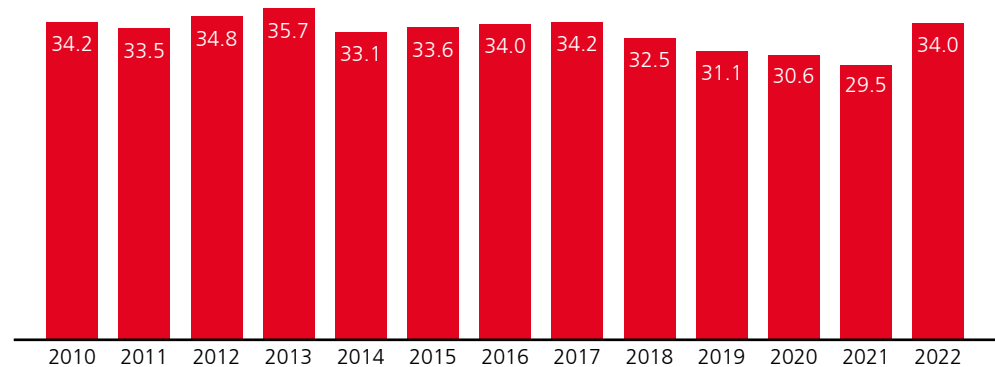
**Figure 5:** Poverty among the elderly (in per cent)



Source: Statistics of the Federal Employment Agency, State Capital Stuttgart, Statistics Office (Population register)

The level of poverty among the elderly is lower than the level of poverty among children and adolescents. However, the curve is different, as poverty among the elderly has increased almost continuously from 2010 to 2022. Here, the shift of level from 3.8 per cent to 5.7 per cent is significant. The significant increase in poverty among the elderly by 0.7 percentage points from 2021 to 2022 is also based on the increasing number of older refugees from the Ukraine. Some factors suggest that poverty among the elderly will continue to increase in future. The further increase in atypical employment, instable employment in the low-wage sector and employment histories with interruptions have long-term effects on the income available in old age. While private provision for old age has become increasingly important, the pension level is falling continuously due to changes in pension legislation in recent years and the demographic development. For those affected, poverty among the elderly goes hand in hand with restrictions in nearly all areas of life.<sup>5</sup>

**Figure 6:** Poverty among single parents (in per cent)



Source: Statistics of the Federal Employment Agency, State Capital Stuttgart, Statistics Office (Population register/household generation)

In the period from 2010 to 2022, between 29.5 and 35.7 per cent of single parents in the State Capital Stuttgart received benefits pursuant to SGB II. The rise in 2022 can be explained by the refugees from the Ukraine who often came to Germany without a second person with parental authority. The poverty risk of single parents has remained at a high level for years and is more than four times higher than that of two-parent families with one or two children. In the State Capital Stuttgart, in every fifth family children grow up with only one parent.<sup>6</sup> Children increase the poverty risk of a household, as they directly increase the household's needs and, in addition, the care tasks make it difficult or even impossible to compensate by taking on additional work. Both the household's needs and the care tasks increase with the number of children. In social



and labour market politics, single parents, in particular women, who form a large proportion of single parents, are considered a population group with special socio-political support needs, as they cannot share providing for the family and caring for the children with another parent in the household.<sup>7</sup>

The reasons for the high risk of poverty among single parents are manifold. An important role is the difficulties in finding a balance between work and bringing up children. In the traditional distribution of roles, working mothers usually take on the role of additional earners and the man is the main breadwinner of the family. In the case of separation or divorce, mothers are faced with a difficult double burden and a poverty trap, because of increased living costs on the one hand, inadequate maintenance obligations of the fathers vis-à-vis the mothers and, on the other hand, their income situation, which often put women in precarious situations.

Single parents are often more affected by unemployment – a circumstance that is based on structural obstacles when it comes to a work-life (child-rearing) balance. Women still have a lower income compared to men, the increase in salaries is lower and, even with the same qualification, they earn less than men.<sup>8</sup>

### Classification / Definition

For certain population groups, such as single parents, women, children or the elderly, there is an increased risk of poverty combined with a risk for social disadvantage. This is a case of social inequality since opportunities in life are often better for one group than another insofar as financial resources and living conditions are concerned.<sup>9</sup> Growing up and living in poverty is associated with various limitations, obstacles and personal difficulties. Moreover, poverty and social exclusion jeopardise social cohesion. Therefore, in many fields and with different measures, the State Capital Stuttgart seeks to fight, ease and, at best, prevent poverty.

According to the EU definition, people are considered to be at risk of poverty, if their income is less than 60 per cent of the equivalent income of the total population.<sup>10</sup> This gauge of the risk of poverty is based on a relative definition of poverty, which states that people have so little means 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 describes a situation in which people cannot afford to meet their basic economic and social needs. People with less than 2.15 US dollar/day at their disposal are affected by absolute poverty.



### Calculation

Child poverty is calculated as the number of benefit recipients pursuant to SGB II and SGB XII under the age of 15, plus the number of persons under the age of 15 in a community of dependence with benefit recipients pursuant to SGB II or SGB XII, in the population under the age of 15:

$$\frac{\begin{array}{l} \text{Number of benefit recipients pursuant to SGB II/SGB XII} \\ \text{under the age of 15} \\ + \\ \text{Number of persons under the age of 15 in a community} \\ \text{of dependence with benefit recipients pursuant to} \\ \text{SGB II or SGB XII} \end{array}}{\text{Number of residents under the age of 15}} \times 100$$

The poverty of adolescents and young adults is calculated as the proportion of benefit recipients pursuant to SGB II/SGB XII between 15 and 17, plus the number of persons between 15 and 17 in communities of dependence with benefit recipients pursuant to SGB II or SGB XII in the population between 15 and 17 years of age:

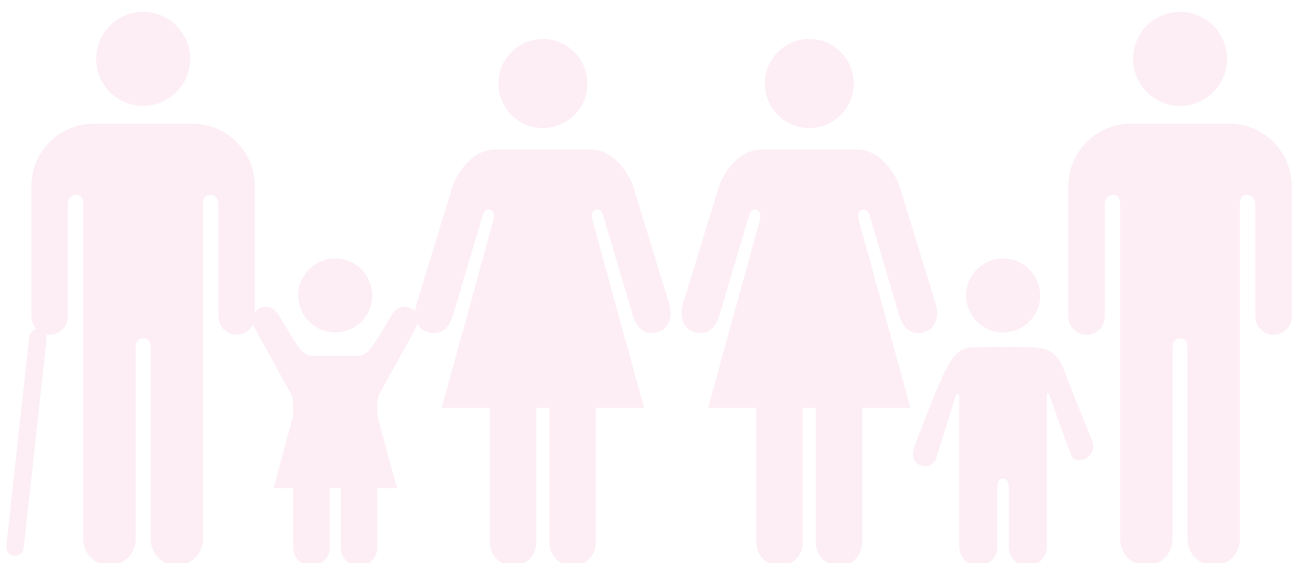
$$\frac{\begin{array}{l} \text{Number of benefit recipients pursuant to} \\ \text{SGB II/SGB XII between 15 and 17} \\ + \\ \text{Number of persons between 15 and 17 in communities of} \\ \text{dependence with benefit recipients pursuant to SGB II/SGB XII} \end{array}}{\text{Number of residents between 15 and 17}} \times 100$$

Poverty among the elderly is calculated as the proportion of benefit recipients pursuant to SGB XII 65 years and older in the population 65 years and older:

$$\frac{\text{Number of benefit recipients pursuant to SGB XII 65 years and older}}{\text{Number of residents 65 years and older}} \times 100$$

Poverty among single parents is calculated as the proportion of benefit recipients pursuant to SGB II in the number of single parents:

$$\frac{\text{Number of single parents with income support pursuant to SGB II}}{\text{Number of single parents}} \times 100$$





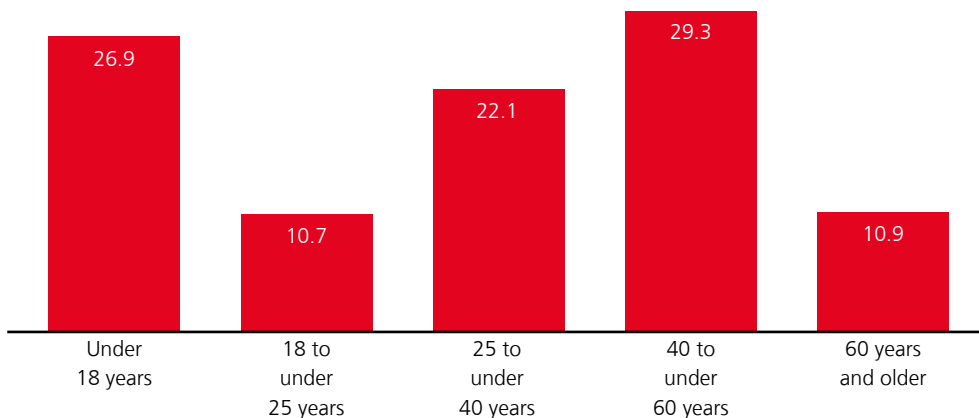
Indicator 1-4:  
**Homelessness**



“The same rights to property, basic services, technology and economic resources”  
(Target 1.4)

According to the Federal Statistical Office statistics on homelessness, some 0.9 per cent of the residents in Stuttgart are classified as homeless in housing. This corresponds to a total number of 5,350 persons. Some 60 per cent of these are men. With 62.3 per cent, the proportion of people affected by homelessness without German citizenship is higher than the number of persons with German citizenship. It is notable that 26.9 per cent of the homeless persons in housing are younger than 18 years, the second highest proportion. The highest proportion of 29.3 per cent of the homeless residents in housing are 40 to under 60 years old. With some ten per cent each, the lowest proportion of homeless people in Stuttgart are 18 to under 25 years and older than 60.

**Figure 7:** Proportion of homeless residents in housing in 2022 according to age groups (in per cent)



Source: Federal Statistical Office

Compared to large cities and just behind Hamburg, the State Capital ranks second, even before Frankfurt am Main and Berlin when it comes to the proportion of homeless people in housing in the population. In contrast to that, Leipzig, Dresden or Duisburg have fewer homeless people in housing.<sup>11</sup>

The State Capital Stuttgart offers a variety of support for homeless people and those jeopardised by homelessness. This includes support to keep their home. People who are imminently jeopardised by homelessness are advised, supported and accompanied. The support for imminent homelessness addresses people who are already homeless and provides accommodation assistance in shelters or emergency housing. The hotline for tenants and landlords is intended for citizens who are threatened with the loss of their home.<sup>12</sup>



### Classification / Definition

This indicator was introduced in 2023 for the first time and is to be continuously updated. The indicator, the frame of which is the Wohnungslosenberichterstattungsgesetz (WoBerichtsG) [Homeless reportage law], takes into account people who are accommodated in shelters, emergency housing or similar housing due to homelessness. Since it is a national statistics, the Federal Statistical Office is responsible. Homeless people sleeping rough are not included in the statistics. The list only includes homeless people who are accommodated as homeless as of the effective date in the night from 31 January to 1 February. No data is available for other dates. The numbers also include refugees with an approved application for asylum and who are accommodated within the context of preliminary accommodation.<sup>13</sup>

### Correlation with other SDGs

Poverty is a multi-faceted and complex subject that interacts with all SDGs.

Poverty is directly related to insufficient access to healthy food and therefore undernourishment (SDG 2). Due to psychological stress, this also impacts the health and well-being of people living in poverty (SDG 3). Access to education is decisive for overcoming poverty (SDG 4), as is equal opportunities for women and girls (SDG 5). Rising energy costs have a stronger impact on people affected by poverty. Therefore, there is a direct interrelationship between access to sustainable and affordable energy (SDG 7), which becomes even more obvious in times of an energy crisis.

Reducing poverty is also related to the cutting down on inequalities, for instance the distribution of income (SDG 10). Access to affordable housing and the provision of social rental apartments (SDG 11) are important for the fight against poverty.

Poverty is therefore a core aspect of sustainability because it goes hand in hand with numerous other problems and is often the cause of these, in particular in the long term. This applies for instance to climate and environment protection (SDG 13, SDG 14, SDG 15). When it comes to inequality, it can be observed that, generally speaking, the medium income milieus and, even more so, the higher income milieus have a higher carbon footprint and therefore also have a higher impact on the climate (per capita).

The indicator is calculated as the number of homeless people in housing in relation to the total number of residents.

### Calculation

$$\frac{\text{Number of homeless residents in housing}}{\text{Total residents}} \times 100$$

There are also links to the fight against poverty in what we call the Global South. More sustainable consumption and production patterns in Stuttgart improve the people's living conditions along the supply chains, for instance procurement according to fair award criteria, and thus have a global impact (SDG 12). Over the next years, climate change and climate policies can have a huge impact on poor people (SDG 13). In particular vulnerable population groups around the globe are already suffering at present from the impacts of climate change. So, climate protection in Stuttgart also makes a contribution to the fight against poverty in the Global South (SDG 13). Further correlations can be found in SDG 16 "Peace, Justice and Strong Institutions" and SDG 17 "Partnerships for the Goals".

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

- SDG 2:** "Children with overweight"
- SDG 4:** "School leavers by school-leaving qualifications"
- SDG 4:** "Childcare"
- SDG 5:** "Relative poverty among women"
- SDG 8:** "Unemployment"
- SDG 8:** "People increasing earnings"
- SDG 10:** "Relative poverty rate among people without German citizenship receiving benefits"
- SDG 11:** "Accommodation service for social housing"



Practical example 1:

## 4<sup>th</sup> Stuttgart Poverty Conference 2023 – Hand in hand against poverty in the State Capital Stuttgart



### Context:

The phenomenon poverty, its sources and effects are very complex and multi-faceted. Poverty can also be found in a wealthy city like Stuttgart. Some 51,000 Stuttgart residents depend on minimum security benefits (2020). Often, these people are not able to cover their living costs from their own financial resources. In Stuttgart, owning a Stuttgart Bonuscard + Kultur, is also a poverty indicator. The idea behind this card is to improve the social and cultural participation of people affected by poverty. Poverty marginalises and makes participation in everyday life difficult. Poverty can divide urban society, weaken togetherness and is ultimately a threat to democracy. For people affected by poverty, the current crises such as the COVID-19 pandemic and the rising prices for energy and food are an additional burden. As a result, people who have not been threatened by poverty so far will be in need. Poverty in Stuttgart is increasing and becoming more visible.

To enable participation and better local circumstances, the Stuttgart Municipal Council decided in the 2022/2023 municipal budget planning staging the 4<sup>th</sup> Stuttgart Poverty Conference and appointed the Strategic Social Planning of the Social Affairs and Integration Division as coordinator.

### Description / Realisation:

The motto of the 4<sup>th</sup> Stuttgart Poverty Conference, held on 9 May 2023 by the City of Stuttgart together with the Liga der Wohlfahrtspflege Stuttgart [Welfare Organisation] was "Recognise, alleviate poverty and open up opportunities". The six forums identified the adjustments to be made to address the fight against poverty at a local level and drew conclusions for federal and regional politics.

The 2023 Poverty Conference was the fourth conference of the State Capital Stuttgart focusing on the fight against poverty. The concept focused on the personal situation of poor people in Stuttgart, perceivable moments of exclusion and the support services necessary for participation.

The content concept of the 4<sup>th</sup> Stuttgart Poverty Conference was developed and held by the coordination of Strategic Social Planning together with Liga der Wohlfahrtspflege Stuttgart, various offices and departments of the entire city administration, foundations and other partners from the civil society. Some 100 people, 19 of whom with management responsibility for

the six forums, had been preparing the conference since October 2022. The focus of the six forums were the exclusions and challenges of people receiving social benefits or those threatened by poverty. The topics were:

- Housing and housing provision
- Social and cultural participation
- Growing up in poverty
- Work: further development of job opportunities
- Health: Don't become ill! (New) perspectives for people without health insurance in Stuttgart
- Healthy and sustainable food for ALL

Users of social programmes, people simply representing themselves, and people affected by poverty participated in the respective forums in different ways. This way, no special situations were created, exclusion was avoided, so participation at eye level was possible.

### Experience / Results:

The demand for and interest in the poverty conference was very high. More than 430 people from politics, self-representations, Liga der Wohlfahrtspflege, foundations and city administration participated. On 9 May 2023, from 9 to 11 a.m., the poverty conference started with six forums providing social programmes at different locations in Stuttgart to underline Stuttgart's practical relevance. The results of the forums were supplemented and further developed at the subsequent central event in the Stuttgart Town Hall, which included a video message from Federal Minister for Agriculture Özdemir and a lecture on the consequences of poverty by Dr. Spannagel, Institute of Economic and Social Research from the Hans-Böckler-Stiftung. New social area data of Stuttgart as to the distribution of poverty in the city with reference to the municipal implementation of the UN 2030 Agenda were also presented.

Despite the variety of topics, all forums came to the conclusion that, in addition to offering programmes, a joint and sustainable structure for fighting poverty in Stuttgart and sustainable networks are important. All results of the conference plus background information on poverty in Stuttgart are summarised on the City's website at [www.stuttgart.de/armutskonferenz](http://www.stuttgart.de/armutskonferenz).

The poverty conference thrived on the intense cooperation, the work and expert knowledge of different players of the city



administration and the cooperation with Liga der Wohlfahrts-  
pflege, foundations and the civil society. The basis of further  
action is also the presentation of the results in the city committees  
of the municipal council and the different boards of Liga der  
Wohlfahrtspflege.

## Practical example 2: Housing First

### Context:

In Stuttgart, the assistance system of the housing emergency  
support is very well organised and basically works according to  
a support chain principle. However, for various reasons it can  
come to a bottleneck in the assistance system, so that homeless  
people often have to stay a longer time in facilities before they  
can be given their own housing. The Housing First project focuses  
in the first place on individual housing and not at the end of the  
support chain, as is often the case.

### Description / Realisation:

With the Housing First project, the State Capital wants to  
change the rigid system of the housing emergency support and  
examine whether it is possible to optimise old structures and  
procedures of the housing emergency support and achieve success  
in housing placements.

The State Capital Stuttgart promotes the Housing First project  
in the planning programme of the housing emergency support.  
With some 1.8 million euro of municipal funding, the project  
was originally planned as a model project for four years and  
started officially on 1 May 2022. The project is co-financed by  
the Vector Foundation, providing some 150,000 euro.

The Housing First project is realised by an association of Stuttgart  
Wohnungsnotfallhilfe and a four-member Housing First project  
team (Caritasverband für Stuttgart e. V., Evangelische Gesellschaft  
Stuttgart e. V., Sozialberatung Stuttgart e. V. and Ambulante

### Division / Office / Public Undertaking:

Strategic Social Planning in the Social Affairs and Integration  
Division (Coordination)

### Further reading / Links:

<https://www.stuttgart.de/armutskonferenz/>  
(last access 03.07.2023)



Hilfe e. V., leadership and project responsibility lies with Caritas-  
verband für Stuttgart e. V.). The Strategic Social Planning  
Department in the Social Affairs and Integration Division controls  
and accompanies the project very closely through regular exchange  
and monthly advisory committees.

### Experience / Results:

In the four years of the project Housing First, at least 50 apart-  
ments for homeless people should be acquired and the contract  
directly concluded between tenants and landlords. The project  
team of Housing First Stuttgart supports all parties involved.

### Division / Office / Public Undertaking:

Social Welfare Office of the Social Affairs and Integration Division;  
Association of Housing Emergency Support Stuttgart and Housing  
First project team (Caritasverband für Stuttgart e. V., Evangelische  
Gesellschaft Stuttgart e. V., Sozialberatung Stuttgart e. V. and  
Ambulante Hilfe e. V.); Vector foundation.

### Further reading / Links:

<https://housing-first-stuttgart.de/>  
(Last access 27.03.2023)

GRDRs 648/2020 [Municipal Council document] "Die Stuttgarter  
Wohnungsnotfallhilfe 2021 – Grundlagen und Ziele" ["The  
Stuttgart Housing Emergency Support 2021 – Principles and  
Goals"]



### Practical example 3:

#### Social cohesion in Stuttgart's districts

A joint study by the Statistics and Social Welfare Office – Database for social neighbourhood development

#### Context:

A liveable, stable and sustainable society calls for social cohesion.

In general, social cohesion can be understood as quality togetherness in the community. In recent years, social cohesion has become increasingly important as an influencing factor and an indicator for community togetherness in modern society. Promoting this is therefore a socio-political task for society as a whole.

Especially in the neighbourhoods, a sense of togetherness can be furthered. Vibrant neighbourhoods, mutual understanding, as well as the acceptance of diversity and a variety of contacts are of utmost importance in this respect. Social networks within the neighbourhoods support social participation, can take the edge off the effects of poverty and thus strengthen social cohesion. Neighbourhood projects in the districts open up the opportunity to shape a way of living together in the community in a positive and trusting way.

#### Description / Realisation:

The Statistics and Social Welfare Office of the State Capital Stuttgart have developed a joint evaluation as to social cohesion on the basis of the 23 districts of Stuttgart. A concept, developed and tried and tested by the Bertelsmann Foundation, was adapted to assess social cohesion.

Social cohesion is multi-dimensional and influenced by many factors. The overall index "Social Cohesion" comprises the aspects social relationships, solidarity and a public welfare orientation.

#### Experience / Results:

The differences between the districts are moderate. Even in the districts where cohesion is above average areas can be identified where cohesion can be improved. Therefore, all districts have the opportunity to take a look at the individual features of social cohesion that can be assessed. Here is a variety of starting points of how local cohesion can be promoted.

The analysis shows the structural link between poverty and social cohesion. In low-income districts, social cohesion is also lower. That's why the fight against poverty is very important for social stability.

This study is an important database for social neighbourhood development. In 2022, the Social Welfare, Youth Welfare and Public Health Office launched a citywide process to develop a "Framework for social neighbourhood development in Stuttgart". Social neighbourhood development makes an important contribution to realising the 17 Sustainable Development Goals of the United Nations (SDGs) and supports in particular the achievement of the targets SDG 1: "No Poverty", SDG 3: "Good Health and Well-being", SDG 10: "Reduced Inequalities", SDG 11 "Sustainable Cities and Communities" and SDG 16 "Peace, Justice and Strong Institutions".

#### Division / Office / Public Undertaking:

Examination "Social cohesion in Stuttgart's districts":  
 Statistics Office in the Public Safety, Order and Sport Division;  
 Social Welfare Office in the Social Affairs and Integration Division  
 Framework concept of social neighbourhood development in Stuttgart:  
 Social Welfare Office in the Social Affairs and Integration Division,  
 Youth and Education Division

#### Further reading / Links:

[www.stuttgart.de/zusammenhalt](http://www.stuttgart.de/zusammenhalt)  
[www.taskcards.de/#/board/8736b209-8b6b-41f6-a478-e2f319c87c98/view](http://www.taskcards.de/#/board/8736b209-8b6b-41f6-a478-e2f319c87c98/view) (last access 06.04.2023)

GRDRs 392/2023 [Municipal Council document] "Strategie zur sozialen Quartiersentwicklung – Entwicklung und Umsetzung einer Rahmenkonzeption" [Strategy for social neighbourhood development – development and implementation of a frame concept]



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://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 are in particular the improvement of the nutrition situation and sustainability in agricultural production.



## Overview of the relevant targets

The following targets of SDG 2 are relevant to German municipalities and are already covered in the VLR by indicators:



**2.2** End all forms of undernourishment



**2.4** Sustainable production of food 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 productivity and income of small food producers



**2.5** Safeguarding the genetic food production

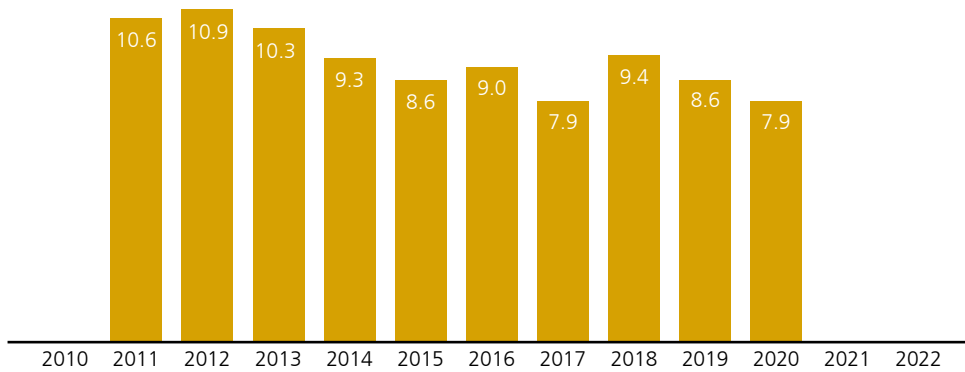


**2.a** Investments in rural infrastructure, agricultural research, technology and gene banks



## Indicator 2-1: Children with overweight (at school enrolment examination)

**Figure 8:** Children with overweight (at school enrolment examination) (in per cent)



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

“End all  
forms of under-  
nourishment”

(Target 2.2)

By 2015, the number of children with overweight in the age group 4 to 5 years had shown a clear decrease for the entire city. Since then the value has been stable with annual fluctuations between 7.9 and 9.4 per cent.

The number of overweight children is very high in economically and socially disadvantaged families. Reason for this is that these children do less or no sport or do not get a balanced diet. A study revealed a significant correlation between the proportion of overweight children and the proportion of registered unemployed people or people receiving unemployment benefits, low income (near the at-risk-of-poverty rate) and income support recipients compared to the number of residents in general.<sup>14</sup>

The State Capital Stuttgart has taken various measures to improve nutrition and promote physical activity, which promise a positive effect on children's weight. Stuttgart is a very heterogeneous city with, on the one hand, well-off neighbourhoods and neighbourhoods with social disadvantages on the other. So, in 2015, the child health report first evaluated the rates of children with overweight according to city districts, which since then have been annually updated by social monitoring ([www.stuttgart.de/sozialmonitoring](http://www.stuttgart.de/sozialmonitoring)).<sup>15</sup> With values between 1.6 and 20.2 per cent, the rate of overweight children in the age group 4 to 5 years differs significantly in the respective city districts. This is why the city, alongside its comprehensive programmes, focuses in particular its obesity prevention and health promotion measures on the neighbourhoods, which according to social monitoring require support with regard to health and social indicators.

### Classification / Definition

Not only undernourishment and a micronutrient deficiency, but also overweight is part of the definition of malnutrition.<sup>16</sup> Therefore, the indicator is directly related to target 2.2. The indicator shows the rate of overweight children at their school enrolment examination. Size and weight are recorded in standardised form and converted into the body mass index. Then, the BMI is compared to age- and gender-specific values of a reference population to determine overweight. The indicator

shows the proportion of children with a body mass index above the threshold. This threshold is determined as the value below which 90 per cent of all children of the same gender in the age group in Germany are. The body mass index is calculated as  $BMI = (\text{weight [in kg]} / (\text{height [in m]}))^2$ . The year refers to the respective enrolment years. This means that the indicated year complies with the year of enrolment. Data was collected approximately 18 months before.



In principle, the aim is to decrease the rate of overweight children and adolescents, since childhood obesity goes hand in hand with various health risks, some of which may not become apparent until adulthood (e.g. cardiovascular diseases, type 2 diabetes).

Due to the legal school enrolment medical examination, where all 4- to 5-year-old children (N ≈ 5,000) are examined every year, the State Capital Stuttgart has valid data for this age group.

### Calculation

Overweight children:

$$\frac{\text{Number of children at school enrolment with overweight}}{\text{Number of all examined children of a school year}} \times 100$$

### Food quality at Stuttgart's schools

i

The quality of food at Stuttgart's schools is also decisive for a healthy and balanced diet for children and adolescents. The results of a 2021 survey on the food on offer shows potential for improvement. Pupils and parents were questioned on topics around food in general, such as nutrition and health, good food and organic food, but also on the organisation of lunch catering, the design and use of rooms and participation in decision-making. When it comes to the selection of food, 40 per cent of the students said that the meals didn't fill them up, and

only 30 per cent said that the meals were tasty. The variety of dishes was rated good, as well as the 25 per cent organic food offered in the context of an "organic day". There is potential for improvement with regard to the serving staff, the hygiene in the rooms and pupils' participation in decision-making. The results of the study will be discussed by a working group to jointly develop recommended actions for the various stakeholders. The common goal is to improve the quality of food at Stuttgart's schools.<sup>17</sup>

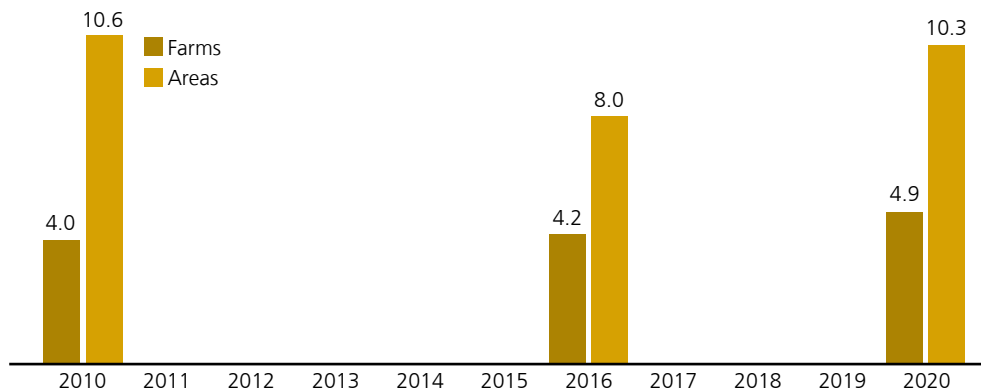






## Indicator 2-2: Organic farming

Figure 9: Organic farming (in per cent)



Source: State Statistical Office Baden-Württemberg (Agricultural structure survey)

“Sustainable production of food and resilient agricultural methods”

(Target 2.4)

In 2007, there were seven organic farms in Stuttgart. By 2016, this number had increased to eight, while the total number of farms decreased from 257 to 191 in the same period. The proportion of organic farms increased accordingly from 2.7 to 4.2 per cent. However, in 2007, 266 hectares were being farmed organically, with this area decreasing to 200 hectares by 2016. So, the percentage of organic farming land fell from more than ten per cent in 2010 to eight in 2016. Since then, it has risen again and was once more at slightly more than ten per cent in 2020.

### Classification / Definition

Organic farming is part of sustainable agricultural policy. It is based on resource-saving production methods as well as on animal welfare, the latter to be achieved by limiting the number of animals kept in the area. Mineral fertilisers and synthetic chemical pesticides are not permitted in organic farming; the focus is on a cycle: using manure of own livestock as fertiliser. In contrast to conventionally managed farms, the purchase of feed from foreign cultivation is minimal or not permitted. This way, organic farming also assumes global responsibility.

Data on organic farming is collected approximately every four years in the context of the official agricultural structure survey. Farms with five hectares of land or more or with minimum production units that manage at least parts of the farm according to the guidelines of Regulation (EC) No. 834/2007 are taken into account.

### Calculation

Proportion of area under organic farming:

$$\frac{\text{Area under organic farming}}{\text{Area under farming in total}} \times 100$$

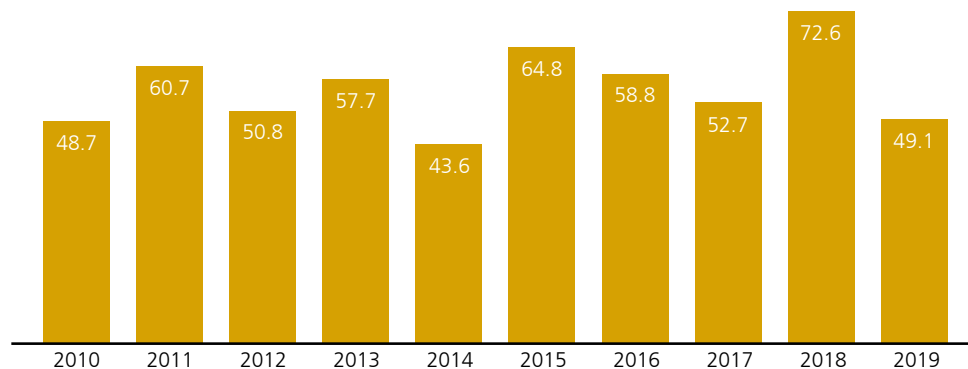
Proportion of organic farms:

$$\frac{\text{Number of organically operating farms}}{\text{Number of agricultural farms in total}} \times 100$$



## Indicator 2-3: Nitrogen surplus

Figure 10: Nitrogen surplus (in kg/ha)



Source: Community Guide of the Bertelsmann Foundation, Federal Environment Agency, Federal and State Statistical Offices

“Sustainable production of food and resilient agricultural methods”

(Target 2.4)

The nitrogen surplus of the State Capital Stuttgart determined via model calculations, fluctuates considerably over the period shown and reached a peak of 72.6 kg/ha in 2018. The Federal Environment Agency states in this respect: “The level of nitrate depends on several factors. The concentration by land use around the monitoring points are of utmost importance. In addition, regional hydrogeological conditions, such as groundwater surface distance and flow velocity, as well as underground hydro-chemical conditions play an important role”.<sup>18</sup> The national aim is to reduce the nitrogen surplus nationwide to 70 kg/ha per year by 2030. In Stuttgart, this rate is complied with in the period under review, except for 2018. At present, the rate in Germany is 80 kg/ha (2020).<sup>19</sup>

### Classification / Definition

Excess nitrogen input from agriculture continues to be a major ecological problem, since with inputs into groundwater, surface water and air, it affects diverse ecosystems. Although nitrogen is a main nutrient element of plants, fertilisation in excess and beyond the natural vegetation period pollutes the ecosystems in such a way that their resilience to climate change and extreme weather conditions decreases.

The nitrogen surplus is determined via model calculations taking into account the use of fertilisers, input from air, removal by input in herbal and animal market products and further aspects.

### Calculation

Nitrogen surplus:

$$\frac{\text{Nitrogen surplus in kilogrammes}}{\text{Area under agricultural use in hectares}} \times 100$$



## Correlation with other SDGs

At first glance, the SDG 2 “Zero Hunger” goal doesn’t seem to be very relevant for Stuttgart. Although, in 2022, some 2,000 needy people say they “shop” everyday at Schwäbische Tafel Stuttgart e. V. [= Food Bank].<sup>20</sup> This sets the goal in a clear correlation with the reduction of poverty in all its aspects, as well as the access to basic foods (SDG 1). The goal goes considerably beyond “Zero Hunger” and includes a balanced diet and sustainable agriculture.

Therefore, there are further correlations between reducing malnutrition and the related health impacts (SDG 3). Educational programmes focusing on ecological sustainability (SDG 4) also teach children and adolescents the basics on how healthy nutrition and sustainable cultivation methods are linked, for instance, by growing and harvesting their own food in school gardens.

The nitrogen surplus is very dependent on agriculture. Organic farming, for instance leads to a more favourable balance of nitrogen surplus, which in turn contributes to better quality of running water (cf. SDG 6 “Clean Water and Sanitation”).

Sustainable production and sustainable consumption (SDG 12) of regional, seasonal, certified organic food go hand in hand with a low ecological footprint (SDG 13, SDG 14, SDG 15). A healthier diet, in particular on a vegetarian basis not only prevents malnutrition and an impact on health (SDG 3), but also reduces the impact on the climate (SDG 13) and the

ecological impacts on land (SDG 15) and water (SDG 14). Non-sustainable agricultural practices are a greater burden for the climate by releasing more climate-damaging gases, such as methane from livestock farming or nitrous oxide and nitrogen oxides from excess fertilisation of the soil. In addition, the use of pesticides and fertilisers, as well as land use and soil compaction, impair the local water and terrestrial biodiversity and soil quality.

The following indicators are directly relevant to SDG 2 “Zero Hunger”:

- SDG 3:** “Promotion of physical activity in nursery schools”
- SDG 4:** “Educational programmes with reference to ecological sustainability”
- SDG 6:** “Quality of running water”
- SDG 12:** “Sustainable procurement”
- SDG 13:** “Greenhouse gas emission”
- SDG 15:** “Soil index”
- SDG 15:** “Biodiversity”

2

ZERO  
HUNGER

#### Practical example 4:

### Healthy, sustainable and climate-friendly nutrition for all

#### Context:

A sustainable and healthy diet is an elementary component of a sustainable development.

Almost every tenth human being in the world goes hungry. Land areas that could be used for the cultivation of food, are used to a large extent for the cultivation of plants for animal feed, fuel or industrial material. Around a quarter of the worldwide greenhouse gas emissions can be traced back to nutrition systems and accelerate climate change. This in turn already has an impact on land use in nearly all parts of the world, it promotes droughts or extreme weather conditions and destroys bases of life and subsistence economy. And yet, approximately one third of all food produced worldwide ends up in the bin.

Access to (good) food and nutritional education, as well as the avoidance of food waste are important keys to prevent hunger at a global and local level and to make sure that food production does not have negative impacts on the climate, local environment and local people.

#### Description / Realisation:

In Stuttgart, there are already the following key approaches and measures, which are to contribute to healthy nutrition for all:

- With the 4<sup>th</sup> Poverty Conference 2023 on 9 May 2023, an exchange platform was used in Stuttgart to identify and fight poverty at a local level. The topics nutritional poverty and nutritional education were also discussed in decentralised forums to develop joint local measures.
- Since November 2022, there has been a staff post in the City of Stuttgart, which promotes climate-friendly nutrition and spreads the word throughout the city. There is a special focus on measures to prevent food waste and promote vegetable-based dietary habits. Both play a part in alleviating hunger – at a local and indirectly also at a global level.
- Since December 2022, Stuttgart has been a food-sharing city and it pays more attention to the appreciation of food and avoidance of food waste.

- In 2022 and 2023, the State Capital Stuttgart provides the association Ernährungsrat StadtRegion Stuttgart e. V. with 230,000 euro to support the development of a sustainable nutrition system in Stuttgart and its surroundings.
- Communication and education programmes make the correlations between individual behaviour and hunger in many parts of society visible. In the context of the Urban Future Conference the film “Food Fighter” was screened in June and a field trip offered to the 2030 Agenda alliance mEin Stuttgart-mEine Welt and the Ernährungsrat Stadt-Region Stuttgart together with the Department for International Relations.

#### Experience / Results:

Improvements for social and structural topics can only be achieved together with many stakeholders and various measures.

Many helpful measures do not cost a lot, however, it requires a change of behaviour when it comes to everyday nutrition and supportive frame conditions to facilitate the implementation.

#### Division / Office / Public Undertaking:

Strategic Social Planning Department in the Social Affairs and Integration Division;  
Staff Unit Climate Protection in the Climate Protection, Mobility and Housing Policy Unit

#### Further reading / Links:

<https://www.stuttgart.de/armutskonferenz>  
<https://urban-future.org/event/stuttgart-23/programme/>  
<https://www.meinstuttgart-meinewelt.de>  
(Last access 15.03.2023)



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://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 are, in particular, combatting infectious diseases, promoting mental health and well-being, preventing and treating the misuse of harmful substances, universal access to healthcare and reducing impacts due to pollution of air, water and soil.



## Overview of the relevant targets

The following targets of SDG 3 are relevant to German municipalities and are already covered in the VLR by indicators:



**3.4** Reduce premature mortality due to noncommunicable diseases and promote mental health



**3.6** Reduce traffic accidents and fatalities



**3.8** Access to basic health care services for all



**3.9** Reduction of diseases and death due to chemicals and pollution

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



**3.1** Reduce maternal mortality



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



**3.2** Termination of all avoidable fatalities among the under-5s



**3.b** Support of research, development and general access to affordable vaccines and drugs



**3.3** Combat infectious diseases



**3.c** Increase of financial means for the healthcare sector and support of health care professionals in developing countries



**3.5** Prevent and treat abuse of harmful substances



**3.d** Improvement of early warning systems for global health risks

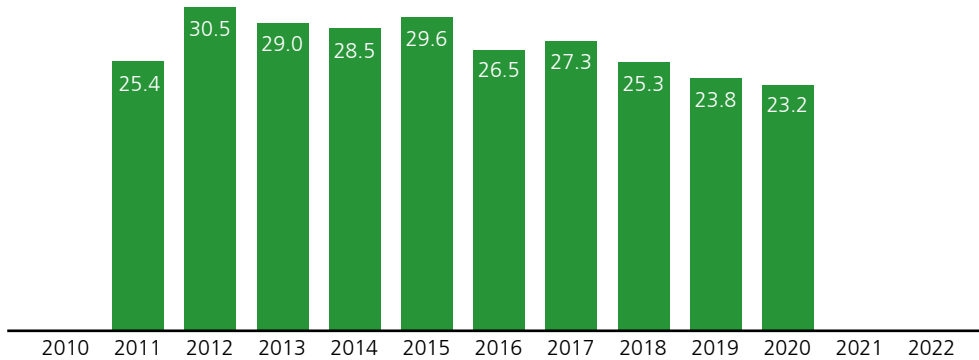


**3.7** Universal access to sexual and reproductive care, birth control and education



## Indicator 3-1: Children with conspicuous screening of gross motor skills (at school enrolment examination)

**Figure 11:** Gross motor skills among children (percentage of 5-year-old children with conspicuous screening at the school enrolment examination)



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

“Reduce premature mortality due to noncommunicable diseases and promote mental health”  
(Target 3.4)

The proportion of children with conspicuous gross motor skills in the school enrolment examination fluctuates between 23 and 30 per cent in the period under review. Since 2017, the number of evident findings has been on a continuous downturn. The period under review for the enrolment years 2021 and 2022 coincided with the pandemic years. Due to the COVID-19 pandemic, the age groups could not be examined entirely, so that no data is available for 2021 and 2022.

### Classification / Definition

The indicator shows the rate of children with a conspicuous screening of gross motor skills (documentation of the school enrolment examination). The stage of development of gross motor skills is examined with a standardised examination (hopping on one leg) and assessed according to age-specific threshold values. Since the examination is a screening process, a certain excess survey has to be assumed. The year refers in each case to the enrolment years. This means that the indicated year complies with the enrolment year, whereas the data was collected approximately 18 months before.

Reference to the indicator of target 3.4 is not obvious at first glance. However, the development of gross motor skills is important for all physical activities. It is the basis for physical activity and sport to prevent noncommunicable diseases, such as cardiovascular diseases and type 2 diabetes, it also promotes mental well-being and thus makes a direct contribution to target 3.4.

### Calculation

Proportion of children with conspicuous screening of gross motor skills:

$$\frac{\text{Number of children of an age group with a conspicuous screening of gross motor skills}}{\text{Total number of children of an enrolment year who are examined}} \times 100$$



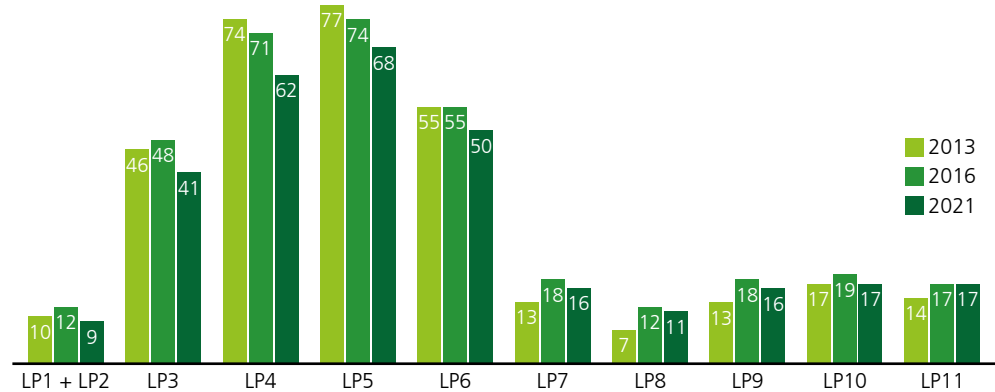


## Indicator 3-2: Level of organisation in sports

“Reduce premature mortality due to noncommunicable diseases and promote mental health”

(Target 3.4)

Figure 12: Level of organisation of different life phases (LP) in sport clubs (in per cent)



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

The level of organisation in sport clubs is particularly high with children. In the life phases 4 and 5 (children from 6 to under 14), more than half of the children are organised in sport clubs. Also in life phase 6 (adolescents from 14 to under 18) the proportion is some 50 per cent. With adulthood (LP7), the level of organisation drops significantly and remains then under 20 per cent.

Since 2013, a decline in sport club membership has been observed, in particular among children and adolescents in life phases 3 to 6 (from 3 to under 18). In the other life phases, the development is not so consistent. Overall, the 2021 survey indicates that membership has declined in all life phases compared to the 2016 census. The COVID-19 pandemic caused even more people to leave a sport club.

### Classification / Definition

Sport and physical activity are among the central factors of health promotion. In addition to individual activity, the organisation in sport clubs in particular is an example of physical activity. The Office of Sport and Physical Activity of the State Capital Stuttgart records the number of members in sport clubs according to life phase. Here, a distinction is made between eleven different life phases.<sup>21</sup>

- 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 persons organised in sport clubs is ascertained and related to the number of residents. The value resulting from this is the level of organisation in per cent.

Sport and physical activity are vital for the prevention of non-communicable diseases, such as cardiovascular diseases and type 2 diabetes, it also promotes mental well-being and thus makes a direct contribution to target 3.4.

### Calculation

Organisation level in sports:

$$\frac{\text{Number of persons organised in sport clubs per life phase}}{\text{Total number of residents per life phase}} \times 100$$





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**Sport clubs during the COVID-19 pandemic**

A survey 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 and presumably the reason they did not leave the club.<sup>22</sup> In addition it could be seen that clubs with an above-average number of children and adolescents as members had the highest loss of members. However, an increase could be observed in outdoor and contactless sports where activities could be resumed earlier when restrictions were loosened.

Indicator 3-3:  
**Urban physical activity spaces**



“Reduce premature mortality due to noncommunicable diseases and promote mental health”

(Target 3.4)

Sport and physical activity are part of urban life in Stuttgart. In addition to the programmes of the sport clubs, more and more sport and physical activities take place beyond the classic sports facilities. At the same time, not only is the number of people increasing doing outdoor sport and without instructors, but also the range of possible forms of exercise. This means that demand for open public spaces are more diverse. With the “Stuttgart Master Plan for Urban Physical Activity Spaces”, the city administration has been developing strategies to promote physical activity in public spaces and ensure it in the long term. In 2020, the physical activity space per resident is 0.23 m<sup>2</sup>; the aim is to double this.

**Classification / Definition**

The indicator refers to areas that are specifically equipped for sport and physical activity and accessible to all. This includes, for instance, kick-around areas, basketball courts, boules areas or table tennis tables. These are related to the number of residents. The indicator was introduced in 2021 and will be updated on a regular basis. It has to be taken into account for this indicator that it only refers to actual sports facilities. With boules areas for instance, only the actual area is measured and not the entire park.

Sport and physical activity are indispensable for the prevention of noncommunicable diseases such as cardiovascular diseases and type-2 diabetes, as well as for mental well-being and thus make a direct contribution to target 3.4.

**Calculation**

Urban physical activity spaces:

$$\frac{\text{Sports areas accessible to all in square metres}}{\text{Total number of residents}} \times 100$$



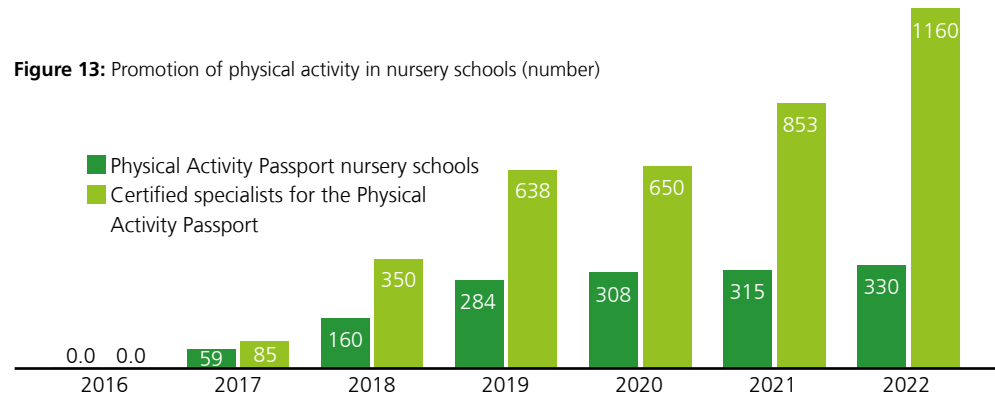
## Indicator 3-4:

## Promotion of physical activity in nursery schools

“Reduce premature mortality due to noncommunicable diseases and promote mental health”

(Target 3.4)

Figure 13: Promotion of physical activity in nursery schools (number)



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

The Stuttgart Physical Activity Passport was developed to support nursery schools and sport clubs in promoting physical activity. It accompanies children in the age group 3 to under 6. One goal of the Physical Activity Passport is to integrate physical activity into everyday family life. Eight animated graphics of animals teach different exercises in a child-friendly way, each of which can be performed at four levels of difficulty. The short videos show how to do the exercises correctly. The Physical Activity Passport supports educational staff, exercise instructors and parents in promoting the children’s motor skills and in observing, accompanying and assessing their development in a differentiated way. Since the programme was launched the number of nursery schools participating has increased significantly to 330. In Stuttgart, there is a total of 1,160 certified specialists for the Physical Activity Passport, and the trend is rising.

For children, physical activity in everyday life has a major influence on their healthy development. The State Capital Stuttgart, together with clubs and care facilities, offer the programme “Growing up actively” in an age-appropriate form to promote physical activity. In addition to the Physical Activity Passport, this includes other components that aim at promoting physical activity and motor skills of children (kitafit, schwimmfit, minisport voucher).<sup>23</sup>

### 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.

Physical activity in nursery schools is fun and also prevents overweight. It is the first step in avoiding noncommunicable 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

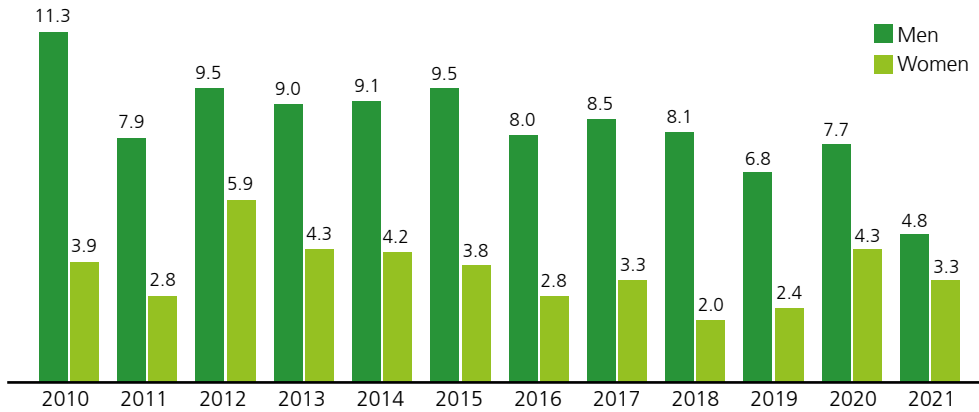
Promotion of physical activity in nursery schools:

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



## Indicator 3-5: Suicide mortality

**Figure 14:** Suicide mortality among men and women (cases / 100,000 residents)



Source: State Statistical Office Baden-Württemberg

“Reduce premature mortality due to noncommunicable diseases and promote mental health”  
(Target 3.4)

The number of suicides per year fluctuates considerably, which is not unusual from a statistical point of view, given the relatively low number of cases. The quite different time-based distribution between men and women is remarkable. In the period under review, 2010 was the year with the most suicides among men, while 2012 stood out when it comes to suicides among women. In 2021, a considerable decrease in the suicide rate among men can be seen, reaching its all-time low since 2010 with 4.8 cases per 100,000 residents.<sup>24</sup>

A Medical Journal [Deutsches Ärzteblatt] study showed no correlation between suicide rates and the COVID-19 pandemic according to police crime statistics. However, to be able to exclude accompanying effects in the coming years it would be wise to continue to monitor the very complex data.<sup>25</sup>

### Assistance in suicide crises



In Stuttgart, there is a wide range of support programmes for people who are in a life crisis and potentially suicidal, as well as for relatives and the bereaved following a suicide. At the following link and QR code, you will find addresses and telephone numbers of institutions, which offer competent and experienced support for overcoming suicide crises.<sup>26</sup>

[www.stuttgart.de/medien/ibs/WEB\\_Hilfe-in-Suizidalen-Krisen\\_Feb\\_2021.pdf](http://www.stuttgart.de/medien/ibs/WEB_Hilfe-in-Suizidalen-Krisen_Feb_2021.pdf)



### Classification / Definition

Suicide is one of the possible premature causes of death. Suicide is usually the result of severe mental impairment or disorder; this is why suicide mortality can be used as an indicator here. Actual suicides vary between men and women and therefore have to be considered as a gender-specific issue.

The data is based on the statistics of causes of death, which in turn is based on the death certificates issued by doctors who determine the death. It is assumed that there is an unrecorded

number of suicides that are included in the statistics as accidents or other types of deaths in addition to the statistically recorded suicides. The reason for this may be that the suicide is not recognised, is not clear or that there is a tendency to state another cause of death due to the loyal relationships between the doctors determining the death and the relatives. The indicator reflects the number of suicides by gender, relative to the number of residents.



**Calculation**

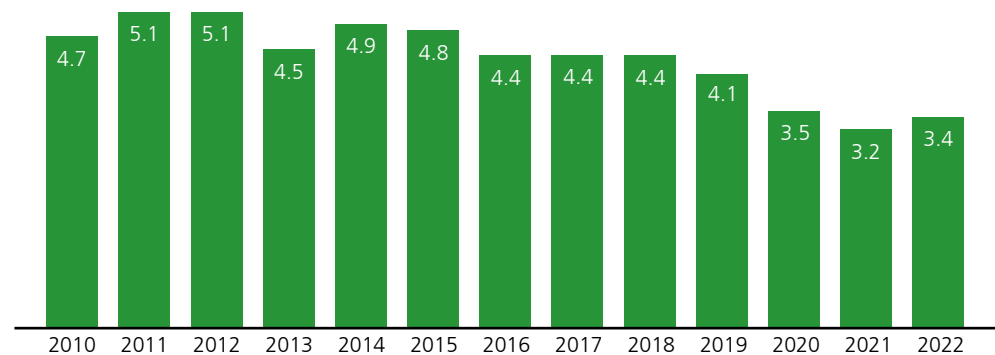
Deaths due to suicide:

Number of suicides of men /	Number of suicides of women /
Number of residents * 100,000	Number of residents * 100,000

**Indicator 3-6:  
Traffic casualties**

**Figure 15:** Traffic casualties (number of casualties /1,000 residents)

“Reduction of traffic accidents and fatalities”  
(Target 3.6)



Source: Federal and State Statistical Offices

Between 2010 and 2022, the number of traffic casualties fluctuates between 3.2 and 5.1 per 1,000 residents. Even if the pattern is irregular, a downward trend can be observed since 2012. This may be partly due to the monitoring and working on traffic accident black spots in the city. Particular focus is on children’s way to school. The decrease in 2020 and 2021 can at least be partly accounted for by the COVID-19 pandemic, which meant a reduction in the traffic volume. The number of traffic casualties is directly related to SDG 11 in terms of sustainable mobility: a shift from motorised private transport to more environmentally compatible modes of transport (public transport, bicycle, on foot) can also contribute to the reduction in accident figures.

**Classification / Definition**

The indicator relates the number of persons injured or killed in road accidents to the population. This indicator is directly related to target 3.6 to reduce traffic accidents and road fatalities and has so far been assigned to target 11.2 (Sustainable mobility). Due to the density of traffic in cities and the convergence of different road users (cars, cyclists, pedestrians), road safety is a key issue. The traffic casualties indicator indicates how successful road safety measures ultimately are.

The indicator is not entirely accurate since the number of traffic casualties should – strictly speaking – be related to the number of road users, as not only residents, but also commuters to the city, play a key role in urban traffic.

**Calculation**

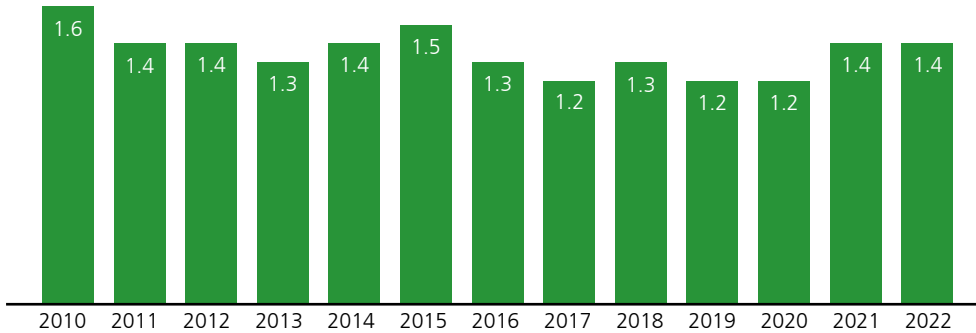
Traffic casualties:

Number of persons injured or killed through traffic accidents /
Number of residents * 1,000



## Indicator 3-7: Premature mortality

**Figure 16:** Premature mortality (deceases/1,000 residents)



Source: State Capital Stuttgart, Statistics Office

“Access to basic health services for all”  
(Target 3.8)

Premature mortality of people under 65 in the State Capital Stuttgart between 2010 and 2022 was consistently under 1.6 fatalities per 1,000 residents. By 2020, a slight decline can be observed – despite fluctuating annual values.

A wide spectrum of causes is responsible for this decline, such as advances in medical care and the decrease in traffic casualties. The overall decline in premature mortality cannot be clearly attributed to individual measures in the areas of preventative health measures, elimination of accident black spots or improved occupational safety. However, taken as a whole, the measures and the range of basic health services are likely to impact the development.

In 2021 and 2022, a slight increase in premature mortality can be observed. On the basis of latest findings, it is unlikely that this is based on a higher mortality rate due to the COVID-19 pandemic. Another possible cause could be the higher proportion of older age groups. From 2020 to the end of 2022, a total of more than 760 people died of or with COVID-19 in Stuttgart.<sup>27</sup>

### Classification / Definition

The quality of people’s lives also depends on their health status. If deaths occur frequently under the age of 65, this can indicate massive health risks and problems in the healthcare sector. Therefore, the measurement of mortality under the age of 65 reflects widespread health risks.

In municipalities, healthcare and the promotion of preventative health measures, which include both physical and mental health, have a very high priority, as does increasing road safety. Furthermore, municipalities together with business associations can contribute to improving occupational health. The indicator is defined as the proportion of deceased under 65 in all residents per thousand.

### Calculation

Premature mortality:

$$\frac{\text{Number of fatalities among persons under 65}}{\text{Number of residents}} \times 1,000$$

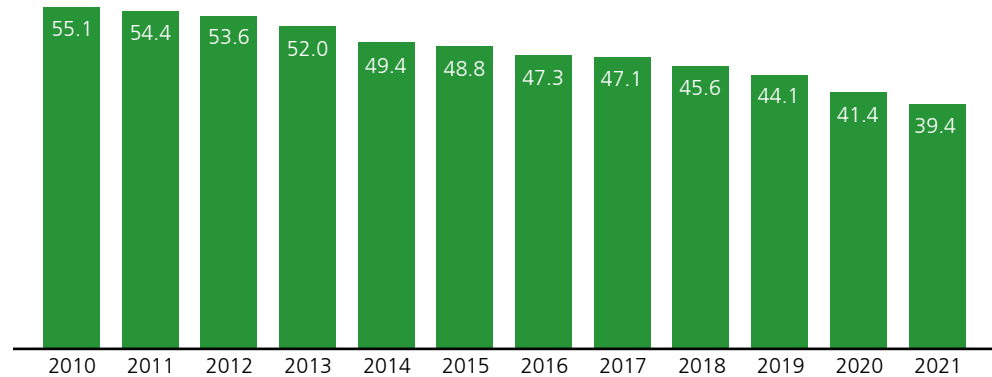


## Indicator 3-8: Medical care

“Access to  
basic health  
services for all”

(Target 3.8)

**Figure 17:** Medical care (number of doctors/100,000 residents)



Source: State Statistical Office of Baden-Württemberg

According to the data of the State Statistical Office of Baden-Württemberg, the care coverage by general practitioners in the State Capital Stuttgart decreased between 2010 and 2021 in relation to the population. However, the present data seems to underestimate the actual density of physicians. In 2017, due to different definitions, the Northern Württemberg District Medical Association reports a significantly higher number of general practitioners for Stuttgart with an increase in the number of doctors from 277 in 2015 to 374 in 2017.

### Opinions on medical care



The 2021 citizen survey revealed that 58 per cent of the people are satisfied with medical care and hospitals, 24 per cent were very satisfied and only some 4 per cent were dissatisfied or very dissatisfied.<sup>28</sup>

A higher density of general practitioners tends to increase the chance of flexible and individually oriented treatment (reduced waiting times as an aspect of accessibility). However, the indicator does not provide reliable information on the quality of care or the actual accessibility, in particular for less mobile population groups. In addition, it should be taken into account that increasingly more doctors work part time leading to a decline in care, for instance difficulties with appointments.

### Classification / Definition

The indicator reflects the density of physicians. Medical care is part of a comprehensive health care and thus an important aspect of the target. In this context, general practitioners are important for primary care and the possible referral to specialised doctors. At the same time, the coverage by general practitioners can also be an indicator of the performance of the health sector as a whole. As a general rule, gaps in coverage can refer to an unfavourable health service coverage as a whole.

### Calculation

Medical care:

Number of general practitioners without a specialisation

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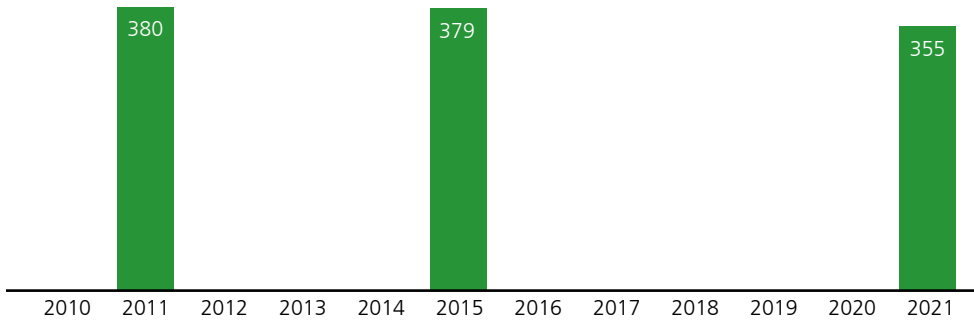
Number of residents

\* 100,000



## Indicator 3-9: Primary care close to home – distance to the nearest general practitioner practice

**Figure 18:** Linear distance to the nearest GP practice (in metres)



Source: Federal Office for Building and Regional Planning

“Access to  
basic health  
services for all”

(Target 3.8)

In 2011 and 2015, the estimated linear distance to the nearest general practitioner (GP) practice was some 380 metres and dropped to 355 metres in 2021. When interpreting these values, however, the topography of Stuttgart must be taken into account. Due to the basin location often with steep slopes, the actual distances can deviate considerably from the linear distance used here as a basis.

### Classification / Definition

The indicator reflects the distance, as the crow flies, to the nearest GP practice according to the number of residents.

The procedure chosen only approximately reflects the actual distance to the nearest GP practice. In the medium term, the indicator will be further developed taking into account actual walking distances.

### Calculation

The linear distance describes the absolute, relief-independent distance from a population unit (250 x 250 metres) to the next unit with a GP practice, 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 in accordance with the proportion of the total population of the district or independent town, 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.

### Accessibility of medical practices

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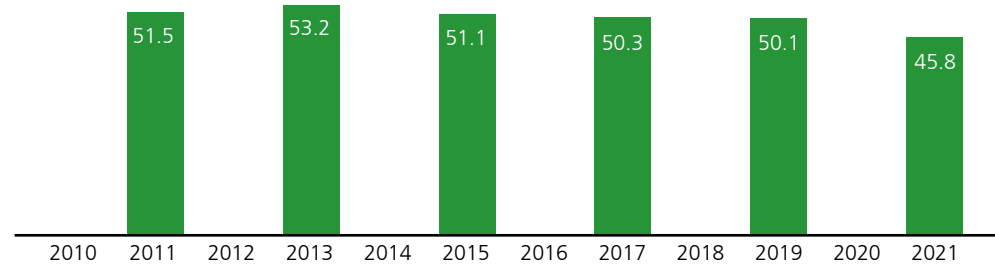
An analysis of the Statistics Office of the City of Stuttgart as to the accessibility of medical practices shows that most of the medical practices are within easy walking distance. This result is also reflected in the 2021 citizen survey which showed a high level of satisfaction. However, there are significant differences between the city districts.<sup>28</sup> The highest density of medical practices is in Stuttgart-Mitte, where everyone can get to a medical practice in less than ten minutes on foot. The lowest density is in Plieningen with only two medical practices. In Vaihingen, it takes on average the longest to reach a medical practice. Compared to previous years, no significant differences can be seen, i.e. that the general accessibility remains good. It remains unclear here how prompt appointment scheduling is.<sup>29</sup>



## Indicator 3-10: Places in nursing homes

“Access to basic health services for all”  
(Target 3.8)

Figure 19: Places in nursing homes (places / 1,000 residents)



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

The places available in full-time residential care in the State Capital Stuttgart have somewhat decreased since 2013. The 53 care places for 1,000 residents 65 years and older at that time decreased to some 46 places in 2021. In fact, the care situation with residential places in nursing homes became more critical due to the disproportionate increase in the number of senior citizens in need of care.<sup>30</sup> Compared to 2019, the number of residential care places significantly decreased in 2021 by approximately 500.

In principle, the approach is “non-residential rather than residential” – particularly as the majority of people in need of care would prefer to be cared for at home. Therefore, the non-residential care infrastructure in the State Capital Stuttgart has been expanded to a very large extent in recent years. It is foreseeable that the number of people in need of care will increase, and – due to the demographic development (increase in the number of senior citizens in need of care) – a 100 per cent utilisation of the places available will not be sufficient, even if non-residential care will be substantially expanded.

### Classification / Definition

The provision of places in nursing homes is an essential aspect of the care of older people in need close to home. What is important is, on the one hand, the proper care of the people in need of residential care. However, the availability of nursing home places also means relief for family members who would otherwise have to take over the care themselves – with the follow-on consequences for the family situation and job opportunities. A sufficient number of care places also provide security for those families currently not in need of a care place, but are dealing with a possible need in future. A predictable future bottleneck in care means stress for families, even before the need actually arises. Due to these side effects, the indicator “Places in nursing homes” reflects a broader spectrum of

relevant aspects. The indicator is defined as the number of places available in nursing homes in relation to the number of residents over 65. The data is collected every two years.

### Calculation

Places in nursing homes:

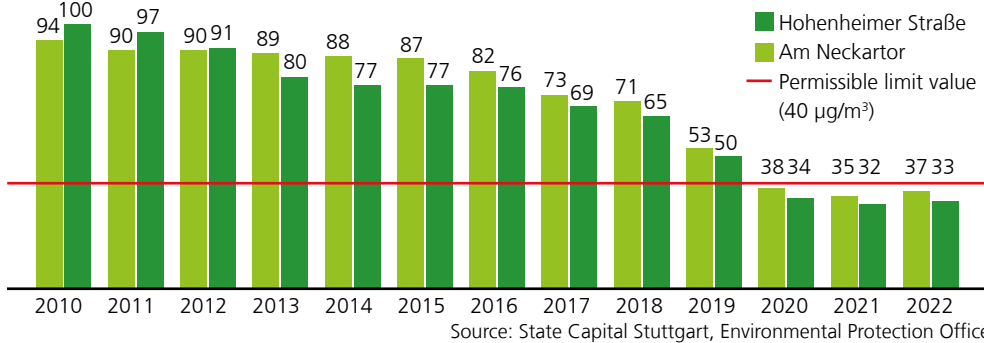
$$\frac{\text{Number of places available in nursing homes}}{\text{Number of residents 65 years and older}} \times 1,000$$





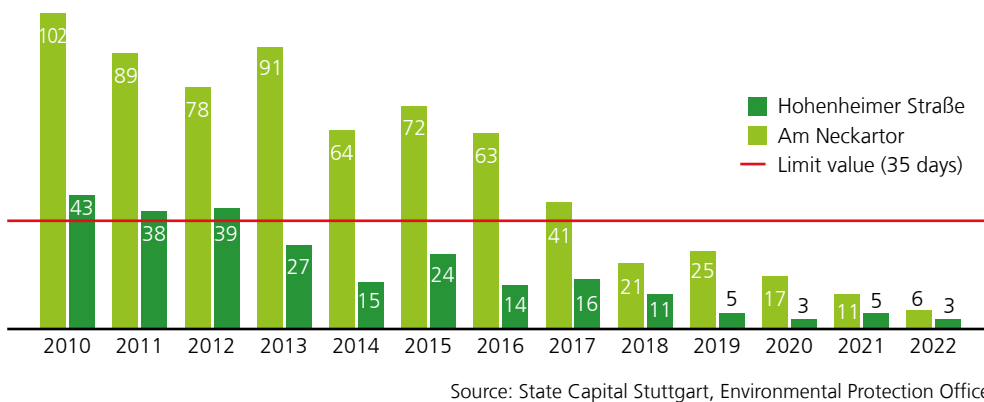
Indicator 3-11:  
Air quality

**Figure 20:** Annual mean values NO<sub>2</sub> for two traffic-oriented monitoring stations (in µg/m<sup>3</sup>)



“Reduction of disease and death due to chemicals and pollution”  
(Target 3.9)

**Figure 21:** Days with PM<sub>10</sub> > 50 µg/m<sup>3</sup> for two traffic-oriented monitoring stations (number of days)



Both the nitrogen dioxide and particulate matter pollution decreased significantly at Am Neckartor and Hohenheimer Straße in Stuttgart-Mitte during the reporting period. In 2020, the thresholds of 40 µg/m<sup>3</sup> with regard to nitrogen dioxide pollution were observed for the first time in the period under review due to air pollution control measures. With 38 and 34 µg/m<sup>3</sup>, the values are significantly lower than those measured ten years earlier (94 and 100 µg/m<sup>3</sup>). However, there are two other monitoring stations (Prag- and Talstraße), where the nitrogen dioxide thresholds were still exceeded.

The number of days with a particulate matter pollution of more than 50 µg/m<sup>3</sup> has also been lower than the threshold of 35 days at Hohenheimer Straße since 2013 and at both monitoring stations since 2018. In 2022, 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.

Air pollution is mainly caused by traffic. The decline in pollution reflects the improved measures to reduce pollutant emissions. Air pollution due to mainly non-traffic-related pollutants (e.g. sulphur dioxide, dust precipitation) has decreased significantly during the last years, ozone pollution has increased slightly.

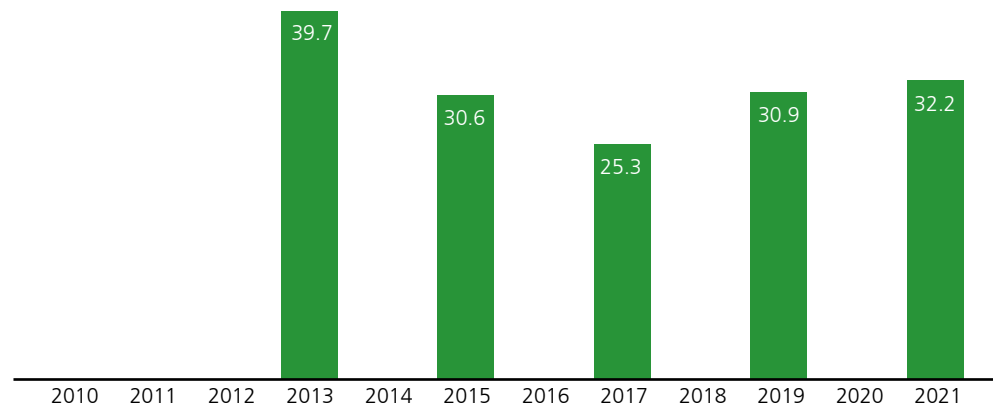


### Opinions on air quality

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In 2013, almost 40 per cent of the citizens stated in the citizen survey that they were very satisfied or satisfied with the air quality in Stuttgart. This was the highest percentage compared to the lowest value in 2017 with some 25 per cent. In other years, the percentage was at approximately 30 per cent (cf. Fig. 22). This shows the discrepancy between how air quality is felt and the values measured, since the air quality has improved significantly at both monitoring stations since 2013.<sup>28</sup>

**Figure 22:** Opinions on air quality: Percentage of people who are very satisfied/satisfied with the air quality in Stuttgart (in per cent)



Source: State Capital Stuttgart, Statistics Office (citizen surveys)

### 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 indicator selected draws on two thresholds the observation of which is a particular challenge in Stuttgart.

These are precautionary values, i.e. permanent exceedance of the thresholds makes health impacts on the population more likely. However, a distinct causal traceability of deaths or illnesses to air pollution is not possible. For many years, in accordance with legal regulations, the air in Stuttgart has been monitored 24/7. Baden-Württemberg has a corresponding monitoring network for this.

### Calculation

Air quality:

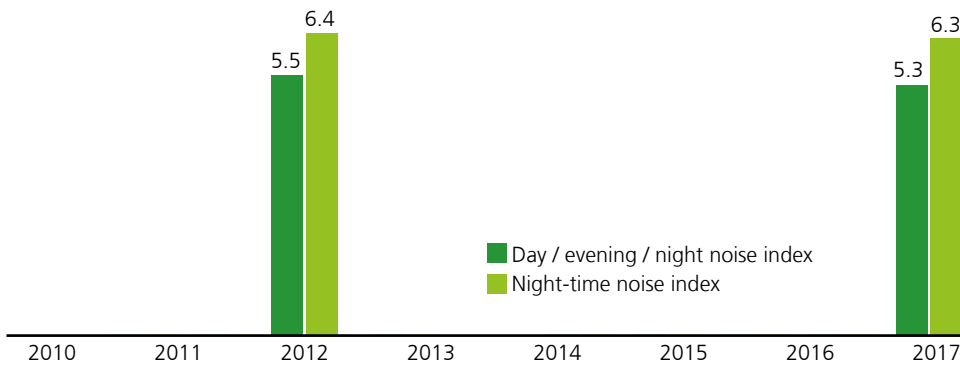
Annual medium nitrogen dioxide pollution:  
permitted  $40 \mu\text{g NO}_2 / \text{m}^3$

Number of days per year with a particulate matter  
average of  $\text{PM}_{10} > 50 \mu\text{g} / \text{m}^3$ : permitted 35 days



## Indicator 3-12: Noise pollution

**Figure 23:** Proportion of residents exposed to noise (noise pollution above 65/55 dB(A) (day/night) due to road traffic) (in per cent)



Source: State Capital Stuttgart, Environmental Protection Office

Compared to 2012, for the year under review 2017, there was a minimum decrease in the proportion of those affected for the entire city area. Nevertheless, almost 40,000 people (6.3 %) in Stuttgart were affected by night-time road traffic noise above 55 dB(A).

The City of Stuttgart drew up a Noise Action Plan in 2009 in accordance with the EU Environmental Noise Directive, which was updated in 2015 and reviewed in 2019, to systematically and continuously reduce noise pollution. The next comprehensive update is scheduled by 2024.

Road traffic is the main source of noise pollution in Stuttgart. Therefore, the focus of the measures is on reducing road traffic noise. The main points of noise reduction planning are speed limits also on main roads, by-pass roads around residential areas for HGV traffic, increased installation of noise-reducing road surfaces and the construction or raising of noise barriers, as at B 10/27 in Zuffenhausen or a noise barrier at A 831 in Vaihingen.

“Reduction of disease and death due to chemicals and pollution”

(Target 3.9)

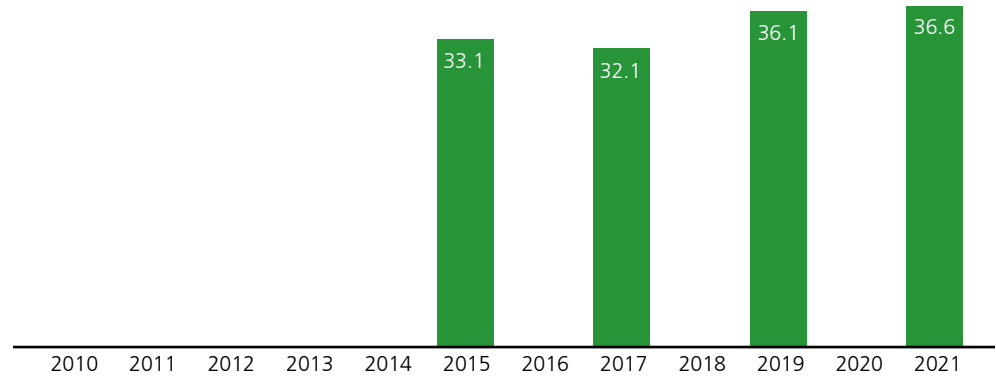
### Opinions on noise pollution



Since 2015, data on perceived noise pollution has been collected every two years as part of the citizen survey. In 2015 and 2017, the percentage of people who are very satisfied or satisfied with the extent of the noise level in Stuttgart was around 30, with a slight increase to some 40 per cent in 2019 and 2021 (cf. Fig. 24). This, in turn, means that approximately two thirds of the people perceive noise pollution in Stuttgart as too high.<sup>28</sup>



**Figure 24:** Opinions on noise pollution: Proportion of people who are very satisfied/satisfied with the noise pollution in Stuttgart (in per cent)



Source: State Capital Stuttgart, Statistics Office (citizen surveys)

### 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<sub>night</sub>) above 55 dB(A) are detrimental to health.

Noise is distributed in the city very differently. Relatively high noise levels can be observed in certain places. However, these can vary depending on the time of the day. During the day, noise pollution, in particular by road or air traffic, tends to be higher than at night. In particular, noise pollution at night is a problem, since it can cause sleeping disorders.

The noise pollution indicator reflects the proportion of those affected who are exposed to noise levels of more than 65 dB(A) during the day or 55 dB (A) at night.

The indicator has been developed from the impact analysis required by the EU Environmental Noise Directive, the results of which are also presented in the Noise Action Plan of the City of Stuttgart.

Noise pollution through excess noise exposure is acoustic environmental pollution, which is detrimental to health and environment, as is emphasised in target 3.9.

### Calculation

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

$$\frac{\text{Number of residents with road traffic noise exposure above 65 dB(A) over 24 hours}}{\text{Number of residents}} \times 100$$

Noise pollution, night-time noise index:

$$\frac{\text{Number of residents with night-time road traffic noise pollution above 55 dB(A)}}{\text{Number of residents}} \times 100$$



## Correlation with other SDGs

The goal SDG 3 "Health and Well-Being" is directly related to SDG 1 ("No Poverty"), since poverty and homelessness can have mental consequences or are associated with insufficient access to medical care, places in nursing homes or medication. Malnutrition or overweight has a direct impact on health and can promote cardiovascular diseases or diabetes (SDG 2 "Zero Hunger").

It is also related to SDG 4 ("Quality Education"), because medical check-ups and physical activity programmes are preventative health measures in the context of quality and free education at schools and nursery schools.

Consistent wastewater disposal and the provision of quality drinking water are also indispensable for good health (SDG 6 "Clean Water and Sanitation").

A high workload can contribute to economic growth (SDG 8 "Decent Work and Economic Growth"), however, it can also be a target conflict at the same time, since too much work on a permanent basis can impair health and well-being. On the other hand, unemployment, in particular long-term unemployment, can have negative effects on mind and health. Social inequalities (SDG 10 "Reduced Inequalities") can also affect in particular mind and well-being in general.

Air quality and noise pollution are directly related to urban traffic and means of transport chosen (cf. "Transport means for getting to work", under SDG 11). The "Air quality" indicator is also influenced by pollutants from other sources (e. g. indicator "Greenhouse gas emission", SDG 13). In a carbon-based economic system, these emissions in turn are influenced by economic activity (in particular the indicator "Gross domestic product", SDG 8, also SDG 9 "Industry, Innovation and Infrastructure"). Forests, trees (SDG 13 "Climate Action") and recreational areas (SDG 11 "Sustainable Cities and Communities") and natural environments and biological diversity (SDG 15 "Life on Land") are related to air quality, but also to well-being as a whole.

The sustainable procurement of organic food or low-pollutant products (SDG 12 "Responsible Consumption and Production") contributes not only to improved health of Stuttgart residents, but also to that of people along global production chains.

The increased occurrence of urban heat islands as a consequence of climate change (SDG 13 "Climate Action") also has direct health effects, often in the form of cardiovascular diseases or even a fatal heat stroke.

Potential target conflicts in the context of ecological sustainability (SDG 6, SDG 13, SDG 14, SDG 15) arise in connection with construction and the expansion of infrastructure in the health sector, which can be kept in check by environmentally, climate- and resource-friendly construction methods.

Mobile working as part of the Digital Municipality (SDG 16) can contribute to a better work-life balance (in particular, when commuting to and from work is reduced). The increased work-life balance resulting from this reduces stress and promotes mental health and well-being. In addition, the reduction in traffic can result in a reduction of road casualties and is therefore directly related to sustainable traffic (SDG 11).

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 10:** "Low-barrier housing"
- SDG 11:** "Bicycle traffic"
- SDG 11:** "Recreational areas"
- SDG 11:** "Density of passenger cars"
- SDG 11:** "Means of transport for getting to work (incl. pedestrians)"
- SDG 13:** "Forest area"
- SDG 13:** "Trees in public spaces"
- SDG 13:** "Greenhouse gas emissions"
- SDG 15:** "Biodiversity"
- SDG 16:** "Mobile working"

3 GOOD HEALTH AND WELL-BEING



## Practical example 5: Urban physical activity space

### Context:

Public accessible playgrounds and space for physical activity are very important for allowing children to grow up healthy and play a special part in offering equal opportunities when it comes to health. Studies show that everyday activity of children often depends on their background. Children in attractive residential areas with opportunities to play and exercise move up to eight times more than children without playgrounds and opportunities in their neighbourhood.<sup>14</sup>

### Description / Realisation:

The master plan for urban physical activity space provides pioneering ideas how to plan public space in Stuttgart so that it can become more attractive for exercise or sports. With a two-year planning and participation process, the Urban Planning and Housing Office together with the Sport and Physical Activity Office and an external working group developed this master plan. The potential and examples presented in the master plan aim at providing a public space that offers an incentive for regular physical activity, strengthens a sense of social togetherness and improves the quality of life in the neighbourhood. In November 2021, the municipal council decided to always take the master plan into account in future urban development projects and redesigns of public spaces.

This is done in interdepartmental cooperation and with the local players and users involved.

### Experience / Results:

Since 2019, some 35 projects have been successfully carried out in the course of the master plan for urban physical activity space in cooperation with district offices, youth councils, civil engineering, sport clubs and the Parks, Cemeteries and Forestry Office.

The master plan takes current needs and trends into account to develop attractive physical activity opportunities in all city districts. For example a further five facilities for calisthenics were set up and three sport boxes provided with rental equipment; at Marienplatz, an exercise circuit was built and two playgrounds equipped with modern movement modules. In addition, temporary fitness modules, mobile pump tracks and teqball tables could be tried and tested at ten locations throughout the city for a short time. This low-threshold approach will be further expanded in the coming year, along with murals in public spaces encouraging people to get moving.

A special project is the temporary use of Österreichischer Platz in Stuttgart-Süd. The former park area at Österreichischer Platz – an area of approx. 3,000 square metres right in the middle of Stuttgart's city centre – is to be transformed into a sports centre with trend sports for kids and young people: a cool place to meet and move.

### Division / Office / Public Undertaking:

Sport and Physical Activity Office in the Public Safety, Order and Sport Division together with the Civil Engineering Office, the Parks, Cemeteries and Forestry Office, the District Offices, Youth Councils and Sport Clubs

### Further reading / Links:

GRDRs 739/2018, 106/2021 [Municipal Council documents]  
<https://www.stuttgart.de/medien/ibs/masterplan-fuer-urbane-bewegungsraeume-landeshauptstadt-stuttgart.pdf>  
<https://www.stuttgart-bewegt-sich.de/bewegungsraeume>  
 (Last access: 15.03.2023)



## Practical example 6: schwimmfit – Swim safely in Stuttgart



### Context:

Being able to swim is a basic motor competence all children should master. Children who cannot swim miss out on an invaluable experience in life and exercise. The experience children and young people gain in swimming is something special for their physical, motor, psychological and social development and cannot be replaced by anything else.<sup>31</sup>

Surveys show that the number of children who are safe in water by the end of primary school is decreasing. No data is yet available for the post-pandemic period; however, it is assumed that the pandemic has made the situation worse, so there is a definite need for action.

### Description / Realisation:

This is where the “schwimmfit” programme comes in. Since 2007 the target has been that all children are able to swim at the end of primary school.

With the “Rent a Swimming Coach” project, the Sport and Physical Activity Office supports schools and nursery schools during swimming lessons by providing swimming coaches who conduct lessons together with teachers and assistants. This way, children who can’t swim or are not so good, can be helped.

The “schwimmfit Family” component has been designed to find free swimming time in indoor and learning pools to enable additional swimming courses there. Three times a year, courses are organised in the learning pools with the opening hours extended to Saturdays. There are also courses in the municipal swimming pools during the summer season. All courses are published at [www.stuttgart-bewegt-sich.de](http://www.stuttgart-bewegt-sich.de). The time schedules help families find swimming courses for their children, and also make it easier for clubs and pool operators to assign free places.

### Experience / Results:

#### “Rent a Schwimmtrainer”

In the school year 2022/2023, 65 schools (more than 150 classes to grade 6) get support from a swimming coach. Almost half of Stuttgart’s 88 primary schools are supported at present. The need is rapidly rising, since many children often cannot swim. At some schools, swimming lessons would have to be cancelled, if there were no support.

#### *schwimmfit Family*

In 2022, more than 300 courses were organised and advertised via “schwimmfit Family”. Regardless of the established courses, families can use the City’s indoor and outdoor swimming pools individually and practise with their children. Children up to the age of 6 have free admission. A video is available at [www.stuttgart-bewegt-sich.de/entdecke/schwimmfit](http://www.stuttgart-bewegt-sich.de/entdecke/schwimmfit) to show parents how they can get their children used to water.

#### *Getting used to water in nursery school*

One experience from the programme was that support by swimming coaches was more readily accepted by schools than by nursery schools. In nursery schools many children are not yet accustomed to water and the organisation to visit a pool is sometimes too much. For this reason, getting-used-to-water sessions should be carried out in nursery schools by trained nursery teachers or external coaches.

#### *Swimming capability index*

A swimming capability index is to be introduced to gauge success and objectively assess swimming skills in Stuttgart. This index (number of children in Grade 4 with a bronze certificate or higher) would make it possible to offer more support in certain city districts or at certain schools where the children are not so fit in swimming.

### Division / Office / Public Undertaking:

Sport and Physical Activity Office in the Public Safety, Order and Sport Division

### Further reading / Links:

<https://www.stuttgart-bewegt-sich.de/entdecke/schwimmfit>  
 Recommendations of the Standing Staff of Conference of the Ministries of Culture Affairs in the Federal Republic of Germany, the German Association for Sports Science and the Deutsche Vereinigung für Sportwissenschaft and the Bundesverband zur Förderung der Schwimmausbildung für den Schwimmunterricht in der Schule [Federal Association of the Promotion of Swimming Training in Schools] (2017):  
[https://www.kmk.org/fileadmin/Dateien/veroeffentlichungen\\_beschluesse/2017/2017\\_05\\_04-Empf-Schwimmen-in-der-Schule\\_KMK\\_DVS\\_BFS.pdf](https://www.kmk.org/fileadmin/Dateien/veroeffentlichungen_beschluesse/2017/2017_05_04-Empf-Schwimmen-in-der-Schule_KMK_DVS_BFS.pdf) (Last access 15.03.2023)

3 GOOD HEALTH AND WELL-BEING



## Practical example 7: Urban Care Conference

### Context:

The aim of the Urban Care Conference is to ensure and promote the cooperation and networking of all people involved in the care sector in Stuttgart: the care insurance companies and other funding agencies, as well as medical services and people actually affected to further develop the care of the Stuttgart population together.

### Description / Realisation:

The Urban Care Conference is a platform to network the players in the care sector. Synergies are used and resources released by pooling know-how and structuring working processes. Exchange and transdisciplinary networking is the basis for adequately addressing the general social task of creating a powerful, local and coordinated care of the population. The common objective is the development of care with a view to a democratic care culture with shared responsibility.

### Experience / Results:

In the context of the Urban Care Conference three working groups were established with the following subjects:

- WG 1 Establishment of the required urban care and support structures: non-residential and residential care
- WG 2 Development of age-appropriate neighbourhood structures: "Caring Community"
- WG 3 Development of integrated support, relief and networking structures: digital participation

Recommended action is available for all three working groups. The recommendations are the result of participative working processes. The recommendations were jointly developed by experts from the care sector and are supported by all members of the Urban Care Conference. The recommendations are not conclusive.

### Division / Office / Public Undertaking:

Social Welfare Office in the Social Affairs and Integration Division

### Further reading / Links:

GRDRs 463/2022 [Municipal Council document] "Weiterentwicklung der Pflege in Stuttgart: Aktueller Stand und Handlungsempfehlungen" [Development of Care in Stuttgart: current status and recommended action]



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://www.stuttgart.de/lebenswertes-stuttgart)





## SDG 4 Quality Education

“Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”

Relevant targets of SDG 4 for German municipalities are in particular access to high-quality primary and secondary education, to pre-school education, as well as technical, vocational and tertiary education. The focus is on reducing gender- and milieu-specific differences in education and providing 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 and are already covered in the VLR by indicators:



**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** Elimination of 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

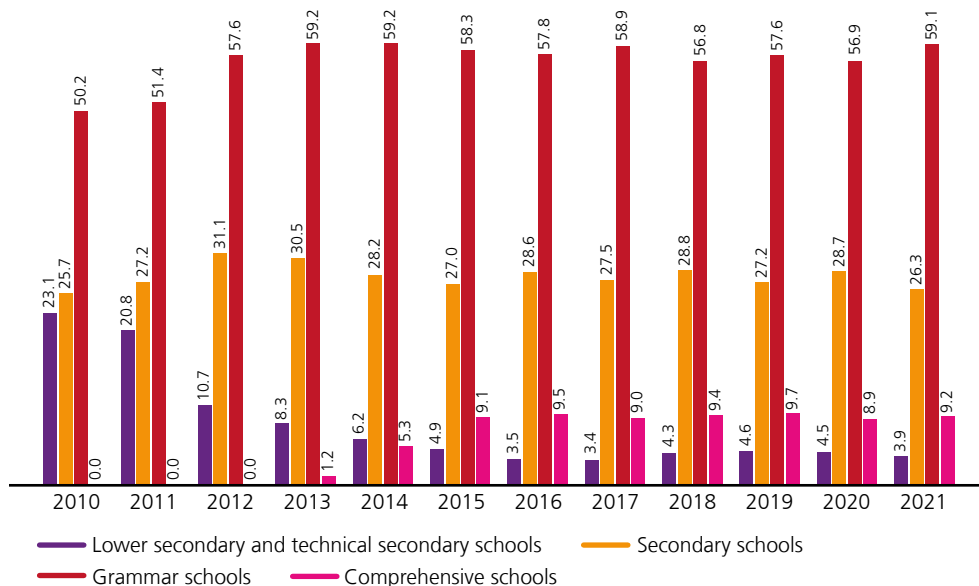


**4.a** Introduction and expansion of inclusive and safe schools



## Indicator 4-1: Transition from primary school

Figure 25: Transition rates from primary school to secondary school (in per cent)



“Free quality primary and secondary education”

(Target 4.1)

Source: Schools Administration Office

More than half of Stuttgart’s primary school children change to a grammar school after the fourth grade. This value has seen little change in recent years. In relation to the entire period under review since 2010, two points stand out: on the one hand, since 2010 the transitions have increasingly shifted from the lower secondary and technical secondary schools to grammar schools due to the elimination of the binding recommendation from the primary school. On the other hand, the introduction and expansion of comprehensive schools as of 2013 led to a preference for this school type.

### Classification / Definition

The transition rate from primary schools to secondary schools indicates the ratio of primary school children transferring to various types of schools. Transitions from public primary schools are shown.

### Calculation

Transition from primary school:

$$\frac{\text{Number of transitions to the respective type of school}}{\text{Number of primary school children in final year}} \times 100$$

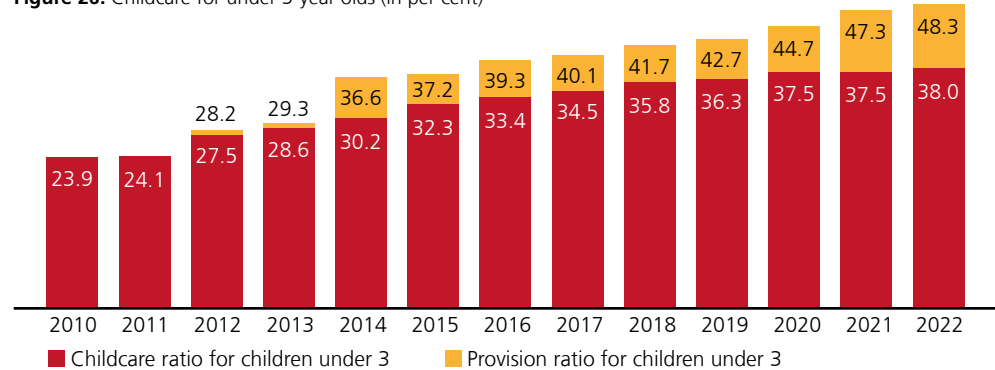


## Indicator 4-2: Childcare

“Equal access to  
quality pre-school  
education”

(Target 4.2)

**Figure 26:** Childcare for under 3-year-olds (in per cent)



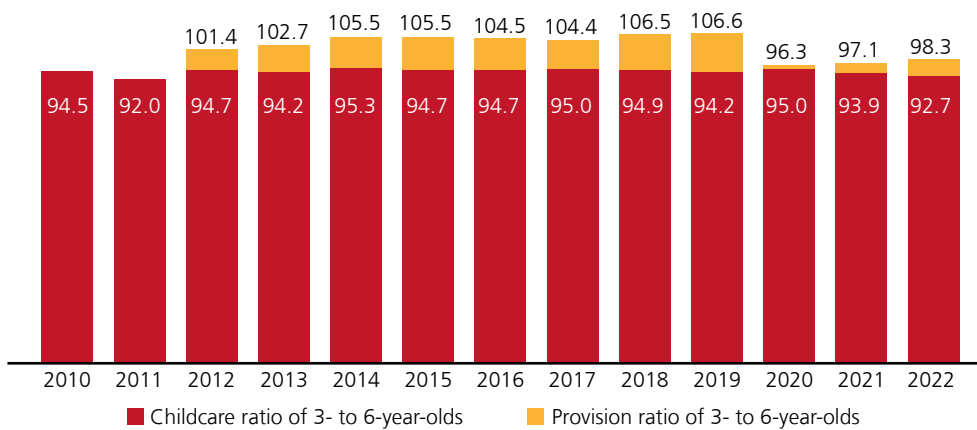
Source: State Statistical Office of Baden-Württemberg; State Capital Stuttgart, Youth Welfare Office and Statistics Office

Childcare of under 3-year-olds increased in the reporting period. The percentage has risen from 23.9 (2010) to 38.0 per cent (2022). The expansion of daycare centres in the State Capital Stuttgart has been intensified in recent years and is reflected in these figures.

In 2022, the number of young children under 3 years in Stuttgart was some 17,100. In particular, between 2014 and 2018, it increased by more than 2,000 due to a high level of immigration and rising birth rates. Since 2019, the number of young children has decreased by some 1,000. The cause is slightly declining birth rates and more children and their families moving away in 2020.<sup>27</sup>

Due to the increase in the number of children between 2014 and 2018, the childcare ratio has not increased as much as in the years before 2014, despite an increase in places. In 2020, the childcare ratio rose by more than one percentage point to 37.5 per cent, this can be accounted for by the decline in the number of children. In 2021, the value was exactly at the level of the previous year, in 2022, a slight increase of 0.5 percentage points can be observed. The provision ratio which refers to the places theoretically available, rather than the children actually cared for is about 48 per cent, the provision target for the under 3s is around 60 per cent.

**Figure 27:** Childcare for 3- to 6-year-olds (in per cent)



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

In the period under review, the proportion of children between three and six cared for mostly remained unchanged. The value fluctuates between 93 and 96 per cent. In 2021 and 2022, however, a decline in the childcare ratio of approximately one percentage point can be observed for three to six year-olds. On the one hand, this is due to a decline in care capacity, in particular caused by staff shortages, and on the other hand due to an increased demand caused by the arrival of families with children from the Ukraine in 2021 and 2022. The war-related new arrivals from the Ukraine means a further demand for care places.

This is also reflected by the recent statistical total provision rate of 107 per cent, which does not consider the actual number of children cared for, but the number of places available. In terms of figures, there are sufficient places available in Stuttgart. However, due to staff shortages, construction measures and the like, not all places available can be allocated. Therefore, the place buffer of more than 100 per cent makes sense and is necessary. In particular, this surplus of places is also effective, because since the school year 2020/21, the deadline for school enrolment has in stages been brought forward to 30 June. Bringing forward the deadline for school enrolment means that more 6-year-olds will remain in the nursery school for another year.

### Opinions on childcare

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In the 2021 citizen survey, when asked about satisfaction in different areas of life, 50 per cent of the people answered that they were satisfied or very satisfied with the range of nursery schools and daycare facilities. Even if the participants to a large extent said that they were satisfied with childcare, this is still a topic among the basic problems Stuttgart residents have. 39 per cent of the respondents assessed the problem of the

lack of childcare facilities as rather large or very large. With 56 points, the problem of unavailable all-day care ranks eighth and the problem of the lack of daycare facilities ranks 12th. The municipal barometer comprises 100 possible points, whereby the number of points is the basis for the order of the 32 ranks. The score reflects how a problem is perceived; the higher the score, the greater the problem.<sup>28</sup>



### Classification / Definition

Pre-school childcare should improve the educational opportunities of children – regardless of the origin and educational level of the parents – and prepare the children for school. Parents preparing children for school can also be correct and constructive, but the SDGs prefer institutionalised pre-school education. The availability of pre-school education programmes also offer parents the opportunity for gainful employment. For these reasons, early childhood education has a key position both from a social point of view (e.g. in terms of education, equality and equal opportunities) and from an economic point of view (in terms of the financial situation of the parents).

The “Childcare ratio” indicator reflects the actual care. The provision rate of daycare, on the other hand, indicates the number of places statistically available for children of the corresponding age in nursery schools, including the company places occupied by Stuttgart children. When calculating the provision rate, 6-year-olds attending nursery schools are also taken into account. Therefore, the reference figure for years included until 2014: 3.25 at 95 per cent; from 2015: 3.27 at 98 per cent and from 2020: 3.51.

The indicator shows the proportion of children cared for among all children and differentiates between age groups. Both sub-indicators do not reveal the quality of care. The indicator also does not reveal whether children are not cared for due to a lack of care facilities or places or due to decisions made by the parents.

### Calculation

Care ratio:

Actual childcare for under 3-year-olds:

$$\frac{\text{Number of children under 3 in daycare centres}}{\text{Number of children under 3}} \times 100$$

Actual childcare for 3 to 6 years old children:

$$\frac{\text{Number of 3 to 6 years old children in daycare centres}}{\text{Number of 3 to 6 years old children}} \times 100$$

Provision ratio:

Places available in nursery schools for children under 3:

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

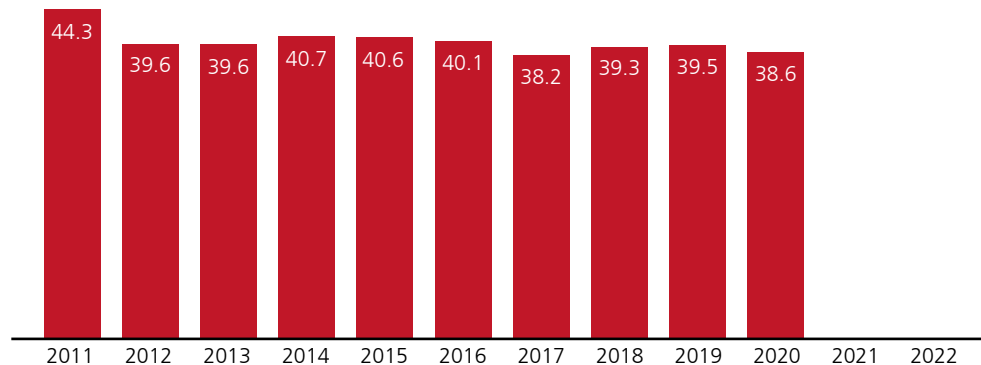
Places available in nursery schools for 3 to 6 years old children:

$$\frac{\text{Number of places for 3 to 6 years old children}}{\text{Number of 3 to 6 years old children (cf. definition)}} \times 100$$



Indicator 4-3:  
**Children with speech impediments  
 (at school enrolment examination)**

**Figure 28:** Children with speech impediments (at school enrolment examination) (in per cent)



Source: State Capital Stuttgart, Public Health Office

“Equal access to  
 quality pre-school  
 education”  
 (Target 4.2)

The number of children with speech impediments revealed in the school enrolment examination has been at a fairly constant 38 to 40 per cent since 2012, except for the 2011 school enrolment year. The evaluation period for the 2021 and 2022 school enrolment years coincides with the pandemic years. Due to the COVID-19 pandemic, a complete evaluation of the years was not possible. Therefore, no data is available for 2021 and 2022.

**Classification / Definition**

The indicator describes the proportion of children in a school enrolment year where language screening is conspicuous. The Heidelberger Auditive Screening in School Enrolment Examination (HASE screening) is used to assess the level of language development. In this context, appropriate thresholds are set for the different age groups. The HASE screening differentiates between children with and without speech impediments.

The rate of children with a conspicuous language screening is relatively high, since the screening initially records all children with speech impediments. Further tests are carried out to find reasons for the problems (for instance little knowledge of German or disorders in speech development), the results are then used to determine the support required. The year respectively refers to the school enrolment years. This means that the indicated year complies with the enrolment year. Data was collected approximately 18 months before.

**Calculation**

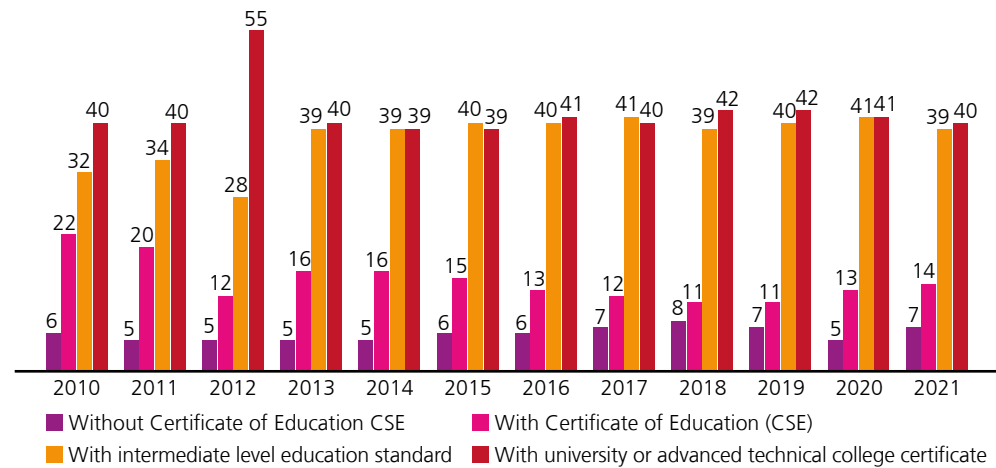
Children with speech impediments:

$$\frac{\text{Number of children with a conspicuous language screening according to HASE}}{\text{Number of all children examined in an enrolment year}} \times 100$$



## Indicator 4-4: School leavers by school-leaving qualifications

**Figure 29:** School leavers from general education schools by school-leaving qualifications (in per cent)



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

“Equal access to affordable, technical, vocational and tertiary education”

(Target 4.3)

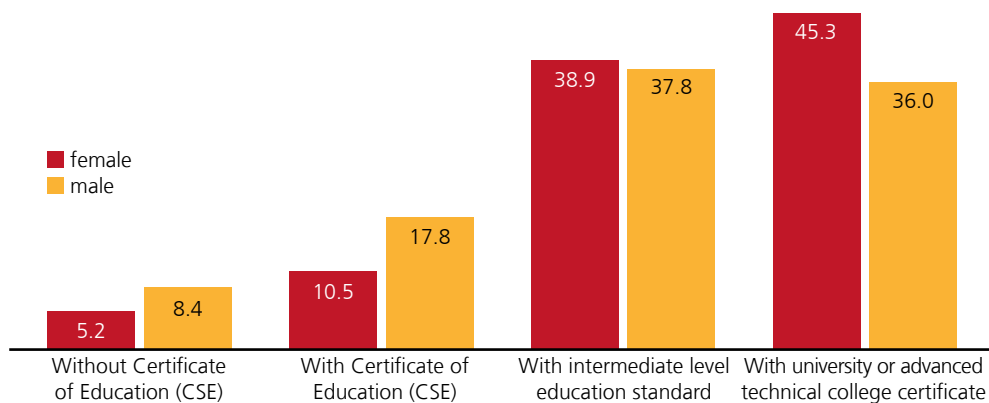
Some 40 per cent of pupils in Stuttgart leave school with Abitur and thus obtain the university or advanced technical college certificate. Since 2010, this share has remained unchanged to a large extent. 2012 is an “outlier year” in which the Abitur rate hit a one-time 54.6 per cent. This exceptional value comes from the grammar schools switching from nine to eight years (some model schools stayed with a nine-year period). This meant a double Abitur year in 2012, while the number of school leavers from other secondary schools remained at the normal level. Accordingly, the proportion of school leavers with Abitur was significantly higher.

The proportion of pupils with an intermediate level education standard has also been some 40 per cent since 2013, having been around one third in previous years. In contrast, the proportion of pupils leaving school with CSEs has dropped. In the period under review, the proportion fell from 22 to eleven per cent now. The number of school leavers without a school-leaving certificate has remained comparatively constant between five and eight per cent.

These figures refer to the educational institutions in the State Capital Stuttgart. However, the pupils at these schools do not necessarily live in Stuttgart, but may also commute from the surrounding region. The indicator is restricted to school leavers from general education schools and does not consider the pupils who, after completing their basic secondary school education, acquired a higher education entrance qualification, for instance in the vocational school system (technical and vocational college, vocational prep schools or vocational grammar schools) after their CSE or secondary school certificate.



**Figure 30:** School leavers from general education schools by school-leaving qualifications and gender in 2021 (in per cent)



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

A gender- and qualification-differentiated analysis of school leavers shows that almost 45 per cent of female school leavers leave school with a university or advanced technical college certificate. Among male school leavers, it is only 36 per cent. The largest group (37.8 per cent) leaves school with an intermediate level education, whereas in 2019 this was 42 per cent. Leaving school with or without CSEs is also more widespread among male pupils. Compared to the evaluation in 2019, the number of school leavers with CSE has increased by 4.5 percentage points. Eight per cent of male school leavers, but only five per cent of female school leavers do not have a school-leaving qualification.

### Classification / Definition

The indicator describes the proportion of school leavers according to their school-leaving qualification at public and private general education schools. In a knowledge society, education, in particular higher education, is of great importance. The basis for good vocational training at universities or in an apprenticeship is a good school education. Often a university or advanced technical college certificate is required or appreciated. Therefore, accomplishments at school are important for both the economy and the professional opportunities of school leavers and of course for their income and opportunities in life. A good education is of great importance both economically and socially.

### Calculation

School leavers from general education schools:

$$\frac{\text{Number of school leavers by school-leaving qualifications}}{\text{Number of school leavers in total}} \times 100$$

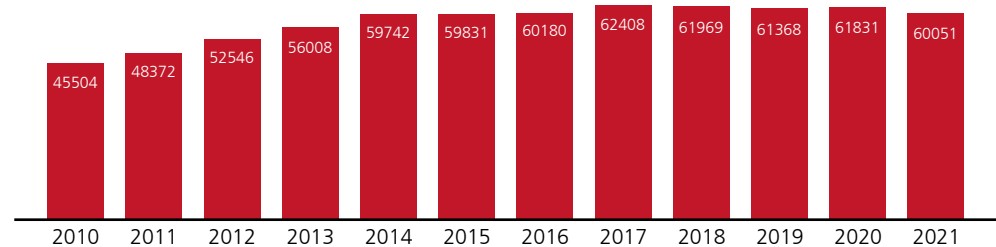


## Indicator 4-5: Students

“Equal access to affordable, technical, vocational and tertiary education”

(Target 4.3)

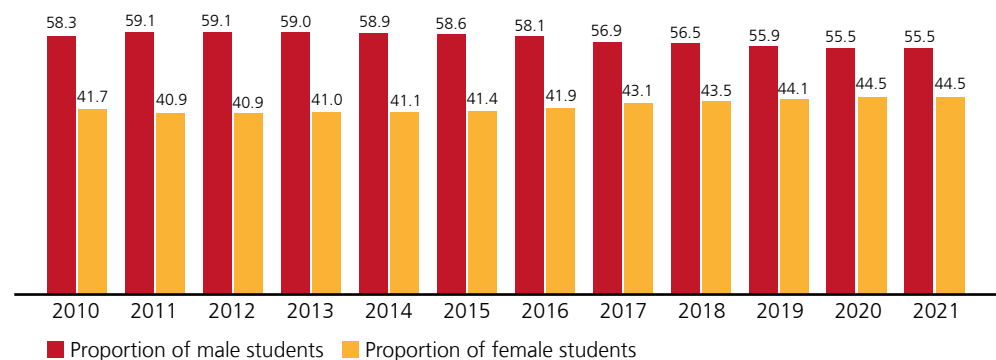
**Figure 31:** Number of students at universities and colleges in Stuttgart since the winter semester 2010/2011



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

Since the winter semester 2010/2011, the number of students at universities and colleges in Stuttgart has increased considerably. In the winter semester 2010/2011, the number of students was some 45,000 and reached its peak in 2017/2018 with around 62,000. Since then, the number has slightly decreased and is approx. 60,000 in the winter semester 2021/2022. In relation to the population of Stuttgart, the proportion of students is some ten per cent in 2021. In Stuttgart, there is a total of 13 state-recognised universities and colleges with the largest proportion of students at the University of Stuttgart and the University of Hohenheim.<sup>32</sup>

**Figure 32:** Number of students at universities and colleges in Stuttgart since the winter semester 2010/2011 (in per cent)



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

The proportion of male students is significantly higher than that of female students. The difference of 20 percentage points between male students with almost 60 per cent and female students with some 40 per cent remained relatively constant between the winter semester 2010/2011 and the winter semester 2016/2017. Since then, the difference has been decreasing and in the winter semester 2021/22 it is still some ten percentage points.

### Classification / Definition

Introduced in 2023, this indicator is to be continuously updated. The indicator describes the number of students at the universities and colleges in Stuttgart for the winter semester of any year. It also shows the percentage of male and female students. This access to tertiary education, highlighted in target 4.3, reflects the access to universities and equal institutions.

### Calculation

Students:

Number of students per winter semester

Number of male and female students:

Proportion of male and female students

/

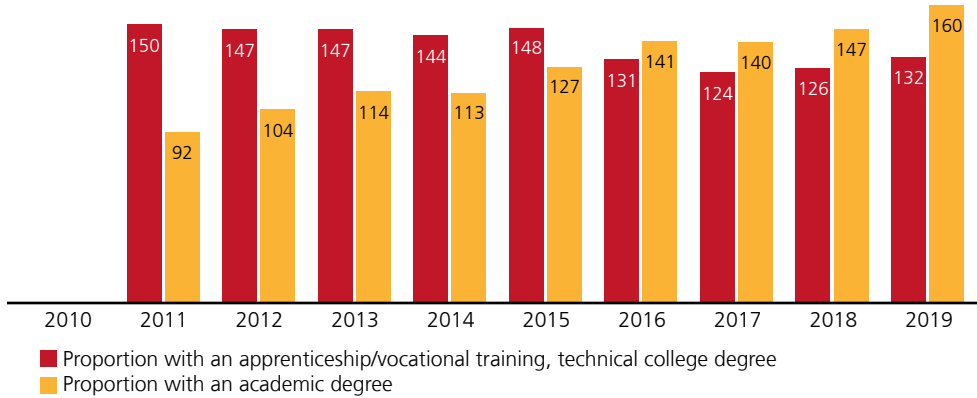
Total number of students

\* 100



## Indicator 4-6: Vocational qualifications

**Figure 33:** Proportion of different vocational qualifications (Number/1,000 persons in gainful employment)



“Increase the number of persons with qualifications relevant to the labour market”

(Target 4.4)

In the period under review, there was a significant shift in the vocational qualification structure in Stuttgart. While in 2011, with 150 persons per 1,000 persons in gainful employment, a considerably higher number of persons had an apprenticeship, a vocational qualification or a technical college degree rather than a university degree, in 2019 this is reversed. Here, 160 persons per 1,000 people in gainful employment have a university degree and 132 persons completed an apprenticeship, a vocational qualification or a technical college degree. In the period under review, the number of persons with a university degree increased and the number of persons with an apprenticeship or technical college degree decreased.

### Classification / Definition

This indicator was introduced for the first time in 2023. It shows the number of persons with different vocational qualifications per 1,000 persons in gainful employment. Due to the classification differences and methodical changes in the microcensus, the figures for 2010 and 2020 cannot be compared and are therefore not included. Data with figures lower than 5,000 persons is not shown. The standard inaccuracy for the characteristics population, people in gainful employment and households is more than 15 per cent. Therefore, a reliable statement as to the number of persons who have not provided information on the type of vocational qualification is not possible.<sup>33</sup>

### Calculation

Persons with an academic degree:

$$\frac{\text{Number of persons with an academic degree}}{\text{Number of persons in gainful employment}} \times 1,000$$

Persons with an apprenticeship / vocational training, technical college degree:

$$\frac{\text{Number of persons with an apprenticeship / vocational training, technical college degree}}{\text{Number of persons in gainful employment}} \times 1,000$$

### Shortage of skilled workers

In light of the predominant shortage of skilled workers, the indicator of the vocational qualification structure in Stuttgart is currently extremely relevant. In 2030, due to the demographic decline, the Stuttgart region will have a shortage of some 132,000 workers; 109,000 of these are skilled workers. According to the structural report of the Stuttgart region,

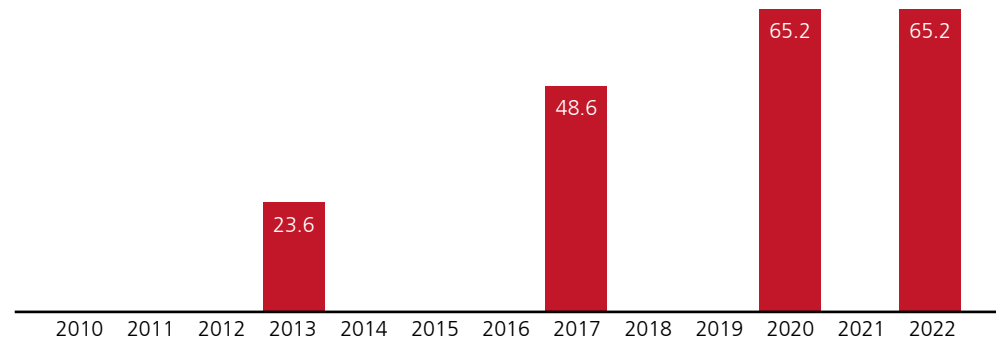
in particular the employment opportunities for low-skilled workers will decline. A shortage is expected in particular in the sector of workers with vocational training. Here, a shortage of 104,000 persons is forecast, whereas a shortage of only 5,000 persons is expected for academically trained specialists.<sup>34</sup>





## Indicator 4-7: All-day primary schools

**Figure 34:** Proportion of all-day primary schools (in per cent)



Source: State Capital Stuttgart, Schools Administration Office

“Elimination of any kind of discrimination in education”

(Target 4.5)

In April 2013, – within the concept of transferring Stuttgart primary schools to all-day schools – it was decided to in the medium term turn all primary schools into (partially) bound all-day primary schools with an integral approach to combine teaching and extra-curricular all-day offers. At that time, there were already 17 all-day primary schools (24 %) in the State Capital. In the following years the number increased, so that since 2020, 45 of the 69 primary schools have been offering all-day schooling and care (65 %).<sup>35</sup> Most all-day primary schools in Stuttgart meet high quality standards.<sup>36</sup>

### Classification / Definition

The indicator describes the proportion of all-day primary schools in all public primary schools in Stuttgart. All-day primary schools ensure free comprehensive education, since they offer the possibility of spreading the time for learning and recreation throughout the day and supplement teaching by educational programmes from a variety of topics and interests (e.g. arts, sports or cultural educational programmes). At the same time, they are the basis for equal access to education for all children, regardless of their social origin or the occupation of their parents.<sup>37</sup> The higher the proportion of all-day primary schools, the greater the educational equality and equal opportunities for further school education.

### Calculation

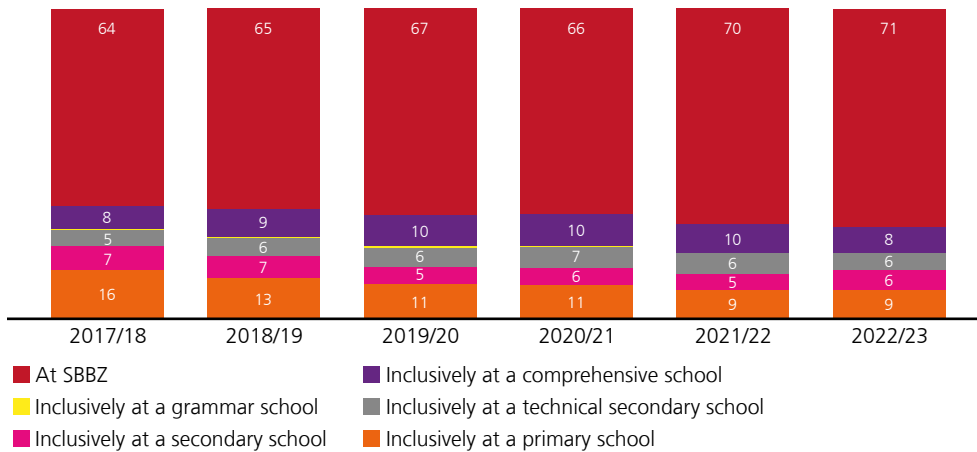
All-day primary schools:

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



## Indicator 4-8: Inclusively educated pupils

**Figure 35:** Proportion of inclusively educated pupils among all pupils with specialised education entitlement according to school type (in per cent)



“Elimination of any kind of discrimination in education”  
(Target 4.5)

Source: State Capital Stuttgart, Schools Administration Office

Most pupils with special educational needs at public schools in the State Capital Stuttgart attend a Sonderpädagogisches Bildungs- und Beratungszentrum (SBBZ) [Specialist Educational and Counselling Centre]. In the school year 2017/2018, the proportion of pupils was 64 per cent. This figure has been increasing over the years to 71 per cent in the school year 2022/2023 and makes up the largest proportion. On the other hand, the proportion of inclusively educated pupils has a general downward trend. Looking at the different types of schools, it can be seen that the lowest proportion of inclusively educated pupils are in grammar schools. Since the beginning of data collection, the proportion there is less than one per cent and therefore is not or hardly visible in the diagram. The figures for the other types of school fluctuate between five and 16 per cent.

### Classification / Definition

The indicator describes the proportion of inclusively educated pupils in relation to the total number of pupils with special education needs at public schools in Stuttgart for the respective type of school. It directly refers to target 4.5 that has the aim to eradicate any kind of discrimination in education. Inclusive education therefore ensures that all children and adolescents are taught together.<sup>38</sup>

In 2008, the UN Convention on the Rights of Persons with Disabilities declared inclusion as a human right of people with disabilities. In the school year 2010/2011, the Local Education Authority Stuttgart launched inclusive education as one of five key priorities in a pilot project.<sup>39</sup>

It is always the decision of the parents to decide whether their child’s entitlement to a special needs education should be met with at primary level or at lower secondary level at a regular school or in a specialised educational and counselling centre.<sup>40</sup>

The indicator was introduced in 2023 for the first time and is to be continuously updated.

### Calculation

Inclusively educated pupils:

$$\frac{\text{Number of inclusively educated pupils per type of school}}{\text{Number of all pupils with special education needs per type of school}} \times 100$$

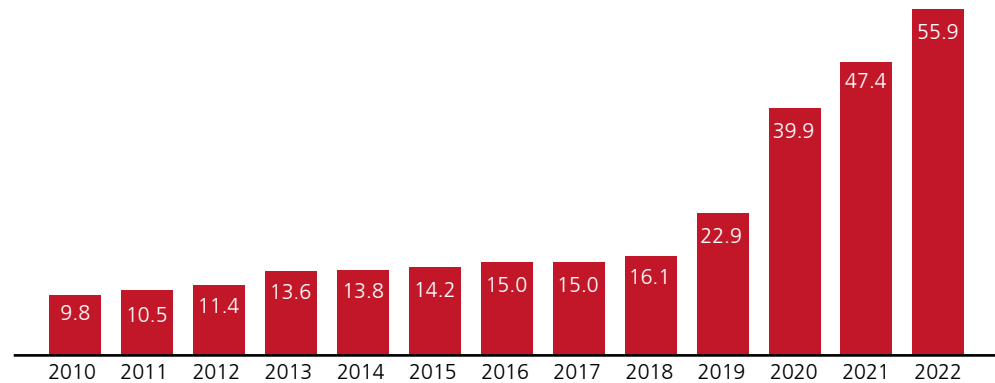


“Elimination of any kind of discrimination in education”

(Target 4.5)

## Indicator 4-9: Digitalisation at municipal schools

**Figure 36:** Proportion of pupils at municipal schools with a digital device at their disposal (in per cent)



Source: State Capital Stuttgart, Schools Administration Office

From 2010 to 2022, the proportion of pupils at public schools with a digital device at their disposal increased more than fivefold. While the increase between 2010 and 2018 was relatively moderate, it has risen rapidly since 2019. In 2022, already 55.9 per cent of pupils at municipal schools have access to digital devices.

With the integrative media education stipulated in the education programmes of the State of Baden-Württemberg, digital education is a priority in teaching at Stuttgart’s schools. The State Capital Stuttgart, as the responsible body, must provide the respective equipment for this. In order to meet this requirement and provide access for all pupils from the various school communities the State Capital Stuttgart has, for more than 20 years, been continuously extending the scope of digital school equipment. Due to the digitalisation measures initiated and realised during the context of the COVID-19 pandemic with the DigitalPakt Schule and the respective additional agreements, it was possible to expand on the digital equipment.

### Full networking of school buildings

i

The digitalisation at Stuttgart’s schools is not only about providing digital terminals. The second focus of the digitalisation strategy for schools is a continual improvement of digital equipment in the City’s school buildings. This comprehensive access to digital terminals in all school rooms is to make the use of digital media more flexible and offer a new type of teaching and learning. The goal is to, without exception, provide all pupils with access to digital media. With the DigitalPakt Schule and in the course of the renovation and innovation projects of the Schools Administration Office, the State Capital Stuttgart is continuously improving the digital equipment of school buildings and will pursue this further. Compared to 2022, 56 of 148 schools, i.e. 37.8 per cent are fully networked (with at least 95% networking).<sup>41</sup>



**Classification / Definition**

The indicator describes the proportion of pupils at municipal schools with a digital terminal at their disposal. The indicator is directly related to target 4.5 “Eradication of any kind of discrimination in education”. Digital education and integrative media education are part of the education programmes. Only the provision of digital terminals by the school authority can enable all pupils, regardless of their background, to participate in digital education. A prerequisite for using digital terminals in municipal schools is the appropriate infrastructure, such as the networking of the school buildings. In this respect, there is a direct relation to target 4.a “Construction and expansion of inclusive and safe educational institutions”. Only if digital education is possible in all classrooms, can integrative media education and thus effective inclusive lessons in terms of the

education programme also be possible for pupils with disabilities and all other pupils.

In 2023, the indicator was introduced for the first time and is to be updated.

**Calculation**

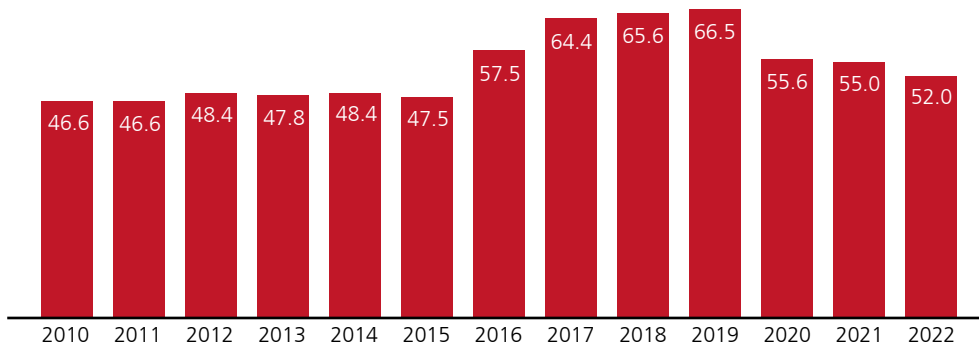
Digital terminals at municipal schools:

$$\frac{\text{Number of digital terminals at municipal schools}}{\text{Number of all pupils at municipal schools}} \times 100$$

Indicator 4-10:

**Educational programmes with ecological sustainability relevance**

**Figure 37:** Schools participating in at least one ESD project, eco-schools programme or environmental certificate (in per cent)



Source: State Capital Stuttgart, Environmental Protection Office

“Education for sustainable development and global citizenship”

(Target 4.7)

In Stuttgart, some 150 schools are municipal schools. From 2010 to 2019, the State Capital Stuttgart substantially increased its support of schools regarding nature and environment and therefore supports the guiding perspective “Education for Sustainable Development (ESD)” which has been part of the education programme of the State of Baden-Württemberg since 2016. The proportion of schools participating in at least one of the ESG programmes, eco-school programme or environmental certificate has increased from 46.6 per cent (2010) to 66.5 per cent (2019). In the last three years, however, the figure dropped to 52.0 per cent (2022). It is assumed that this decline is caused by the COVID-19 pandemic and related homeschooling.



### Education for sustainable development (ESD education programmes) i

Various offices of the State Capital Stuttgart – such as the Environmental Protection Office, the Parks, Cemeteries and Forestry Office, the Waste Management Companies of Stadtwerke [Public Utilities] – offer ESD programmes (Education for Sustainable Development) for Stuttgart schools. The focus of the programmes vary. The launch of the School Garden Network in 2005 provided a first overview of Stuttgart's school gardens and what they offer. The programmes comprise a wide variety of theatre programmes, school gardens, excursions on energy-saving programmes (LESS) and energy projects, environmental management (EMAS ISO), climate protection (Klimaheld) and forest- and waste-related education. Schools are technically and financially supported by the city.

In addition to educational programmes with ecological sustainability relevance, the State Capital Stuttgart also provides schools and educational institutions with municipal and civic programmes in the areas of social and economic sustainability that cover all 17 SDGs. In doing so, the State Capital wants to balance the demand and supply of schools and educational institutions. Here, it makes an important contribution to creating awareness and implementing the guideline "Education for Sustainable Development" in the new education programme in Baden-Württemberg.

#### Classification / Definition

Educational programmes with ecological sustainability relevance are very diverse. In practically all educational institutions – from pre-school education to tertiary education (e.g. universities, vocational colleges) – content with an ecological sustainability relevance plays a relevant role.

For many teachers, education with an ecological sustainability relevance is a matter of course. In addition, there are numerous programmes and activities to consolidate and extend education in the field of ecological sustainability. The proportion of schools participating in thematically relevant programmes reflects the commitment to Education for Sustainable Development (ESD).

#### Calculation

Educational programmes with ecological sustainability relevance:

Number of schools which participate in at least one  
eco-school programme, hold environmental certificates  
or are involved in ESD projects

/

Total number of schools

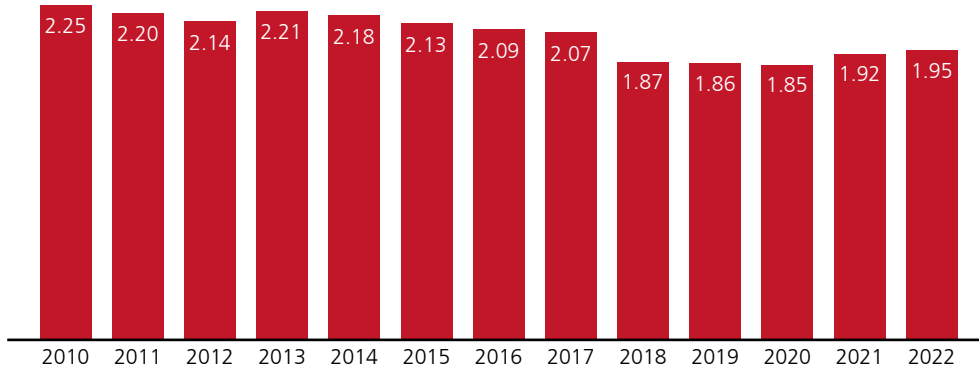
\* 100





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

Figure 38: Media collection of the Stuttgart City Library (in number of media / resident)



Source: State Capital Stuttgart, Stuttgart City Library

“Education for sustainable development and global citizenship”

(Target 4.7)

The Stuttgart City Library comprises the Central Library at Mailänder Platz, 18 district libraries, the mobile library and the eLibrary with a total of more than 1.1 million physical and digital media and access to different online database and streaming services. Between 2010 and 2020, the figure of some 2.3 media per resident decreased to some 1.9. Since then, it has slightly increased and at present (2022) it is at around 2 media per resident. In 2022, more than 5.3 million media were borrowed which is 8.7 per resident.

### Classification / Definition

Public libraries are an important pillar of cultural education. Their task is to provide all residents with free access to information, education and culture, regardless of their income, status, age, gender or origin. Libraries provide media of all kinds and support the acquisition of reading, media and information skills.<sup>42</sup> The indicator describes the number of books and media per resident borrowed from the Stuttgart City Library, its branch libraries and mobile libraries. Since 2015, digital offers have also been included in the statistics.

Since 2023, the indicator replaces the indicator “Loans from the Stuttgart City Library”.

There is no separate SDG for safeguarding and developing culture. Therefore, the indicator is allocated to target 4.7, because the focus is on allowing all learners, regardless of their demographic characteristics, to acquire the knowledge and competence required for a sustainable development. A material factor in this respect is public access for all to municipal libraries and their media collection.

### Calculation

Media collection of the Stuttgart City Library:

$$\frac{\text{Number of media}}{\text{Number of residents}}$$

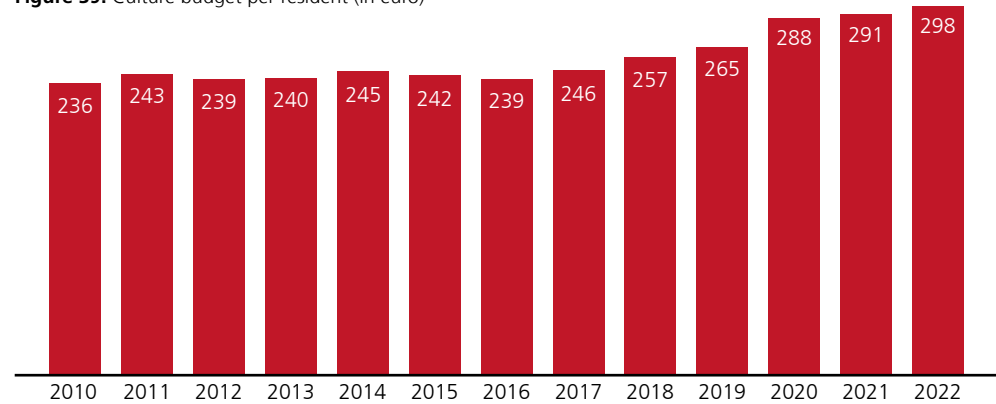


## Indicator 4-12: Culture budget

“Education for sustainable development and global citizenship”

(Target 4.7)

Figure 39: Culture budget per resident (in euro)



Source: State Capital Stuttgart, Cultural Affairs Office

Between 2010 and 2017, the expenditure in the culture budget of the State Capital Stuttgart remained stable at some 240 euro per resident. Since then, this has increased. In 2022, the culture budget was some 298 euro per resident. The culture budget (planned budget 2022: 181.1 million euro) of the State Capital Stuttgart, which is mainly managed by the Cultural Affairs Office (166.3 million euro) is presented in the profit and loss budget. The profit and loss budget also shows the municipal subsidy for the coordination units/departments of the Cultural Affairs Office (net resource demand) in the reporting period and the budget provided to them.

### Classification / Definition

The culture budget includes the expenses of the Cultural Affairs Office and other municipal offices in the cultural sector. These are related to the number of residents and indicate how much money is available for culture in the municipal budget. Up to and including 2021, financial results have been registered, for 2022, there is only a budget estimate since the financial results were not available at that time.

There is no individual SDG to preserve and develop culture. Therefore, the indicator is assigned to target 4.7 that underlines public access to education for sustainable development for all.

### Calculation

Culture budget per resident:

Culture budget in euro

/

Number of residents

### Opinions on the cultural programme

i

More than 70 per cent of people who participated in the 2021 citizen survey said that they are satisfied or very satisfied with the cultural institutions and events. 20 per cent of citizens were partly satisfied. Compared to other areas, satisfaction in this area of life is relatively high, with 72 of possible 100 points. However, compared to previous years, the number of points has slightly decreased and no longer reaches the peak of 76 points.<sup>28</sup>



## Correlation with other SDGs

Considering it comprehensively, education has a crucial influence: both on the individual journey through life and economic advance. Career, income and opportunities in life depend very much on individual educational achievement and social capital. Accordingly, education is of key importance for the social dimension of sustainability (see also SDG 1 “No Poverty”). Poverty is often a consequence of inadequate education, which makes access to the labour market more difficult. The fight against poverty is only possible through education.

At the same time, the economy depends on skilled workers and therefore on a good education system where people can attain the appropriate qualifications. The economic dimension of sustainability (in particular SDG 8 “Decent Work and Economic Growth” and SDG 9 “Industry, Innovation and Infrastructure”) is also closely linked to education. Moreover, education provides information on the ecological consequences of how we “work” (SDG 12 “Responsible Consumption and Production”).

Considering the influence education has on one’s future life, the inequalities and disadvantages in education must be borne in mind. This also refers to health aspects as well as gender inequalities (SDG 5) and issues of inclusion and integration (SDG 10 “Reduced Inequalities”). Educational equality also means access to cultural education and lifelong learning.

Sustainability education gives people the chance of influencing sustainability themselves and shaping their own lives sustainably. The knowledge we have on interrelations between environment and mankind affects almost all SDGs and has in almost all areas of local and regional life an impact on future action (e.g. in health (SDG 3), consumption, waste (SDG 12), water and energy consumption (SDG 6 and 7) or mobility, and urban development (SDG 11)), as well as on global correlations (fair trade (SDG 12)), climate change (SDG 13) and protection of the oceans and biodiversity (SDG 14 and 15). Enabling 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 part of extra-curricular activities.

The governance<sup>43</sup> dimension of sustainability, i.e. the participation of different stakeholders in decision-making processes and their implementation is also related to education, since the will and self-assessed competence to become politically involved also grows with an increasing level of education. Education, with its widespread link to all sustainability aspects, is a key factor.

When it comes to ecological sustainability (SDG 6, SDG 13, SDG 14, SDG 15) possible target conflicts may result from the new construction and expansion of educational infrastructure and educational institutions. In this context, it is of particular importance to take care of environmentally, climate- and resource-friendly building approaches and to reduce construction activity as far as possible to mitigate potential negative impacts.

From an economical perspective, the costs for new constructions and expansion are not to be ignored.

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

- SDG 2:** “Children with overweight”
- SDG 3:** “Children with a conspicuous screening of gross motor skills”
- SDG 3:** “Promotion of physical activity in nursery schools”
- SDG 8:** “Access to vocational education and training after secondary school”
- SDG 11:** “Means of transport for getting to work (including walking)”
- SDG 15:** “Biodiversity”
- SDG 16:** “Registered users at “Stuttgart – my City””
- SDG 16:** “Participatory budgeting”
- SDG 16:** “Participation of adolescents”



## Practical example 8: All-day primary schools in Stuttgart

### Context:

On 16 January 2014, following extensive negotiations the state government and the municipal state associations agreed on cornerstones and joint financing for the expansion of all-day primary schools and the basic levels of schools for pupils with special needs. In August 2014, all-day primary schools were included in the Education Act of Baden-Württemberg. According to this, the all-day school can be established on three or four days for a compulsory seven or eight hours for all pupils – if the entire school shifts to all-day or with an option. With an option, the pupils can choose whether they attend all-day school or half-day school.

### Description / Realisation:

#### *All-day primary schools:*

In the course of the first six months of 2012, the State Institute for School Development developed a pedagogical frame concept for all-day primary schools together with the Youth Welfare Office and the Schools Administration Office. It was presented to the independent organisations, the Education Authority of Stuttgart, as well as representatives of the parents' council. In addition to the school content, the pedagogical frame concept also takes into account socio-pedagogical aspects. Based on the then binding frame concept for all-day schools in Stuttgart, it is the responsibility of the respective schools to devise "their own all-day school" with the respective care organisations.

In addition to the pedagogical frame concept, the Municipal Council decided on 31 January 2013 the following standards:

- Up to 30 hours per week and all-day classes plus preparation and follow-up time
- At least one full-time position for the head teacher directly from the start of all-day operation
- Equipment budget
- Early care hours before lessons normally from 7 a.m.
- Late care hours normally from 4 to 5 p.m. – on the fifth day from noon to 5 p.m.
- Holiday care: all-day programme bookable for a whole school year from 8 a.m. to 5 p.m. (main care time) – early care from 7 to 8 a.m. (closed 23 days per year)

#### *Elementary components of an all-day primary school:*

- Individual learning time together with teacher and educational staff
- Stuttgart's model Sport in the all-day school
- Music for all
- Art and culture in the all-day school
- Promotion of nature times in the all-day school
- Pilot project preparatory classes in the all-day school
- Socio-spatial promotion of all-day programmes
- Participation of pupils in everyday school life and projects
- Informative lunch (according to the recommendations of the German Nutrition Association, 50 per cent organic food, seasonal with fruit and vegetables every day)

### Experience / Results:

As of 2023, 45 of the 70 primary schools in Stuttgart are all-day primary schools with high quality standards. Twelve primary schools offer an all-day programme in the school (transition model until the all-day school is established), which will gradually be developed towards an all-day school.

### Division / Office / Public Undertaking:

Schools Administration Office  
in the Youth and Education Division

### Further reading / Links:

GRDRs 6/2013 [Municipal Council document]  
Flyer "Eine runde Sache", "Pädagogisches Rahmenkonzept"  
[A well-rounded educational concept]



Practical example 9:

## Educational regions in Stuttgart Strengthening networks for effective education for children and adolescents

### Context:

The common goal of the educational regions programme in the four districts and two neighbourhoods selected by the Municipal Council (Nord, Wangen, Untertürkheim, Zuffenhausen, Hallschlag, Neckarpark/Veielbrunnen) is to improve the education and participation opportunities of children and young people by sound cooperation between the local players of formal and informal education locations to enable more educational equity and achievement.

The starting points of the network of educational institutions/groups are a common understanding of education, the identification of the need for action and a coordinated approach to compensating gaps.

In this context, a coordinated goal and strategy formulation of the players and the common aspiration to provide for good education structures are extremely important.

Programme formats oriented to the demand are developed, implemented and evaluated under the premise that they can be connected to programme structures already existing in the respective districts.

### Description / Realisation:

To get a review and identify local needs, existing data from education monitoring is evaluated and supplemented by qualitative interviews in the local educational regions.

In this context, starting from the socio-spatial perspective, the educational and participation opportunities of children and adolescents are taken into account from primary school level to the lower and upper levels of secondary schools.

The following questions are of specific relevance:

- Which systematic promotion chains (resources and programmes) are available in the respective educational region so that the children can experience achievement?
- How are formal, informal and unofficial education and learning places linked in an educational region so that there are no promotion gaps and remaining needs can be identified and compensated?



- How and where can parents, schools and children and youth welfare organisations be supported in actively accompanying and promoting the education of children and adolescents?
- How can the “Educational Equity” goal be delivered, taking into account the diversity of family situations?

With regard to the understanding of the aforementioned central questions, it must be particularly emphasised that development processes for projects and programmes are initiated by the proactive involvement and close coordination of the local players, which are operationalised later.

Participation formats in the context of educational regions are for instance thematical teams of district workgroups, educational workshops with local institutions in the district, as well as the establishment of own educational committees.

### Experience / Results:

From the working processes in the six educational regions, a series of projects and measures has evolved, some of which have been consolidated via the city's budget.

Securing the educational region's programme in the long run enables a consistent view on local initial situations and the need for action that can be seen from them, and it strengthens sustainable cooperation structures in the educational networks.

### Division / Office / Public Undertaking:

Stuttgart Partnership for Education  
Youth and Education Division

### Further reading / Links:

[www.stuttgart.de/bildungspartnerschaft](http://www.stuttgart.de/bildungspartnerschaft)  
(Last access 15.03.2023)



## Practical example 10: Closing the gap in the Stuttgart City Library network

### Context:

The Stuttgart City Library provides comprehensive media and information close to home, sees all age groups through learning processes and is a cultural venue oriented towards the general public and participation. In the context of 2022/23 budget discussions, the Stuttgart City Library was commissioned to carry out a requirement analysis as to whether there are sufficient functional and social criteria for realising four fixed-location libraries for the districts Hedelfingen, Obertürkheim, Wangen and Birkach. The requirement analysis revealed that fixed-location branches with long and regular opening hours and a variety of educational and cultural programmes would promote social cohesion and significantly contribute to more equal opportunities and participation in the neighbourhood. The district libraries in the neighbourhood are the venues with the most diverse visitors and users.

### Description / Realisation:

In particular for less mobile population groups, the district libraries are very important as educational and cultural venues. They are open for all social groups, can be visited without access barriers and are a hub in the diverse network of the district, actively accompanying the people, topics and activities.

#### *Education – SDG 4*

Closing the gap in district libraries can also offer children and adolescents in the Neckar suburbs easy access to a free range of age-appropriate media and educational programmes of the libraries to promote language development and reading, the opportunity to make experiments or get together. During extended opening hours, pupils have the opportunity to access important learning media and protected learning space on site. Moreover, with a strong focus of the district libraries on the cooperation with nursery schools and schools, the Stuttgart City Library reaches all children in terms of equal opportunities – regardless of their parental background or their financial means. Libraries provide support for the individual learning profile and personality development. Adults can also rely on the services of the district libraries in all phases of education and further education, as well with regard to other interests and hobbies. District libraries ensure a broad local access to knowledge in all media forms and counteract the digital divide.

#### *Poverty/Reduced inequalities – SDG 10*

Children and young people can use the libraries free of charge; for adults it is reasonably priced, whereby people with a low income receive a reduction with the Bonuscard. With their

socially integrating character, the district libraries also give social groups, less well situated or affected by poverty, opportunities to participate without any technical or psychological barriers. In addition, the strongly networked libraries open up space for locals to get together, exchange ideas and form social contacts, which means that neighbourly help and support programmes come into effect, integration is promoted and, in general, a contribution is made to a socially fairer, unprejudiced and active urban society and a good sense of togetherness. Libraries do not see themselves as solitary institutions, but rather as a connecting link in a strong network of partners in urban society for the people in the district.

#### *Peace/Justice – SDG 16*

With their media programmes, even small district libraries enable access to comprehensive, reliable information, which makes shaping a well-founded opinion possible and plays an active role in democracy. The extensive events promote social exchange and an understanding for one another.

### Experience / Results:

The Stuttgart City Library has already developed a first room concept for the district library Hedelfingen that, in addition to a specific learning space, also provides a space for getting together and exchanging ideas. With a clear zoning concept, the requirements of the different user groups are taken into account. 24 h services (e.g. for the collection of pre-ordered media, return of borrowed media) should enable the use of certain services beyond opening hours.

At the same time, the concept of pop-up libraries was developed and realised for the first time in vacant premises in the Hedelfingen district. Already prior to the launch of a fixed-location district library, appropriate library programmes are developed and realised actively with local players. The starting point here are programmes to promote language and reading in local nursery schools and primary schools, cooperation with institutions, initiatives and clubs, but also with individuals privately committed, and workshops for senior citizens in the digital transformation process.

### Division / Office / Public Undertaking:

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



Practical example 11:

## Dialogue-based planning process for a municipal place of encounter, education and sustainability



### Context:

The municipal ESD network “Natur erleben Stuttgart – gemeinsam mit Weitblick handeln” [“Experience Nature Stuttgart – acting together with the future in mind”] has been commissioned by the municipal council to develop a framework concept by the end of 2023 for an extra-curricular venue for learning and exploring for children and young people in Stuttgart on the topics of climate protection and sustainability in urban areas. This venue for learning and exploring should also provide a central place for the players in the field of education and sustainable development (ESD).

### Description / Realisation:

The project has the working title “Natürlich Nachhaltig in Stuttgart – BNE im urbanen Raum” [“Naturally Sustainable in Stuttgart – ESD in Urban Areas”] (cf. GRDRs 1136/2021 [Municipal Council document]). The aim of the project is to create an extra-curricular place for learning and exploring for children and young people in Stuttgart dealing with the topic of sustainability in urban areas. This venue should also network Stuttgart’s ESD players, strengthen the common self-conception and open up new spaces for action. Education for sustainable development is to be made visible to make Stuttgart a sustainable, green and child- and youth-friendly city that can be experienced, developed and expanded.

The framework concept is developed in a dialogue-based planning process together with approximately 50 institutions from administration, education and civil society.

### Experience / Results:

The participants in the dialogue-based planning process see a great potential in the concept of a place of encounter, education and sustainability for Stuttgart.

As a central sustainability venue, NaNa STUTTGART is to:

- strengthen the municipal ESD network,
- promote the implementation of the 17 sustainable development goals in Stuttgart,
- pool and supplement the diverse programmes already existing,
- expand the range of topics in the field of education for sustainable development,
- support exchange, networking and cooperation of the ESD players,
- contribute to quality development in the thematic field by defining quality criteria and
- make ESD visible and position it in its entire interdisciplinary spectrum.

Besides, the central location is to be linked to the already existing nature and environmental learning venues and thus enable all those involved in the Stuttgart sustainability scene to have a common identity despite their different prioritisation. The framework concept will be completed by the end of 2023.

### Division / Office / Public Undertaking:

The dialogue-based planning process for a municipal place of encounter, education and sustainability is cooperated between the Stuttgart Partnership for Education and the Youth Welfare Office.

The municipal ESG network comprises eight offices and departments of the city administration:

- Environmental Protection Office in the Urban Planning, Housing and Environment Division
- Urban Planning and Housing Office in the Urban Planning, Housing and Environment Division
- Parks, Cemeteries and Forestry Office in the Engineering Division
- Department for International Relations in the Administrative Coordination, Communication and International Relations Division
- Children’s Affairs Officer in the business sphere of the Mayor
- Schools Administration Office in the Youth and Education Division
- Youth Welfare Office in the Youth and Education Division
- The overall coordination of the network lies with the Stuttgart Partnership for Education in the Youth and Education Division.

### Further reading / Links:

<https://www.stuttgart.de/leben/bildung/>

[bildung-fuer-nachhaltige-entwicklung/](https://www.stuttgart.de/leben/bildung/bildung-fuer-nachhaltige-entwicklung/) (Last access 08.02.2023)

GRDRs 607/2019 [Municipal Council document]

Natur erleben Stuttgart für Klimaschutz und Artenvielfalt [Experience Nature - Stuttgart for climate protection and biodiversity]

GRDRs 19/2021 [Municipal Council document]

Partizipation im Rahmen des Netzwerks Natur erleben [Participation in the context of the network Experience Nature]



GRDRs 1136/2021 [Municipal Council document]  
Ein „Haus der Natur“ für die Kinder und Jugendlichen unserer Stadt  
[A “House of Nature” for children and young people of our city]

GRDRs 748/2022 [Municipal Council document]  
Zwischenbericht Kommunales BNE-Netzwerk „Natur erleben  
Stuttgart – gemeinsam mit Weitblick handeln“ [Interim report  
Municipal ESD network “Experience Nature Stuttgart – acting  
together with the future in mind”]

GRDRs 434/2023 [Municipal Council document]  
Natürlich Nachhaltig in Stuttgart - BNE im urbanen Raum  
[Naturally sustainable in Stuttgart – ESD in urban areas]  
„Fortführung des Planungsprozesses für einen kommunalen  
Ort der Begegnung, Bildung und Nachhaltigkeit“  
[“Continuation of the planning process for a municipal  
place of encounter, education and sustainability”]



### Context:

Children and young people who have recently immigrated are faced with many challenges during their phase of “arriving” in Germany and learning German. Spending time in and dealing with nature can strengthen the resources of the children and young people.

On the basis of this assumption, the model project “Preparatory classes discover Stuttgart’s nature” develops educational programmes for sustainable development (ESD) for pupils in preparatory classes for lower and upper secondary level.

### Description / Realisation:

Working together, interdisciplinary teams from the fields of school, environmental education/ESD and global learning develop criteria and tailor-made programmes. In early summer 2022, these were tested for the first time in cooperation with three schools. Based on this experience, the programmes will be further developed in the school year 2022/23. In this context, the following subjects will be considered:

- Promotion of language skills
- Target-group oriented access to nature and sustainability taking into account the biographical experience and abilities of the newly immigrated children and young people
- Participation and contribution of pupils
- Integral learning and promoting a strong sense of team spirit within the classes

### Practical example 12: Preparatory classes discover Stuttgart’s nature

### Experience / Results:

A handbook is to be developed from the experience gained in the model project that contains methods for the implementation of the ESD programmes with new immigrant school children in preparatory classes and to raise awareness for framework conditions and success factors.

### Division / Office / Public Undertaking:

The project is part of the municipal ESD network “Experience Nature Stuttgart” and coordinated by the Stuttgart Partnership for Education.

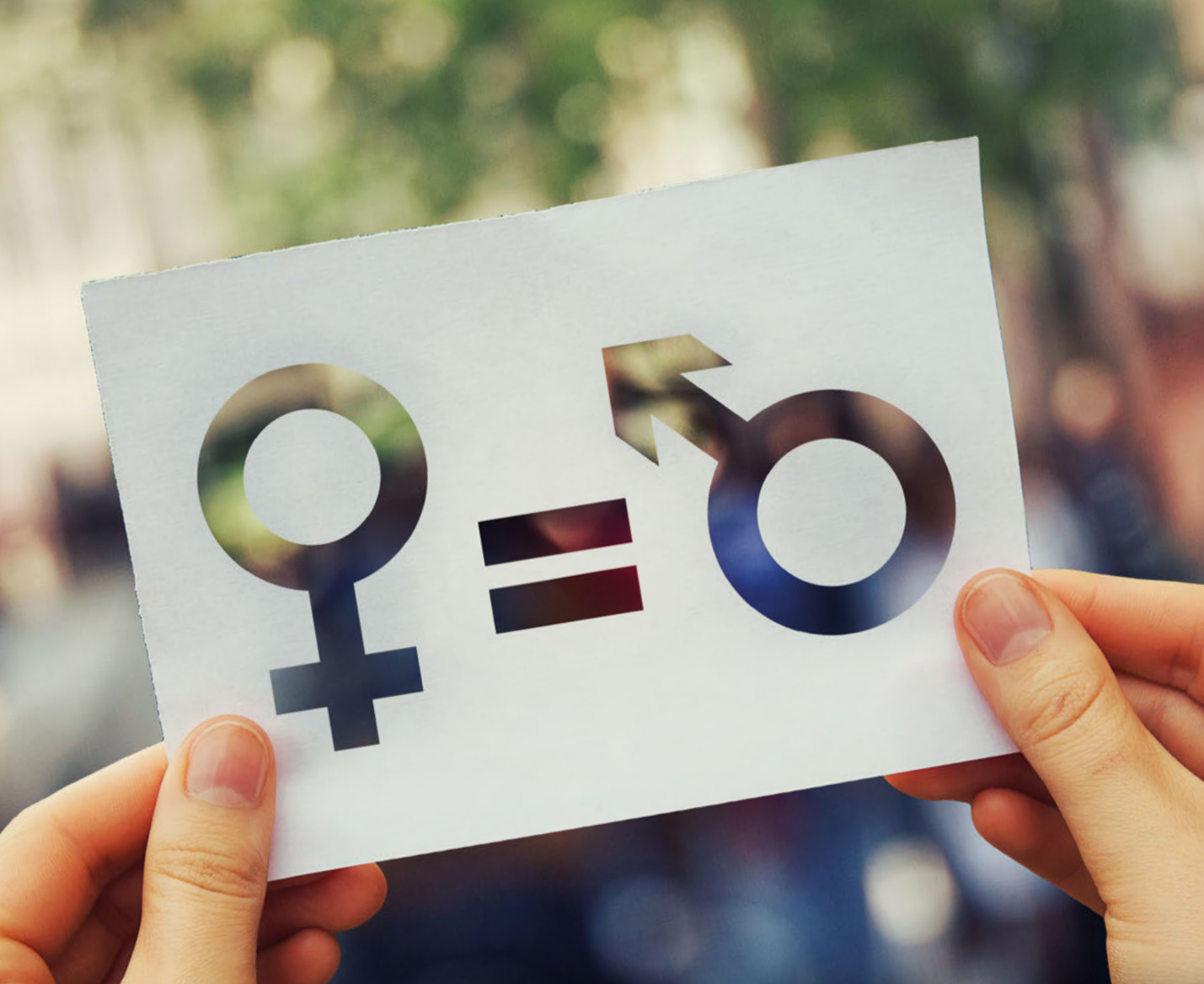
Cooperation partners include:

Education Authority Stuttgart,  
Schools Administration Office,  
Environmental education and forest-related  
education of the State Capital Stuttgart,  
Afrokids International e. V.,  
BUND Kreisverband Stuttgart,  
Gemeinschaftserlebnis Sport,  
Naturschutzbund Deutschland (NABU) Stuttgart e. V.,  
vhs ökostation,  
WIN Global e. V.



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://www.stuttgart.de/lebenswertes-stuttgart)





## SDG 5 Gender Equality

“Achieve gender equality and empower all women and girls to self-determination”

Relevant targets of SDG 5 for German municipalities are in particular those related to ending discrimination against women and girls, as well as violence against women and girls, recognising unpaid care and domestic work, ensuring participation of women in executive positions, ensuring access to sexual and reproductive health and promote gender equality in general.



## Overview of the relevant targets

The following targets of SDG 5 are relevant to German municipalities and are already covered in the VLR by indicators:



**5.1** Termination of discrimination against women and girls



**5.4** Appreciation of unpaid care and promotion of split domestic responsibilities



**5.5** Comprehensive participation in the acceptance of executive positions and decision-making

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



**5.2** Termination of any kind of violence against and exploitation of women and girls



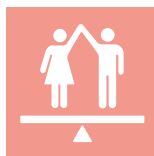
**5.6** Universal access to reproductive health and rights



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



**5.b** Promotion of empowerment of women by technology

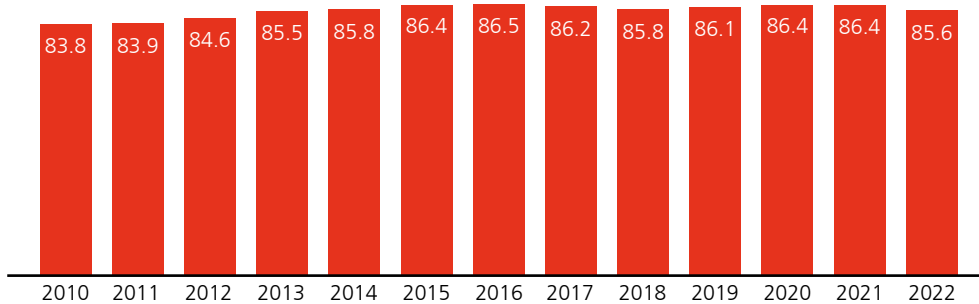


**5.c** Adoption and expansion of political measures and enforceable legislation on gender equality



## Indicator 5-1: Relation of employment rates

Figure 40: Relation of women’s employment rates compared to men (in per cent)

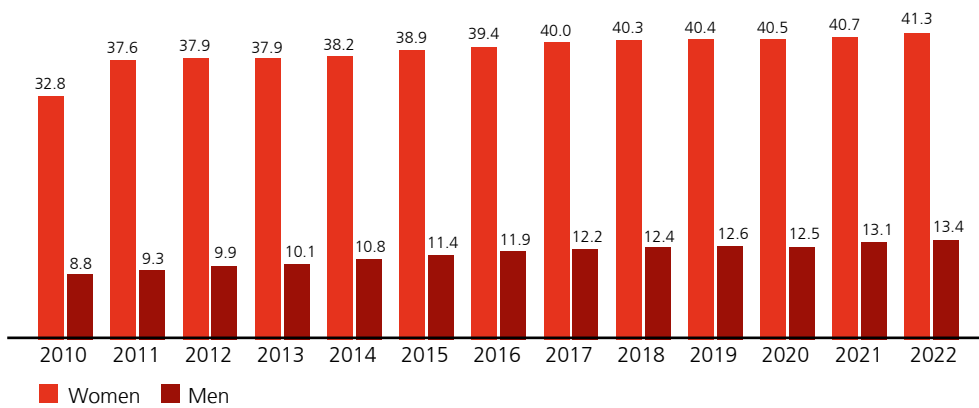


Source: Federal and State Statistical Offices

“Termination of discrimination against women and girls”  
(Target 5.1)

In the period under review, the ratio of employment rates of women and men did not substantially change and is between 83.8 and 86.5 per cent. The employment rate of women remained lower than that of men. The invariable relation of the employment rate of women to that of men is due to a continuous but parallel increase in employment rates for both genders. The pattern of unequal employment rates remains unchanged. More and more employees retire when they are older than 65. This is partly due to the raising of retirement age to 67 years for those born in or after 1947.<sup>44</sup>

Figure 41: Part-time employment rates of women and men (in per cent)



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

Not only are women less likely to be employed than men, but work part-time more often. In the period under review, the part-time rate of women increased from 32.8 per cent in 2010 to some 41 per cent in 2022. The figure also increased for men, from almost 9 per cent in 2010 to 13.4 per cent in 2022. 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 decisive for individual opportunities in life. Therefore, in addition to educational opportunities, which were discussed in SDG 4 with regard to gender, special attention is paid to employment. Employment not only provides income, but also social recognition and enables more independence.

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

Thus, the indicator takes into account the employment situation as a whole. Neither the quality of employment (cf. the following indicators) is taken into account nor the question as to what extent foregoing employment voluntarily is responsible for the differences.

While the employment rate refers to all forms of employment subject to social security contributions, the proportion of part-time employees between women and men also differs. Therefore, the analysis is supplemented by 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 in relation to that of men:

$$\frac{\text{Number of women ssc* at the place of residence}}{\text{Total number of women}} \times 100$$

/

$$\frac{\text{Number of men ssc* at the place of residence}}{\text{Total number of men}} \times 100$$

\* 100

Employment rate of women in part-time employment:

$$\frac{\text{Number of women ssc* at the place of residence in part-time employment}}{\text{Total number of women ssc* at the place of residence}} \times 100$$

/

$$\frac{\text{Total number of women ssc* at the place of residence}}{\text{Total number of women ssc* at the place of residence}} \times 100$$

\* 100

Employment rate of men in part-time employment:

$$\frac{\text{Number of men ssc* at the place of residence in part-time employment}}{\text{Total number of men ssc* at the place of residence}} \times 100$$

/

$$\frac{\text{Total number of men ssc* at the place of residence}}{\text{Total number of men ssc* at the place of residence}} \times 100$$

\* 100

\*ssc = employed subject to social security contributions

### Part-time management

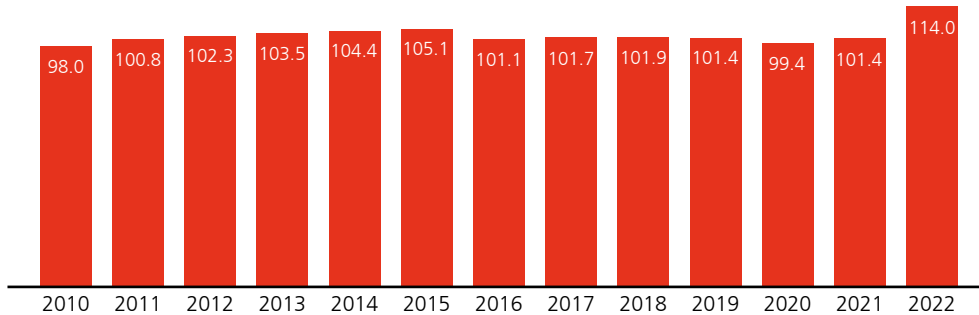
A survey in the City of Stuttgart in 2021 deals with the subject of part-time management. Not only in the administration of the State Capital Stuttgart (LHS), but in a lot of industries the topic has become more important. Childcare, care of relatives or a good work-life balance are only a few reasons that make a part-time model attractive. In addition, studies show that part-time management has a positive effect on work satisfaction, in turn, increasing motivation. For the executives of the State Capital Stuttgart working in part-time,

the motifs and reasons are the same as those mentioned here. In general, the model generates a positive response, however, satisfaction strongly depends on the adaptation of the workload. Moreover, satisfaction rises with increasing age and the general work-life balance becomes more important. Insufficient digitalisation makes part-time management at LHS more complicated. There are various measures such as information and consulting service to promote part-time management in the future.<sup>45</sup>



## Indicator 5-2: Relative poverty among women

Figure 42: Relative poverty among women (in per cent of poverty rate among men)



“Termination of discrimination against women and girls”  
(Target 5.1)

Source: State and Federal Statistical Offices

Poverty is more widespread among women than among men. In the period under review, the values are above 100 in all years except for 2010 and 2020, i.e. the poverty rate among women in these years is always higher than that among men. However, the differences are not so great until 2021. The slight decrease between 2015 and 2016 is due to the arrival of male refugees who, in turn, were more affected by poverty. The difference is made in general by the group of single parents, mainly women. In 2022, the sharp increase in the indicator can mainly be attributed to female refugees from the Ukraine.

### Classification / Definition

Poverty in general was already discussed in SDG 1. However, poverty among the genders does not occur to the same extent. The difference is revealed by the indicator by putting the extent to which women are affected in relation to that of men.

The indicator “Relative poverty among women” indicates the rate of women receiving benefits pursuant to SGB II or SGB XII related to the rate of men receiving benefits pursuant to SGB II or SGB XII. The indicator value is 100 if the proportion of women receiving benefits among all women is exactly the same as the proportion of men receiving such benefits among all men. A value above 100 indicates a higher rate of women receiving benefits pursuant to SGB II or SGB XII compared to this rate of men, i.e. women are more affected by poverty than men. Deadline for data collection is 31 December.

### Calculation

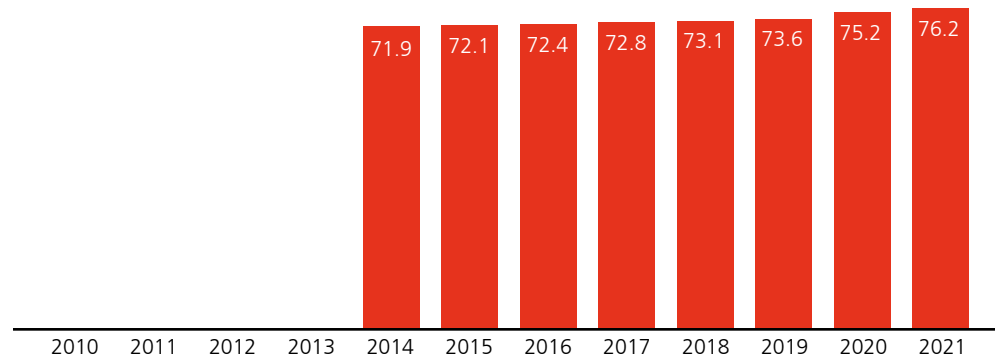
Relative poverty among women:

$$\frac{\frac{\text{Number of female benefit recipients pursuant to SGB II and SGB XII}}{\text{Total number of women 15 years and older}}}{\frac{\text{Number of male benefit recipients pursuant to SGB II and SGB XII}}{\text{Total number of men 15 years and older}}} \times 100$$



## Indicator 5-3: Pay gap between women and men

Figure 43: Relation of median income of women and men (in per cent)



Source: Federal Employment Agency

“Termination of discrimination against women and men”

(Target 5.1)

The relation of the median income of women to the median income of men steadily increased between 2014 and 2021 from 72 to 76.2 per cent in 2021. However, here the significant income disparities between men and women are also shown, since the median income of female respondents in 2021 is only just under 76 per cent of the median income of their male colleagues.

Viewing the results of the unadjusted Gender Pay Gap (GPG) at state level, it can be seen that Baden-Württemberg has one of the highest differences in the median income between women and men, with some 22 per cent in 2021. In contrast, in Mecklenburg-Western Pomerania, as in some other federal states, the income disparity is only almost five per cent. However, this can often be explained by the fact, that the wage level in these federal states is often significantly lower than in Stuttgart and that men in Mecklenburg-Western Pomerania earn less on average. This leads to a particularly small GPG.<sup>46</sup>

### Classification / Definition

This indicator was first introduced in 2023 and is to be continuously updated. The indicator relates the median income of women in full-time employment and subject to social security contributions (ssc) to the median income of men in full-time employment and thus shows the unadjusted gender-specific pay gap. So, the income disparities between women and men at municipal level become obvious. On the one hand, the income disparities can be explained by the choice of career and professional experience, which is included in the unadjusted GPG. 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 only full-time employees are taken into account in the calculation of the indicator. However, since 40 per cent of employed women

work part-time, it can be assumed that the GPG would be even higher if these were included in the calculation. Despite work of equal value and the existing non-discrimination principle, it is not uncommon that women are paid less under the same conditions.<sup>1</sup>

### Calculation

Pay gap between women and men:

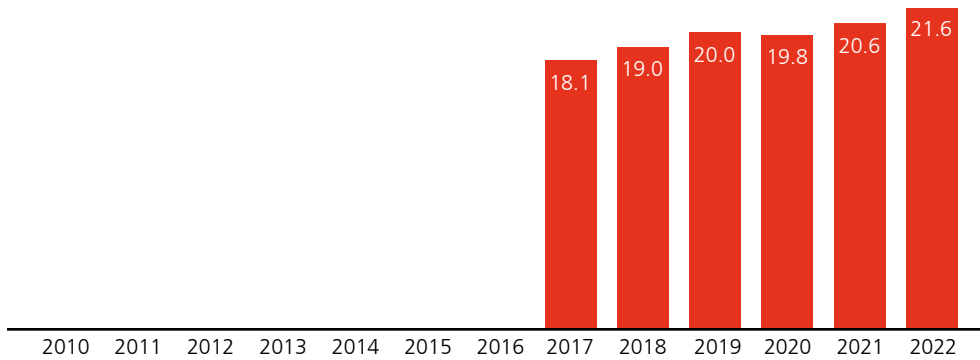
$$\frac{\text{Median income of women ssc* in full-time employment}}{\text{Median income of men ssc* in full-time employment}} \times 100$$



## Indicator 5-4

### Proportion of fathers benefitting from parental allowance

Figure 44: Proportion of fathers benefitting from parental allowance (in per cent)



Source: Federal and State Statistical Offices

“Appreciation of unpaid care and promotion of split domestic responsibilities”  
(Target 5.4)

The participation of fathers reflects the average proportion of men in Stuttgart, who received parental benefits in one year. In 2022, the participation of fathers, which has been constantly rising since its first survey in 2017 reached a new peak. In 2022, on average some 22 per cent (1,543) of parents who receive benefits are fathers. However, with 7,148 recipients of benefit the majority is mothers.

In accordance with the parental benefit statistics of the Federal Statistical Office, in 2018, the proportion of children whose fathers received benefits is some 52 per cent. In contrast to the indicator “Proportion of fathers benefitting from parental allowance”, here, the number of children is taken into account rather than the period of parental leave. In general, fathers do not take parental leave or if, then for a shorter period than mothers.<sup>47</sup>

#### Classification / Definition

The indicator indicates the proportion of fathers receiving parental benefits in relation to all recipients of benefits. The proportion of fathers is an important indicator to assess the extent to which fathers participate in the care of their children and if or to what extent this participation will increase over time. In 2023, this indicator was introduced for the first time and will be updated.

Parental benefits are first and foremost intended to balance the loss of income that arises when parents are at home for their child after the birth of a child. In addition, they are to support families in the fair split of responsibilities and contribute to a better family-work balance. In particular, the introduction of ElterngeldPlus [parental benefit plus] is partly responsible for the increase in fathers taking parental leave and the promotion of a social change in gender stereotype role models.

There are different reasons that most parents receiving parental benefits are still women. In addition to personal and social attitudes, economic conditions also play an important part.

#### Calculation

Proportion of fathers benefitting from parental allowance:

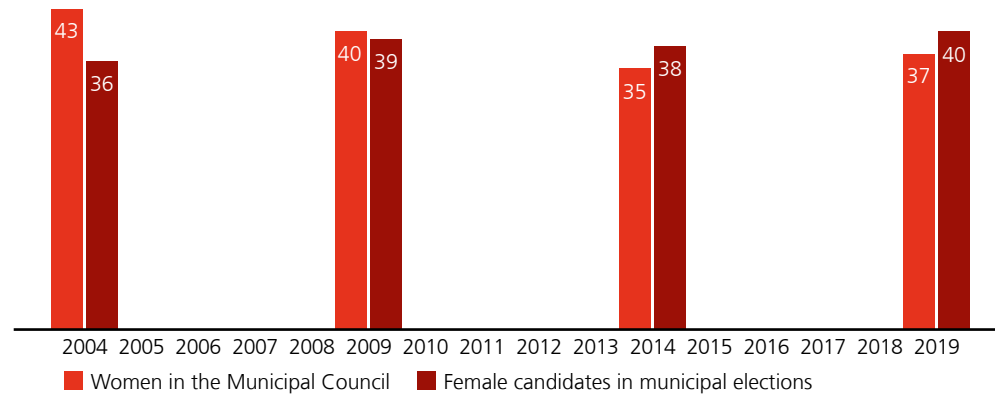
$$\frac{\text{Number of fathers receiving parental benefits (quarterly average)}}{\text{Total number of persons receiving parental benefits (quarterly average)}} \times 100$$



## Indicator 5-5: Women in the Stuttgart Municipal Council

“Full participation  
in taking on  
management  
positions and  
decision-making”  
(Target 5.5)

**Figure 45:** Percentage of women in the Stuttgart Municipal Council (in per cent)



Source: State Capital Stuttgart, Statistics Office

The percentage of women in the Stuttgart Municipal Council increased from some 35 to 37 per cent between the 2014 and 2019 municipal elections. However, in the municipal elections of 2004 and 2009, this percentage was already higher at some 43 and 40 per cent respectively.

Parallel to the percentage of women in the Stuttgart Municipal Council, the percentage of female candidates also increased from the municipal election 2014 to the 2019 election. In 2014 and 2019, the proportion of female Municipal Councillors was higher than that of female candidates; in 2014 and 2019, it was lower. With the exception of 2014, the percentage of female candidates in municipal elections has increased since 2004. In Stuttgart, the Municipal Council is elected every five years. The next election will take place in 2024.

Since the parties and list coalitions act autonomously when nominating candidates, no influence can be expected on the gender ratio of the list of candidates. Legal requirements (e.g. gender quotas) are difficult due to the Equal Treatment Act.

### Classification / Definition

The percentage of women in the Stuttgart Municipal Council reflects the representation of women in local politics. The composition of the representative bodies in particular should – generally speaking – correspond to the composition of the population. The proportion of women is an important aspect that is directly addressed in the sustainability target.

The proportion of women in the Municipal Council is determined by two factors: the nomination of candidates by parties and list coalitions on the one hand, and the election decision on the other hand.

### 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 candidates in Municipal Council Elections:

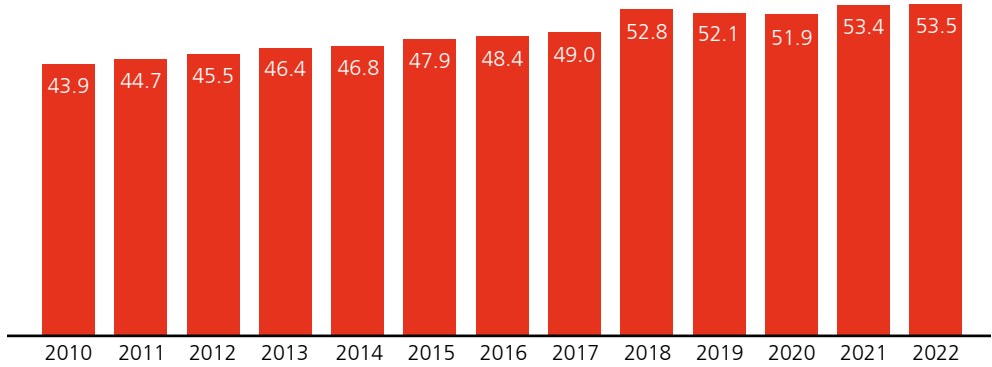
$$\frac{\text{Number of candidates in Municipal Council Elections}}{\text{Number of candidates in total}} \times 100$$





Indicator 5-6:  
**Women in management positions**

**Figure 46:** Women in management positions at the State Capital Stuttgart (in per cent)



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

“Full participation in taking on management positions and decision-making”  
 (Target 5.5)

A central socio-political task is creating equal opportunities between women and men in the labour market. In the last ten years, progress has been made in the employment ratio of women nationwide, however, this does not apply for the percentage of women in management positions.

The percentage of women employed in the administration of the State Capital Stuttgart (excluding the Clinical Centre), increased steadily from 63.3 per cent in 2012 to 64.1 per cent in 2017. Afterwards, it fell to 63.7 per cent in 2019. The percentage of women in management positions took a positive turn from 45.5 per cent (2012) to 52.8 per cent (2018), however, decreased to 51.9 per cent in 2020. With 53.5 per cent, another peak was reached in 2022. The increase in management is therefore higher than the increase in the percentage of women in general. The percentage of women increased in particular at upper management levels and at 51 per cent (2019) is only slightly below the percentage of women in the administration in general. There is a steady trend towards gender equality in the administration of the State Capital Stuttgart.

**Classification / Definition**

The indicator describes the percentage of management positions in the central administration of the State Capital Stuttgart (excluding the Clinical Centre), occupied by women. The figures indicate the extent to which there is a parity in the gender ratio.

**Calculation**

Women in management positions:

$$\frac{\text{Number of women in management positions}}{\text{Number of employees in management positions}} \times 100$$



## Correlation with other SDGs

Gender equality in the different areas of life is influenced by long-term socio-cultural and political developments. There is a close correlation with SDG 1 “No Poverty”.

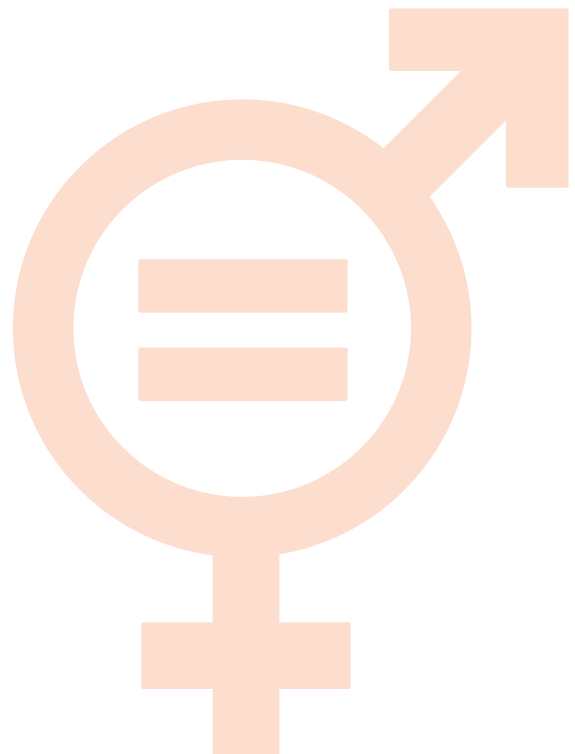
Since in many cases women play a key role in the family when it comes to healthy nutrition, gender equality is directly related to the prevention of malnutrition (SDG 2) in childhood and health impacts (SDG 3). The distinct framework conditions can also have an influence on gender equality in the short and medium term. Childcare in particular (SDG 4 “Quality Education”) enables women to return to working life and leads to a higher employment rate of women. A comparison of the various districts in Germany reveals a clear relation between the employment ratio and the care of children under 3.<sup>1</sup> So, the increase in care for children under 3 in Stuttgart (SDG 4) is probably the reason for the almost unvarying relation of women’s and men’s employment despite the increase in the employment ratio in general.

The participation of women in economic growth (SDG 8) is of central importance. As revealed in this chapter, women are still more often in part-time employment than men and carry out more unpaid care work at home. This also can affect their future pensions and poverty among seniors (SDG 1). There is another discrepancy as to business start-ups by women compared to men (SDG 9 “Industry, Innovation and Infrastructure”).

Gender equality can also be observed in a whole range of other aspects: for instance, the digitalisation of cities and the possibility of mobile working create a better work-life balance, in particular for women (SDG 16). In general, the reduction of inequalities (SDG 10) is the best way to improve gender equality and strengthen women and children.<sup>16</sup> In addition, strengthening LGBTTIQ rights has, in particular, also to be taken into account, but as yet not been included in any of the targets.

The following indicators are directly relevant to SDG 5 “Gender Equality”:

- SDG 1:** “Poverty of single parents”
- SDG 2:** “Children with overweight (at school enrolment examination)”
- SDG 4:** “Childcare”
- SDG 9:** “Business start-ups”
- SDG 16:** “Digital municipality”
- SDG 16:** “Mobile working”
- SDG 16:** “Crimes”





### Practical example 13:

## Equal opportunities for LGBTTIQ



### Context:

In recent years, lesbian, gay, bisexual, trans\*, inter and queer (lgbttiq) people have become more visible and an accepted part of our urban society. Many people involved make an important contribution to an open-minded and positive urban society. However, many people still do experience discrimination, exclusion and even violence due to their sexual orientation or gender identity.

### Description / Realisation:

The Equal Opportunities Department coordinates the field "Sexual orientation and gender diversity" as a cross-sectional task and diversity factor in municipal equal opportunities and diversity policy for the City of Stuttgart. Working together in a municipal working group, the aim is to develop and implement approaches for courses of action and solutions with a view to more acceptance, visibility and equal opportunities.

The current fields of action are:

1. Positive visibility of LGBTTIQ people
2. Context- and culture-sensitive education and awareness work
3. Trustworthy consulting and support opportunities
4. Safe places and opportunities for more social interaction

Also in the context of gender work in child and youth welfare, the intersectional topic is integrated into all spheres of activity. Steered by the Gender working group, the guidelines for gender-sensitive work in child and youth welfare were formulated and adopted by the Municipal Council in March 2007 and updated in July 2018. The Stuttgart organisation units of child and youth welfare have committed themselves to the implementation of the guidelines.

As an employer and signatory of the Charter of Diversity, "diversity" is an important cornerstone in the urban personnel policy of the State Capital Stuttgart. It is important in this context that besides equal opportunities for women and men, this also means equal opportunities, openness, respect and diversity as to sexual identity, national and ethnic origin, age, disability or religion and individual philosophy of life. The annual participation of the City of Stuttgart with a group in the CSD parade and the bi-monthly meetings of City employees – rainbow regulars' table are two examples of how it is implemented.

### Experience / Results:

A wide range of projects in all areas of life contributes to supporting and strengthening the rights of LGBTTIQ people. More detailed information on the respective experience and results of the selected examples can be seen on the following websites:

#### 1. Positive visibility of LGBTTIQ people

- The art exhibition WE ARE PART OF CULTURE [www.stuttgart.de/lgbttiq](http://www.stuttgart.de/lgbttiq)
- Pilot project "Materialschmiede frühkindliche Bildung" [Diversity education material in early childhood]

#### 2. Context- and culture-sensitive education and awareness work

- The project "Regenbogen.Bildung.Stuttgart" [www.regenbogenbildung.de](http://www.regenbogenbildung.de) [Rainbow. Education.Stuttgart]

#### 3. Trustworthy consulting and support opportunities

- LGBTTIQ advisory service of LHS
- BerTA – consulting, meeting point and contact place for rainbow families in Stuttgart

#### 4. Safe places and opportunities for more social interaction

- The project "Regenbogenrefugium Stuttgart" [Rainbow retreat]
- The project "Regenbogenhaus Stuttgart" [www.regenbogenhaus-stuttgart.de](http://www.regenbogenhaus-stuttgart.de) [Rainbow house Stuttgart]

#### 5. Guidelines for gender-sensitive work in children and youth welfare

- <https://www.stuttgart.de/buergerinnen-und-buerger/kinder-und-jugendliche/jugendhilfeplanung/querschnittsthemen.php>

### Division / Office / Public Undertaking:

Equal Opportunities Department  
Youth Welfare Office  
Administrative Services and Human Resources Office

### Further reading / Links:

[www.stuttgart.de/lgbttiq](http://www.stuttgart.de/lgbttiq)  
(Last access 06.04.2023)



### Practical example 14:

## STOP – Stuttgart Order Partnership against Domestic Violence

### Context:

A life free of violence is essential for leading a self-determined life. Domestic violence includes all forms of physical, sexualised, psychological, social, economic and digital violence that takes place between people of full age, who are or have been in a close relationship, regardless of where this happens. These are primarily people in a domestic partnership, but also in other family connections. Domestic violence affects all educational and income levels, as well as all age groups, nationalities, religions and cultures. In Germany, around a quarter of all women have experienced domestic violence. Children are also directly or indirectly affected by domestic violence and are exposed to particular psycho-social stress. As adults, these children tend to be violent themselves, or become victims of partner violence if they have experienced violence in their families as a model to solve conflicts.

### Description / Realisation:

Since 2001, the Stuttgart Order Partnership against Domestic Violence (STOP) has been in place and has been continuously developed by the Equal Opportunities Department over the past 20 years. So, domestic violence as aggression in relationships could be addressed more and more efficiently and comprehensively. Examples are additional priorities such as child protection, help for perpetrators and victims with a migration or refugee background, perpetrator work, male victims of domestic violence, fair dispute training and couples counselling.

Since the end of 2020, the Stuttgart Order Partnership against Domestic Violence (STOP) has been extended on the basis of the Council of Europe Convention on preventing and combatting violence against women and domestic violence (Istanbul Convention) by prevention and public relations spheres of activity. Under the STOP umbrella, in addition to management, further development and coordination of the well-established STOP intervention procedure, the second pillar, which is the structural development and expansion of prevention work and the third pillar – public relations on the basis of target-group-specific planning – is being developed, promoted, pooled and coordinated.

### Experience / Results:

In the area of prevention, as appropriate to their age, children and young people are informed about domestic violence and work carried out to help them solve conflicts without violence. The aim in this respect is that the target group will not exert or tolerate violence in their own partnerships. In addition to the direct work with children and young people, multipliers and professional staff from the entire social environment – employees at nursery schools, schools, open and mobile youth work, but also school psychologists, school doctors, independent midwives and many others – are sensitised and trained on the topic of domestic violence.

The success of STOP is mostly due to its comprehensive networking and the involvement of many direct and indirect players.

In addition to sensitising and training professionals and multipliers in the social environment and working directly with young people, new, contemporary topics, such as digital violence, are to be included in the prevention concept. The COVID-19 pandemic had a major impact on everyday life (home office, homeschooling), and the need for digital programmes and access has increased significantly and long-term. Appropriate measures will have to be taken.

### Division / Office / Public Undertaking:

Equal Opportunities Department

Cooperation partners:

Police Headquarters Stuttgart, Public Order Office, Counselling centres of the Youth Welfare Office, Crisis and Emergency Service, Women's Intervention Centre, Specialist Counselling Centre for Violence Prevention, Stuttgart Court Assistance, Child Protection Centre Stuttgart, Witness and Trial Assistance

### Further reading / Links:

<https://www.stuttgart.de/buergerinnen-und-buerger/chancengleichheit/haeusliche-gewalt/stop.php>  
(Last access 27.03.2023)

<https://www.stuttgart.de/beziehungsgewalt>  
(Last access 27.03.2023)



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://www.stuttgart.de/lebenswertes-stuttgart)



**SDG 6**

## **Clean Water and Sanitation**

“Ensure availability and sustainable management of water and sanitation for all”

Relevant targets of SDG 6 for German municipalities are in particular the improvement of water quality, the implementation of integrated water management and the protection or restoration of water-related ecosystems, access to clean drinking water, efficient use of water in all sectors, as well supporting developing countries in capacity building in the field of water supply and sanitation and the participation of local communities within the partnerships of the Global South.



## Overview of the relevant targets

The following targets of SDG 6 are relevant to German municipalities and are already covered in the VLR by indicators:



**6.2** Access to sanitary facilities for all



**6.3** Improvement of 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



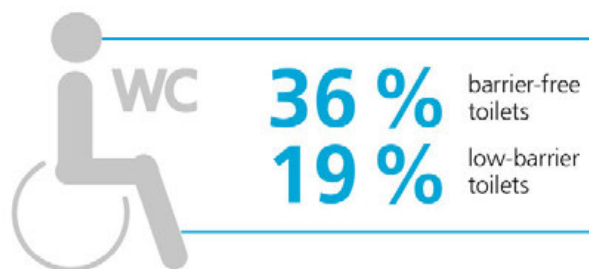
**6.a** Increasing support of developing countries with regard to water supply and wastewater disposal



**6.b** Supporting local involvement in the management of water supply and sanitary provision



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



“Access to sanitary facilities for all”  
 (Target 6.2)

In 2022, some 36 per cent of the 73 public toilets in Stuttgart are barrier-free and approximately 19 per cent are low-barrier. All barrier-free and disabled-friendly toilets can be used free-of-charge or can be opened with a euro key.

**Classification / Definition**

The indicator indicates the proportion of barrier-free or low-barrier sanitary facilities in Stuttgart in relation to all public sanitary facilities. According to the public undertaking Abfallwirtschaft Stuttgart (AWS) some 30 new self-cleaning and free sanitary facilities are to be built by 2025, which are equipped modernly, barrier-freely and contemporarily. These facilities mainly replace old facilities, which are normally not barrier-free. In addition, the City of Stuttgart and AWS are currently looking for new locations for potential barrier-free toilets. At two of the toilet facilities, “toilets for all” are equipped with lifting equipment and a changing bench and only accessible for disabled people. They can also be used by people with multiple and severe physical disabilities and should ensure hygienic and barrier-free use. At present, another two locations are planned.<sup>48</sup>

A euro key is sometimes required to open the toilet. This is a standardised key, which provides people with physical disabilities free access to barrier-free sanitary facilities. The key, which opens more than 12,000 toilets throughout Europe, is only given to people who are dependent on barrier-free sanitary conveniences to protect the facilities against vandalism and pollution.<sup>49</sup>

A map with barrier-free or low-barrier sanitary facilities in Stuttgart can be found here:



[www.toiletten-fuer-alle-bw.de/standorte.php](http://www.toiletten-fuer-alle-bw.de/standorte.php)

The indicator was first introduced in 2023 and will be updated.

**Calculation**

Barrier-free or low-barrier sanitary facilities:

$$\frac{\text{Number of barrier-free public sanitary facilities}}{\text{Number of public sanitary facilities in total}} \times 100$$

$$\frac{\text{Number of low-barrier public sanitary facilities}}{\text{Number of public sanitary facilities in total}} \times 100$$



## Indicator 6-2: Wastewater treatment

“Improvement of water quality, wastewater treatment and safe reuse”

(Target 6.3)



All wastewater entering the wastewater treatment plants is subject to denitrification and phosphorus elimination. In Stuttgart, the highest quality level has been achieved for many years. Thus, the percentage of wastewater treated is constantly at 100 per cent.

### Classification / Definition

Wastewater refers to water contaminated by domestic, commercial or industrial use. Deficient wastewater treatment can lead to harmful substances being discharged into water bodies and significantly increasing their nutrient level. This nutrient surplus is reduced by bacteria. The process consumes oxygen, which leads to fish kill and an increase in algae growth. To ensure the safe use of water bodies and the sustainable re-discharge of wastewater into the water bodies, the municipalities must act appropriately.

### Calculation

Wastewater treatment:

Wastewater volume treated by denitrification and the elimination of phosphorus

/

Wastewater volume in total

\* 100

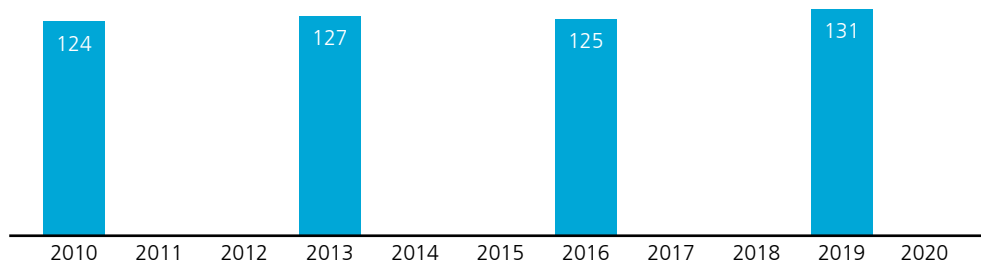






## Indicator 6-3: Consumption of drinking water

Figure 47: Consumption of drinking water (in litre per resident / day)



Source: State Statistical Office Baden-Württemberg

“Increase water use efficiency and ensure freshwater supply”  
(Target 6.4)

The average consumption of drinking water in private households and small businesses in the State Capital Stuttgart per day was initially stable at some 125 litres per resident and day, after decreases before 2010. The 2019 figure shows a further slight increase in water consumption. So, the long-term downward trend, which can be attributed to a more economical use of water in households and the lower water consumption of household appliances (e.g. washing machine, dishwasher), does not seem to be constant. The increase in water consumption could be due to the increasingly hot and dry summers.<sup>50</sup>

### Classification / Definition

Drinking water is one of the key resources and its economical use accordingly important. The consumption of drinking water depends both on private consumption and the use of water by industrial enterprises. Whereas the data on the consumption of drinking water by industry is collected separately, a differentiation between private households and small businesses is not possible. Although the value is determined every three years, the figures are only available later than the data collection of drinking water utilisation. The indicator indicates the average consumption of drinking water by private households and small businesses per resident.

The indicator “Consumption of drinking water” shows the efficiency of water use and will therefore be assigned to SDG 6 from now on, according to which the efficiency of water use must be increased and the supply of freshwater ensured. However, reference to SDG 12 remains in terms of sustainable production and sustainable consumption.

### Calculation

Consumption of drinking water:

$$\frac{\text{Annual consumption of drinking water (private households and small businesses)}}{\text{Number of residents} \times \text{days per year}}$$

### Drinking water and health



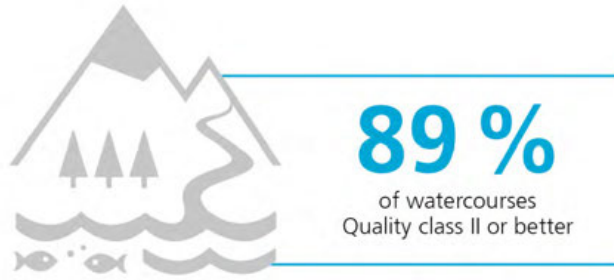
Approximately 60 per cent of the households in Stuttgart are supplied with water from Lake Constance and approximately 40 per cent supplied by the Landeswasserversorgung [State water supply]. It is drinking water of highest quality with unvarying chemical, physical and microbiological characteristics. However, these can change if the water remains longer in the pipes, rarely with any health hazards. If water remains in the pipe for a longer period, this is called stagnation water. Through stagnation the drinking water can absorb metals from the pipe surface and show a high level of metal concentration. Therefore, the Public Health Office recommends running off the stagnation water or using it for other purposes before using it for cooking, in particular for baby food. Brown, murky water that may flow through the pipes is caused by rust and zinc particles from the old galvanised steel pipes. This is not a health hazard, and can be solved by certain measures. The drinking water of Landeswasserversorgung contains no harmful substances, such as lead or decomposition products of pesticides.<sup>51</sup>



## Indicator 6-4: Quality of running water

“Protection and restoration of water-related ecosystems”

(Target 6.6)



Determinating the quality of watercourses is complex and is carried out sporadically. Data is available for the years 1994 and 2010.

In 1994, 55 per cent of kilometres of watercourses in the State Capital Stuttgart was classified as class II or better, in 2010, this figure increased to 89 per cent; since then this value has remained constant.<sup>52</sup> So, the wastewater load of streams in Stuttgart has been significantly reduced in the past twenty years. This is mainly due to the consistent expansion of rainwater treatment plants. When it rains, these retain considerable polluting loads in the sewer system and feed them into Stuttgart’s sewage treatment plants for targeted treatment.

If wastewater treatment systems have been built at (a section of) a watercourse, or other measures have been implemented that may have an impact on the quality of the water body, a reassessment of the water quality is recommended after at least 5 years. After 15 years, a comprehensive examination of the water quality should be carried out.

An update of the comprehensive mapping of water body quality according to the Water Framework Directive is planned, taking into account the impact of the climate change.

### Classification / Definition

As natural water habitats, watercourses are of great importance. Pollutants enter the watercourses due to the discharge of wastewater and rainwater from paved surfaces. In particular, easily degradable organic substances reduce the oxygen content of water bodies and significantly lower the quality of watercourses as a habitat for aquatic species and plants. The improvement of the quality of running water is closely related to improved wastewater treatment.

Conclusions can be drawn about the pollution of a water body due to wastewater discharges and their oxygen-consuming effect from the macrozoobenthos (small aquatic invertebrates such as caddisfly larvae, isopods, snails etc.) that can be determined in the water body. Based on the species found and their com-

position, the saprobic index is determined and assigned to a water quality class. The procedure is specified in DIN standard 38410. The indicator for the quality of running water indicates the proportion of the watercourse (in kilometres) at least in quality class II.

### Calculation

Quality of running water:

Watercourses with at least quality class II in km

/

Total watercourses in km

\* 100



## Correlation with other SDGs

Water is a vital prerequisite for increasing agricultural productivity and sustainable farming (SDG 2). Unsustainable farming methods, in turn, have a direct impact on drinking water and the quality of watercourses due to agricultural residues, for instance from pesticides and fertilisers.

New infrastructure or its expansion (cf. targets in SDG 4, SDG 7, SDG 9, SDG 11) have, as a rule, an effect on the availability of clean water: on the one hand, due to wastewater generation, on the other hand due to water consumption during the construction period, but also when producing materials and goods. Opportunities to adapt to climate change are also provided by what we call the "blue infrastructure". This means obvious water expanses and water elements that are not always visible at first sight. 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.<sup>53</sup> 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 level of wastewater treatment in Stuttgart is also essential for our health (SDG 3). The (barrier-free) access to public sanitary facilities for all has direct relevance for "Sustainable Cities and Communities" (SDG 11) and in terms of accessibility also for various indicators of SDG 10.

Consumption and production push the industrial demand for water. Cleaner production processes reduce water consumption and pollutant emission (SDG 12). Climate change has considerable impacts on the availability of water (SDG 13). Insufficient rainfall leads to droughts, which in turn impairs human health (SDG 3), the environment (SDG 14 and SDG 15), and also agricultural production (SDG 2). This, in turn, has a negative impact on employment and economic growth (SDG 8), as well as on supply chains (SDG 12), since many transports are carried out via inland waterways.

Direct reference to SDG 14 ("Life under Water") is made by the fact that rivers are connected to the seas: for instance, the Neckar is a tributary of the Rhine, which ultimately flows into the North Sea.

The following indicators are directly relevant to SDG 6 "Clean Water and Sanitary Facilities":

**SDG 2:** "Organic farming"

**SDG 10:** "Low-barrier housing"

**SDG 15:** "Renaturation programmes for watercourses"

## 6 CLEAN WATER AND SANITATION



## Practical example 15: Climate-friendly wastewater treatment

### Context:

The State Capital Stuttgart aims at becoming climate-neutral by 2035. To achieve this, it is necessary to cut down on electric and thermal energy or use them efficiently, expand renewable energy systems and quantify CO<sub>2</sub> emissions.

For this reason, the SES (Stadtentwässerung Stuttgart, Municipal Sewage Management) has introduced an energy management system (EnMS) for wastewater treatment systems, sewage operation and sewer sludge incineration. In future, this will be integrated into the SES existing environment and quality management.

The in-house production of wastewater treatment plants of SES already partly meets the needs for energy, which can be directly used in the form of electricity and heat released in the course of wastewater treatment. The new energy management system enables a more efficient control and use of existing energy flows and can optimise them.

The preparation of CO<sub>2</sub> balances supplements the previous requirements and environmental objectives in accordance with the SES quality and environment management system.

### Description / Realisation:

SES develops a measurement concept for the identification of an energy baseline. In the wastewater treatment plants, the main energy consumers should be identified and the necessary gauging technology designated to record these consumers by key figures accordingly. It can be expected that the most of the gauging technology is already available, however, the existing values should be checked for plausibility.

In addition, SES will draw up the required CO<sub>2</sub> balances. Calculation templates are provided by the Environmental Protection Office to calculate the CO<sub>2</sub> emissions of SES measures.

### Experience / Results:

The energy management system project is divided into two sections. At present, a measurement concept is being developed for electric energy. As of spring 2023, a measurement concept for thermal energy will follow. Upon completion of the project, it will be possible to identify the most important influence factors on energy consumption and increase energy efficiency.

Following a period of two years, the experience with the present CO<sub>2</sub> balances will be evaluated. Not only target achievement and methods of the calculation procedure, but also aspects such as implementation duration and financial aspects will be examined by controlling from an investment realisation point of view.

Moreover, SES is in a process of aligning its four control instruments (public welfare balance, investment programme, balanced scorecard, quality and environment management) to SDGs via sustainability controlling, including indicators and sustainability check.

The 2022 public welfare balance confirms that public welfare is foremost when decisions are made.

### Division / Office / Public Undertaking:

Civil Engineering Office/Public Undertaking  
Municipal Sewage Management  
in the Engineering Division

### Further reading / Links:

[https://www.stuttgart-stadtentwaesserung.de/wp-content/uploads/2023/05/Stadtentwaesserung-Stuttgart\\_SES\\_Kurzbrochure-Gemeinwohl-Bilanz-04-2023.pdf](https://www.stuttgart-stadtentwaesserung.de/wp-content/uploads/2023/05/Stadtentwaesserung-Stuttgart_SES_Kurzbrochure-Gemeinwohl-Bilanz-04-2023.pdf)  
(Last access 20.06.2023)



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://www.stuttgart.de/lebenswertes-stuttgart)



**SDG 7**  
**Affordable and  
Clean Energy**

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

Relevant targets of SDG 7 for German municipalities are in particular general access to affordable, reliable and modern energy services, as well as the increase of the proportion of renewable energy in the energy mix, the increase of energy efficiency, international cooperation in the field of clean energy and the expansion of the infrastructure.



### Overview of the relevant targets

The following targets of SDG 7 are relevant to German municipalities and are already covered in the VLR by indicators:



**7.2** Increasing the proportion of renewable energy in the global energy mix



**7.3** Doubling the increase rate of energy efficiency



**7.a.1** Promotion of access to research and technologies, as well as investments in clean energy and infrastructure

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



**7.1** Universal access to modern energy

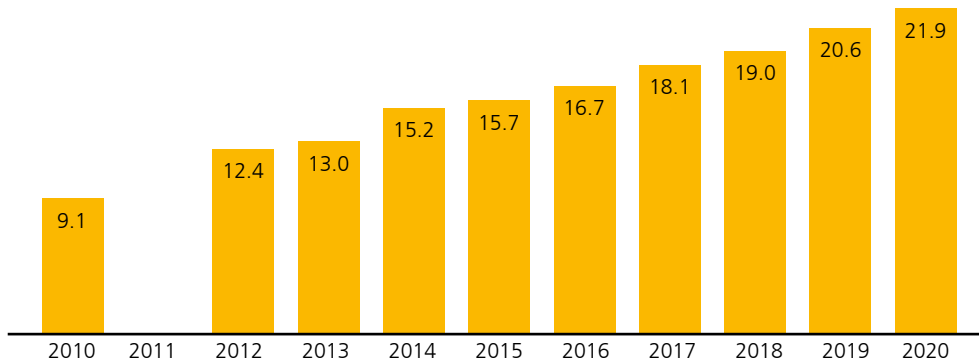


**7.b** Expansion and improvement of energy services for developing countries



## Indicator 7-1: Proportion of renewable energy in final energy consumption

Figure 48: Proportion of renewable energy in gross final energy consumption (in per cent)



Source: State Capital Stuttgart, Environmental Protection Office

“Increasing the proportion of renewable energy in the global energy mix”  
(Target 7.2)

In the period under review, the proportion of renewable energy in the final energy consumption of the State Capital Stuttgart increased continuously. The large rise between 2010 and 2012 is due to the setup of Stadtwerke Stuttgart and the city switching to purchasing 100 per cent green electricity. After this change the proportion of renewable energy in the final energy consumption also increased.<sup>54</sup> For 2011 there is no energy balance.

### Classification / Definition

Energy generation and energy consumption are central issues for sustainable development, as they are largely responsible for global greenhouse gas emissions. With regard to energy generation, the “energy turnaround” in Germany aims to significantly reduce the use of fossil raw materials. Another step of the “energy turnaround”, phasing out of nuclear energy, was implemented in April 2023. Renewable energy is of paramount importance in the reduction of greenhouse gas emissions. This includes wind, solar, hydro, bio energy and ambient heat.

Renewable energy is often characterised by decentralised supply, i.e. unlike in the past, energy is increasingly provided by decentralised systems distributed across and within a large number of municipalities. Municipalities can actively support the expansion of renewable energy and contribute to increasing the proportion of renewable energy in the local energy mix. However, this contribution is only possible by ensuring a reliable energy supply.

The entire electricity and heat consumption from renewable energy is registered. This means, that in addition to the generation of renewable energy and heat in the city area, the purchase

of green electricity, the renewable proportion in the German electricity mix, the participation of Stadtwerke Stuttgart in renewable generation plants and the renewable proportion in district heating are all taken into account. In addition, the proportion of regenerative fuel in the transport sector is taken into account in the Stuttgart district.

### Calculation

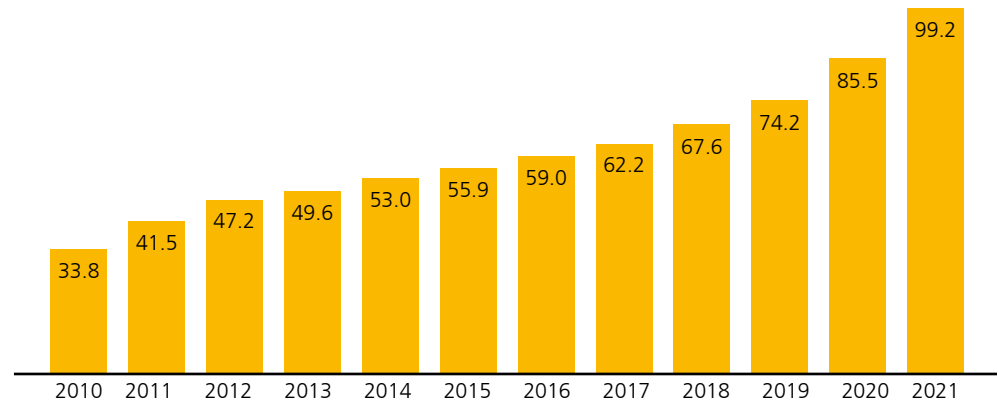
Proportion of renewable energy in final energy consumption:

$$\frac{\text{Energy supply by renewable energy}}{\text{Gross final energy consumption (climatically adjusted)}} \times 100$$



## Indicator 7-2: Power from photovoltaics

**Figure 49:** Power from photovoltaics (in W / resident)



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

“Increasing the proportion of renewable energy in the global energy mix”

(Target 7.2)

Since 2010, the power of photovoltaic systems installed in Stuttgart has almost tripled. In 2021, installed power per resident was 99.2 watt. With its solar campaign, the State Capital Stuttgart has been funding the expansion of photovoltaic systems of up to 450 euro per kWp.<sup>55</sup>

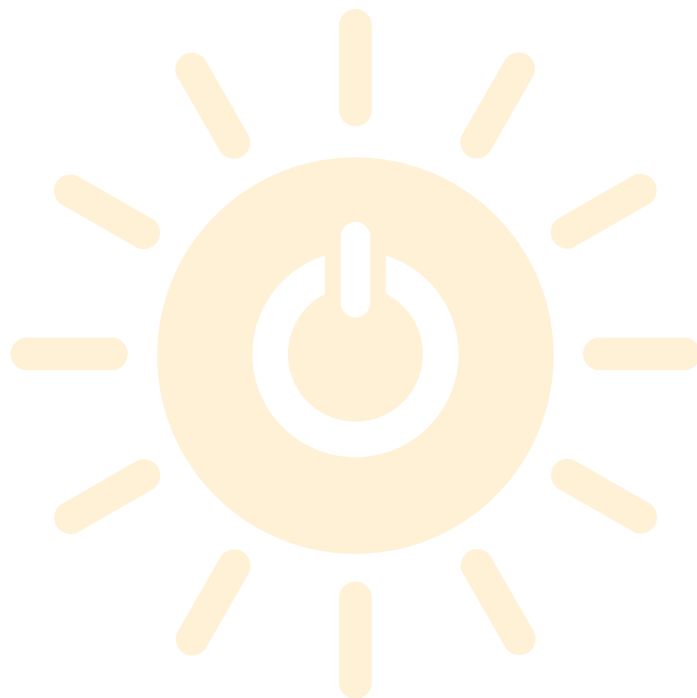
### Classification / Definition

The indicator describes the installed power of the photovoltaic systems in Stuttgart per capita, whereby the installed power indicates the amount of electricity these systems could theoretically generate.

### Calculation

Power from photovoltaics:

$$\frac{\text{Installed photovoltaic power}}{\text{Number of residents}}$$

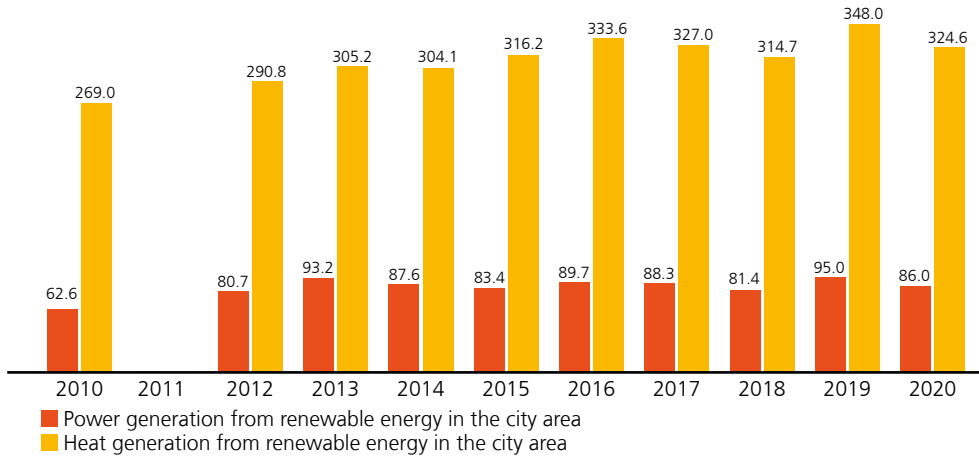






## Indicator 7-3: Production of renewable energy in the city area

Figure 50: Heat and power generation from renewable energy in the city area (in GWh)



“Increasing the proportion of renewable energy in the global energy mix”  
(Target 7.2)

Source: State Capital Stuttgart, Environmental Protection Office

In the last ten years, power generation from renewable energy was increased from some 63 to almost 86 GWh with annual fluctuations in the large plants for power generation of gas from purification plants. For photovoltaics, these statistics only recorded the volume fed into the power grid. Since 2012, the value has fluctuated between 80 and 95 GWh and reached its peak in 2019. Recently, the expansion of photovoltaic systems has risen significantly, but is not so clear in this presentation due to the high proportion of private use of electricity.<sup>55</sup> Over a ten-year basis, an increase can be observed in the generation of heat: while in 2010 some 270 GWh were generated in the city area from renewable energy, this rose to more than 324 GWh in 2020.

### Classification / Definition

The decentralised generation of electricity, in particular renewable energy, can be a municipal contribution to sustainable power supply. It reduces shortfalls in energy transport, makes the municipality more resilient against failures of the power supply and is often economically viable.

The indicator “Generation of renewable energy in the city area” reflects the local, sustainable power supply and takes into account both power and heat generation.

### Calculation

Heat and power generation from renewable energy in the city area:

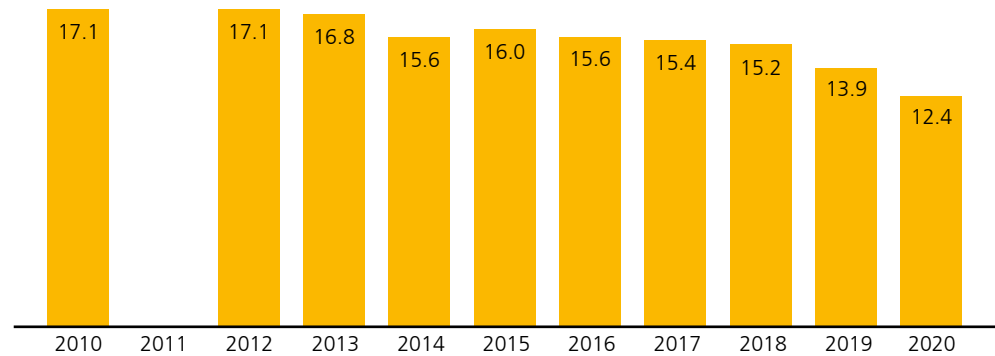
Annual heat and power generation from renewable energy in the city area (GWh/a)



“Doubling the growth rate of energy efficiency”  
(Target 7.3)

## Indicator 7.4: Energy consumption

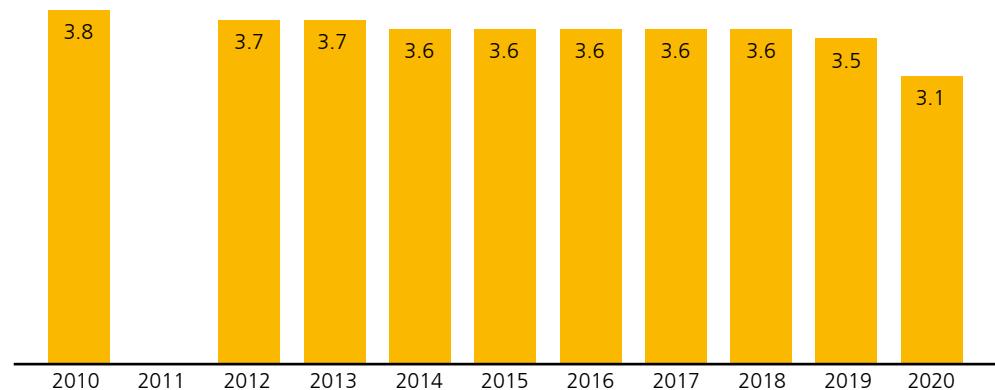
**Figure 51:** Final energy consumption by industry, commerce, trade and services (in MWh/ssc)



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

In the period from 2010 to 2020, the final energy consumption in industry, commerce, trade and services decreased from 17 to 12.4 MWh per employee subject to social security contributions (ssc).

**Figure 52:** Final energy consumption in the transport sector (in MWh/resident)

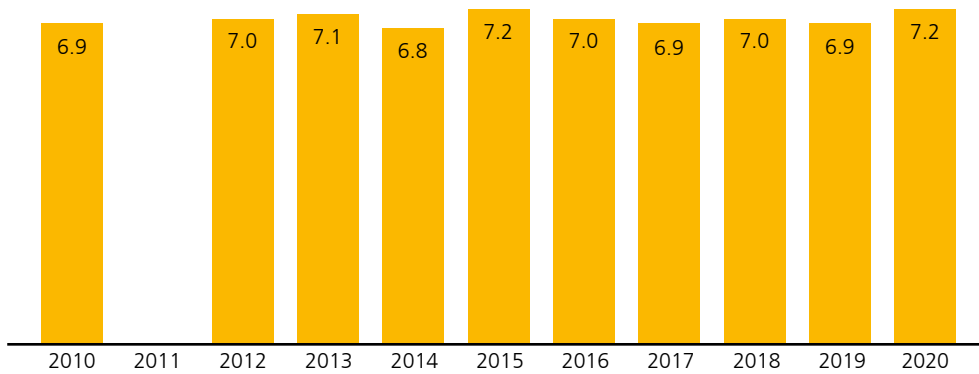


Source: State Capital Stuttgart, Environmental Protection Office, Statistics Office

In the period under review, the final energy consumption in the transport sector per resident and year remained stable for many years and has only recently fallen. The consumption decreased from 3.8 MWh in 2010 to 3.1 MWh per resident in the year 2020. Besides the decrease in population figures, this can be explained by a strong decrease in recorded traffic.<sup>56</sup> Compared to 2019, the decrease in 2020 by 0.4 MWh per resident can be explained by the COVID-19 pandemic and the resulting decline in traffic.



**Figure 53:** Final energy consumption by private households (in MWh/resident)

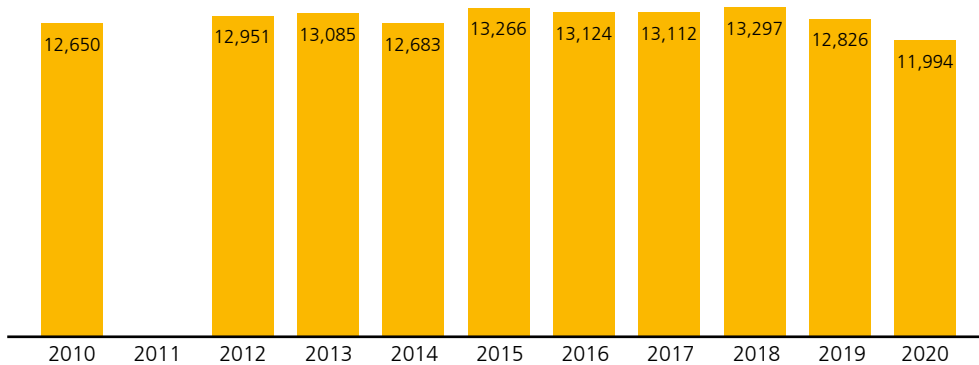


Source: State Capital Stuttgart, Environmental Protection Office, Statistics Office

The final energy consumption by private households per resident is subject to annual fluctuations. The increase of energy efficiency of building shells, heating technologies and terminal devices is counter-balanced by the increase in living space per resident and an increase in the use of electronic devices. Thus, efficiency gains are neutralised by the increase in consumption. Compared to previous years, the increase in energy consumption in 2020 can be explained by the impacts of the COVID-19 pandemic, since more people stayed at home and thus the energy consumption increased.

Whereas the relative final energy consumption has decreased in the economy and transport sectors, this does not apply to the same extent to private households.<sup>53</sup>

**Figure 54:** Final energy consumption by the city as a whole (in GWh/a)



Source: State Capital Stuttgart, Environmental Protection Office

From 2010 to 2019, the final energy consumption by the city as a whole was on average 13,000 GWh/a and thus approximately nine per cent lower than the value in 1990. For 2020, the value decreases significantly and is, at 11,994 GWh, 16 per cent lower than in 1990.

While in the previous years a dynamic development failed to materialise, the COVID-19 pandemic led to a considerable reduction in energy consumption.



### Classification / Definition

Energy is an important resource. In addition to sustainable energy generation, the reduction of energy consumption is a central sustainability goal. The possibilities to influence energy consumption, be it by saving energy or improved efficiency, are manifold and dependent on various stakeholders, from private individuals to large organisations. Politics can intervene at various levels. Municipalities can also aim at reduced energy consumption with a variety of specific measures. These include for instance targeted energy management of municipal properties, support programmes or energy efficiency.

The indicator final energy consumption reflects the extent to which energy is actually consumed. On the one hand, it is indicated as the total actual consumption for the city as a whole. On the other hand, the specific development of energy consumption is presented, differentiated according to the sectors commerce/trade/services and industry, transport and private households.

The indicator relates the final energy consumption to the number of users. In the case of final energy consumption in industry, commerce, trade and services, 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 industry, commerce, trade and services:

Consumption of final energy by industry, commerce, trade and services (climatically adjusted)

/

Number of employees subject to social security contributions

Final energy consumption by traffic:

Consumption of final energy by traffic (climatically adjusted)

/

Number of residents

Final energy consumption by private households:

Consumption of final energy by private households (climatically adjusted)

/

Number of residents

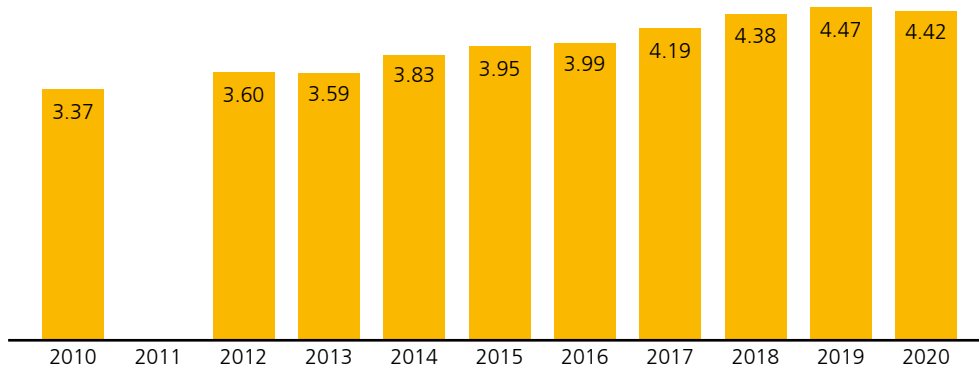
Final energy consumption by the city as a whole:

Consumption of final energy by the city as a whole (climatically adjusted)



## Indicator 7-5: Energy productivity

Figure 55: Energy productivity (in million euro / MWh)



“Doubling the increase rate of energy efficiency”  
(Target 7.3)

Source: State Capital Stuttgart, Environmental Protection Office

Energy productivity more than doubled between 1995 to 2012. It also increased significantly in the period from 2010 to 2020. Therefore, economic growth does not lead to proportional growth in energy consumption. In fact, the reduction in final energy consumption in all consumption sectors is offset by a significant increase in the gross domestic product.<sup>55</sup>

### Energy directive of the State Capital Stuttgart



Due to limited resources and to protect the environment, the economical and rational use of energy is a high-priority task of our time. The goal of the State Capital is to use energy required in the city’s properties rationally.

to 20 per cent. The goal of a climate-neutral community will be advanced and promoted by the participation in the funding programme of the Federal Environment Ministry “Master plan 100 per cent Climate Protection”.<sup>57</sup>

With the adoption of the energy concept “Urbanisation of Energy Transition” in January 2016, the Municipal Council is pushing the consistent and integral implementation of the energy turnaround in Stuttgart. In the context of the energy concept, a catalogue of measures was drawn up to achieve the planned goals of the city. By 2020, the primary energy consumption is to be reduced by 20 per cent compared to 1990 and the proportion of renewable energy increased

The prerequisites for a sustainable energy supply are being formed with the implementation of energy turnaround. To make this process successful increasing efforts in energy saving must have a high priority. Municipalities with their numerous properties have a special role model function (Municipal Council documents: GRDRs 1493/2019 revised version, GRDRs 1056/2015, GRDRs 294/2016).

### Classification / Definition

Energy productivity is the ratio energy consumption to economic productivity. This makes it clear to what extent energy is used effectively. This way the indicator complements the indicators for energy generation and energy consumption by measuring the effectiveness of their use.

### Calculation

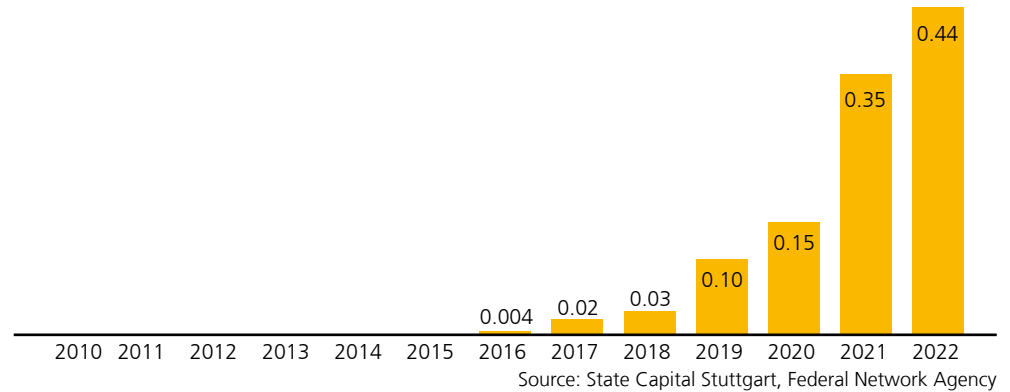
Energy productivity:

$$\frac{\text{Gross domestic product}}{\text{Final energy consumption by the city as a whole}}$$

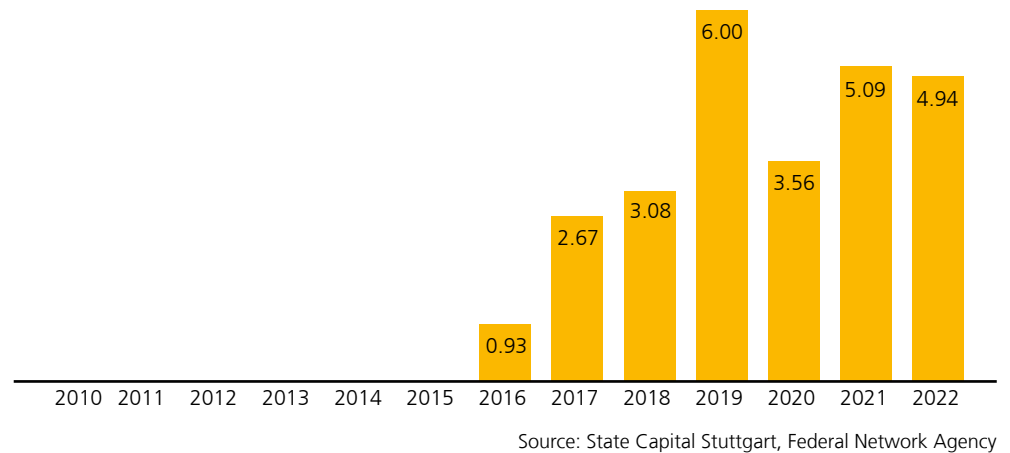


## Indicator 7-6: Charging station infrastructure

**Figure 56:** Public and private normal and quick charging points as of 3.7 kW per 100 cars (in number)



**Figure 57:** Public and private normal and quick charging points as of 3.7 kW per 100 e-cars (in number)



The number of public and private charging points for e-cars per 100 cars is consistently on the rise. In 2022, 0.44 charging points per car were available in Stuttgart. The relation of the charging station infrastructure to 100 electrically driven vehicles shows that in particular due to the increased number of electric or hybrid vehicles the range of charging points per 100 e-cars has, relatively speaking, been decreasing. In 2022, some five charging points per 100 e-cars were available in Stuttgart. In turn, the peak is reached in 2019, with six charging points per 100 e-cars. However, this is probably due to the significantly lower number of 12,956 registered electric and hybrid cars compared to 2022. The number of registered electric or hybrid vehicles has more than doubled to 26,173 cars.

### Opinions on charging station infrastructure i

Some 35 per cent of the respondents of the 2021 citizen survey among the local residents in Stuttgart indicate that they are not satisfied with the charging infrastructure for e-cars, 19 per cent are even very unsatisfied. Very satisfied or satisfied were 18 per cent of the respondents. 28 per cent of the citizens answered the question with neither satisfied nor unsatisfied.<sup>28</sup>

#### Classification / Definition

On the one hand, the indicator shows the number of public and private normal and quick charging points in Stuttgart per 100 cars and, on the other hand, the relation per 100 electric or hybrid cars. Since a charging station normally offers charging for two cars at the same time, charging points were measured and not charging stations.

It is the City of Stuttgart's aim to increase the number of charging stations by the end of 2023 with new available charging points at new locations. In addition, 20 of the future locations are to be equipped with DC quick charging stations and made available in public spaces. The indicator was introduced in 2023 for the first time and is to be updated.

#### Calculation

Charging station infrastructure:

Number of public and private normal and quick charging points as of 3.7 kW

/

Number of registered cars in total

\*100

Number of public and private normal and quick charging points as of 3.7 kW

/

Number of cars with electric drive (incl. plug-in hybrids)

\*100

### Correlation with other SDGs

The goal of a clean energy supply has far-reaching consequences for other SDGs. Considering today's energy crisis and increasing energy costs, the connection between access to affordable energy and SDG 1 "No Poverty" is plainly evident. Keeping water and air clean (SDG 3 "Good Health and Well-Being" and SDG 6 "Clean Water and Sanitation") as well as Climate Action (SDG 13) are closely linked to energy generation and use. However, energy also plays a crucial role for 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 communities (SDG 11) are also key factors for developments in the energy sector.

There is a potential target conflict with SDG 2 "Zero Hunger" and SDG 15 "Life on Land", since increased energy generation from biomass directly contends with the protection of the natural habitat and the use of areas for growing food.

Production and consumption form a hinge-joint between numerous SDGs which either support one another or have conflicting targets. One solution 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 heating energy"

**SDG 11:** "Passenger cars with electric drive"

## 7 AFFORDABLE AND CLEAN ENERGY



## Practical example 16: Energy modernisation in the city administration

### Context:

Redevelopment areas are for upgrading and improving the urban development infrastructure. In addition to the urban development targets, such as redesign of squares, traffic improvements or new-build projects, assistance for private owners with modernising their houses is an important goal of a redevelopment area. Buildings dated when it comes to energy and residential value are brought up to a new standard, energy-wise and more environment-friendly.

### Description / Realisation:

There is an energy funding directive for urban renewal to achieve universal standards across all redevelopment areas. This is based on the specifications of KfW efficiency houses. Here, it no longer matters whether a building is used as a residential building or a non-residential building. Two characteristic values are important for energy-related renovation: the primary energy requirement QP, this means the required total energy requirement of a building (including energy supply itself) and transmission heat loss HT, i.e. thermal energy lost via the building shell. In the meantime, with the update of the energy funding directives (Municipal Council document GRDs 746/2022), demands are made on KfW efficiency houses 85 (i.e. they have a QP of 85 %), but at the same time are subsidised with 25 per cent of their construction and planning costs. If a KfW efficiency house 70 or 55 is achieved, 35 per cent of the construction and planning costs will be subsidised.

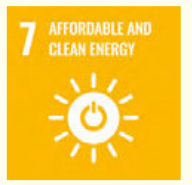
### Experience / Results:

For many owners the funding by the redevelopment area is attractive, because in addition to funding, tax advantages (increased tax depreciation pursuant to Section 7h EStG [Income Tax Law]) can be asserted. Tenants in redevelopment areas are also protected: in the case of relocation, they receive support from the social planning sector and in the case of modernisation with municipal participation, the rents are also arranged with the city in advance, so that they are in the middle price segment of the rent index, even after modernisation. In all redevelopment areas, there are buildings that have been updated with municipal funding, some of them only due to the support of urban renewal. In the redevelopment area Stöckach, to mention an ongoing process, twelve buildings have been brought up to new energy standards within eleven years.

### Division / Office / Public Undertaking:

Urban Renewal and Residential Development Department / Urban Planning and Housing Office in the Urban Planning, Housing and Environment Division





Practical example 17:

## Stadtwerke Stuttgart – Implementation of the energy and mobility turnaround



### Context:

The Municipal Council decided that the State Capital Stuttgart is to be climate-neutral by 2035, ten years earlier than in Germany, as a whole. Stadtwerke Stuttgart has taken this decision as its strategy: the municipal company derived specific implementation steps from the climate schedule to reduce emissions by up to a quarter – in electricity, heat and mobility.

### Description / Realisation:

The specific implementation steps comprise a turnaround in electricity, heat and traffic. By 2023, Stadtwerke Stuttgart reckons with an investment of three billion euro for all three sectors.

In concrete terms, the enterprise wants to generate green electricity for their clients itself: by 2035, a generation volume of approximately 1.7 terawatt hours per year is planned. Therefore, it is investing in wind farms and large-scale photovoltaic open-space systems as close as possible to Stuttgart.

For heat transition alone, Stadtwerke Stuttgart expects to invest 700 million euro by 2035. For this reason, the enterprise wants to draw on all renewable heat sources in the city area, this includes in particular wastewater heat, as well as air and geothermal heat, and if possible, also heat from the Neckar. Depending on the available sources, the heat solutions can be pipeline-bound or property-based. The focus is on generating energy locally, close to the consumer. It is important that the most beneficial technology is used. Innovations such as hydrogen are also being tested.

To promote the mobility turnaround, Stadtwerke Stuttgart has been consistently expanding its charging infrastructure. By the beginning of 2023, the energy service provider will have the largest charging network in Stuttgart. The goal is to have 10,000 to 15,000 charging points in the city area by 2035 – privately and publicly accessible. This increase in charging opportunities is to make the switch to e-mobility attractive for all – a key feature in the electrification of individual transport.

### Experience / Results:

Stadtwerke Stuttgart is the first municipal enterprise that derived distinct measures from the climate schedule of the city. Stadtwerke Stuttgart must adjust its labour force and digital infrastructure to quickly implement the measures.

### Division / Office / Public Undertaking:

Stadtwerke Stuttgart GmbH  
(100 per cent subsidiary of the State Capital Stuttgart)

### Further reading / Links:

[www.stadtwerke-stuttgart.de/strategie](http://www.stadtwerke-stuttgart.de/strategie)  
(Last access 27.03.2023)

## 7 AFFORDABLE AND CLEAN ENERGY



## Practical example 18: Solar campaign and building modernisation programme

### Context:

On 13 November 2020, the Committee for Climate and Environment adopted the “solar campaign”. With the subsidy programme, the State Capital Stuttgart supports building owners, tenants, lease-holders and facility operators in developing power generation via solar energy (photovoltaics). The comprehensive programme is a component of the action programme “Global climate in distress – Stuttgart takes action”, by which immediate climate protection action amounting to 200 million euro is implemented in Stuttgart.

### Description / Realisation:

The solar campaign plays an important part in making the city climate-neutral. When PV systems are installed on or at buildings, other measures, such as electrical installation updates, the setting up of a meter mounting board, erection of scaffolding or structural engineering work are subsidised. Since these positions are often very expensive, the subsidising is intended to help over the threshold and make a start. This applies in particular for tenant electricity systems, which often mean higher costs for the measurement concept required. The subsidy rate depends on the size of the system. The maximum subsidy rate is 350 euro per kilowatt peak (kWp). If photovoltaics is installed above a green roof or along the building façade, the subsidy rate rises up to 450 euro per kWp. The installation of storage batteries and upstream charging infrastructure for e-cars, each in connection with PV expansion, will also be financially supported. Here, up to 1,000 euro net per newly established e-charging station supplied by the upstream charging infrastructure will be subsidised.

In addition, the installation of ready-to-use PV systems – balcony models – is subsidised for tenants with a flat-rate grant of 100 euro per system for connecting charges. The subsidy can be combined with current and future subsidy programmes of the federal and state government (BAFA, KfW, L-Bank) provided this applies.

Since 2016, the State Capital Stuttgart together with the Energy Consulting Centre has been carrying out the “Building Modernisation Programme” in approximately ten to 15 districts per year, to address private house owners in districts with a particularly high energy-saving and modernisation potential. Here the Mayor officially invites all the local residents to an information session. The State Capital Stuttgart subsidy and advisory programmes are presented, giving an overview of energy-efficient renovation measures. Afterwards, the owners in the respective districts can register for individual consultation at their home free of charge. The aim here is to convince as many owners as possible in the districts with a high demand for renovation or potential for energy-efficiency measures.

### Experience / Results:

The evaluation of the programme revealed that approximately 80 per cent of the participants have carried out refurbishment or are planning to do so.

### Division / Office / Public Undertaking:

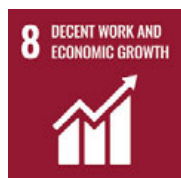
Environmental Protection Office in the Urban Planning, Housing and Environment Division

### Further reading / Links:

<https://www.stuttgart.de/leben/umwelt/energie/foerderprogramme/solaroffensive.php>



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://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 and increasing productivity and resource efficiency. Furthermore, SDG 8 is also about achieving full employment and decent work. The focus is on reducing the number of young people without a job, school qualifications or vocational training.



## Overview of the relevant targets

The following targets of SDG 8 are relevant to German municipalities and are already covered in the VLR by indicators:



**8.1** Sustainable economic growth



**8.5** Full employment and decent work for all with equal pay



**8.6** Support for young people without a job, school qualifications or vocational training

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



**8.2** Diversity, innovation and modernisation for economic productivity



**8.3** Promotion of job creation programmes and programmes supporting growing enterprises



**8.4** Improvement of resource effectiveness in consumption and production



**8.7** Moderately end slavery, human trafficking and child labour



**8.8** Protection of labour rights and promotion of a safe work environment



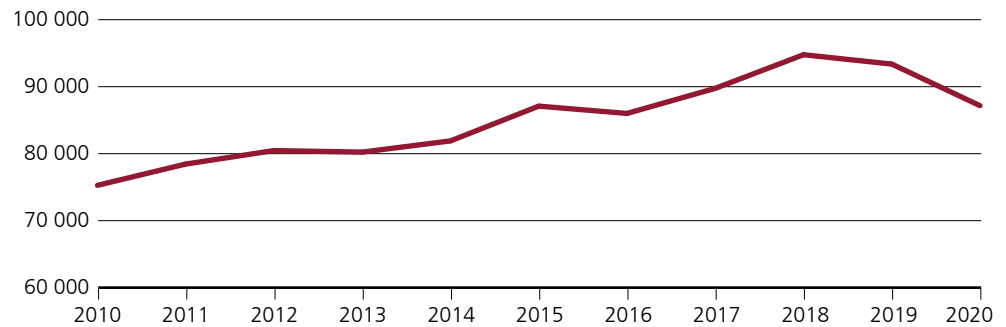
**8.9** Promotion of positive and sustainable tourism



## Indicator 8-1: Gross domestic product

“Sustainable economic growth”  
(Target 8.1)

Figure 58: Gross domestic product (in euro / resident)



Source: “National Accounts of the Federal States” working group

The gross domestic product of the State Capital Stuttgart dropped significantly with the economic crisis from 2007 - 2009. In 2009, the gross domestic product in Stuttgart was 66,130 euro per resident. However, as of 2010 a rapid recovery could be observed. As early as 2011, the 2007 level was exceeded again with a gross domestic product of 78,452 euro per resident. By 2019, there was a further increase to 93,378 euro per resident. The good overall economic situation in Germany is also reflected in Stuttgart. In addition, the business location Stuttgart has developed in recent years more dynamically than other business locations of comparable German cities.<sup>58</sup> The severe recession was caused by the global COVID-19 pandemic with the gross domestic product dropping in 2020 to a level of 87,168 euro per resident.<sup>59</sup>

### Classification / Definition

The productivity of the economy is the starting point for economically and socially sustainable development, providing opportunities for ecologically sustainable activities. The total economic power is reflected in the gross domestic product.

The gross domestic product is the sum of all goods and services produced as final products within a spatial unit minus intermediate consumption in the respective price ranges.

For the indicator, the gross domestic product is in relation to the official population figure.

### Calculation

Gross domestic product:

$$\frac{\text{Gross domestic product in the respective prices}}{\text{Number of residents}}$$

### Stuttgart in the economic city ranking



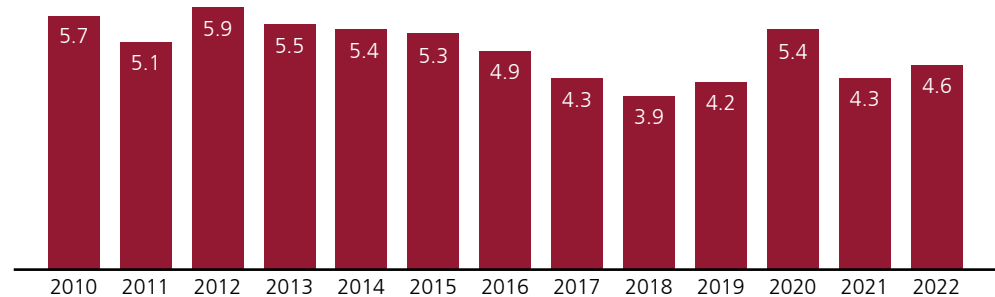
There is a constant competition among cities, in particular in the fields of labour market and economic power. City rankings and their evaluations make it possible to assess a city according to various criteria and compare it with other cities. Recently, the consulting company IW Consult carried out an economic city ranking, including the City of Stuttgart. The cities are compared according to various indicators. In the labour market, the City of Stuttgart ranks 8<sup>th</sup> in the level ranking with 71 other cities. When it comes to economic power, the State Capital ranks 3<sup>rd</sup>, its best result. The structural high value of the gross domestic product, which contributed to the good ranking can be partially explained by the high number of commuters. In addition, an above-average performance was measured in Stuttgart for active business start-ups. In total, Stuttgart managed to reach 4<sup>th</sup> place in the overall assessment.<sup>60</sup>



## Indicator 8-2: Unemployment

“Full employment and decent work for all with equal pay”  
(Target 8.5)

**Figure 59:** Unemployment in total (in per cent)



Source: Statistics of the Federal Employment Agency

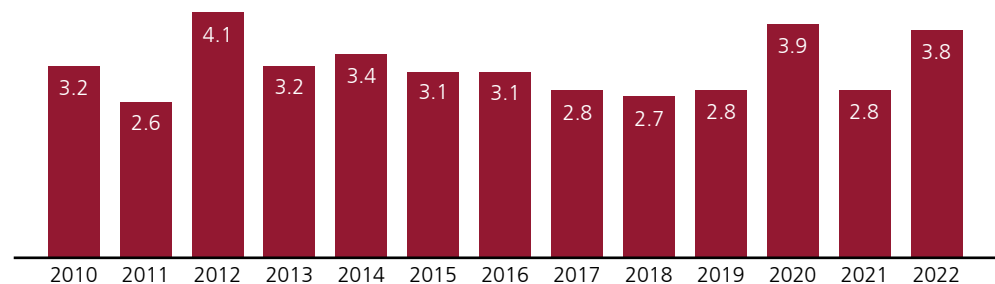
In recent years, the unemployment rate fluctuated between 3.9 and 5.9 per cent. Between 2012 and 2018, it steadily decreased. This decrease is due to the positive development on the labour market, which has contributed to a significant increase in employment (cf. indicator “Employment rate”). In 2020, unemployment again rose considerably to 5.4 per cent due to the COVID-19 pandemic. In 2021, however, it decreased again to the level prior to the COVID-19 pandemic.<sup>61</sup> The new increase by 0.3 percentage points in 2022 can, however, be explained by the influx of refugees from the Ukraine.

### Opinions on unemployment



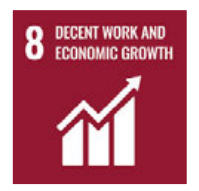
In the 2021 citizen survey, unemployment in Stuttgart is not perceived as a major problem by the participants, with 41 of a possible 100 points. Nevertheless, it can be seen that, compared to the 2019 citizen survey, this area has increased by seven points.<sup>28</sup>

**Figure 60:** Unemployment among adolescents and young adults (“youth unemployment rate”) (in per cent)



Source: Statistics of the Federal Employment Agency

From 2012 to 2019, the unemployment rate of under 25-year-olds steadily decreased to 2.8 per cent. The significant increase in 2020 plus the unemployment rate in general can be explained by the COVID-19 pandemic and the related downturn in the economic momentum. The further increase in youth unemployment in 2022 can, on the other hand, be explained by the young refugees from the Ukraine who have come to Germany.<sup>62</sup>



**Classification / Definition**

Registered unemployed are persons who

- are temporarily not in employment or are only employed for less than 15 hours a week (unemployment),
- are looking for employment subject to social security contributions, with a minimum of 15 working hours per week (personal efforts),
- are available for the job placement efforts of the Employment Agency or the Job Centre, i.e. are able and willing to work and have the right to (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 refers to the number of registered unemployed people related to the civilian labour force as a whole (i.e. employed + registered unemployed). The civilian labour force includes the whole dependent civilian labour force, as well as the self-employed and family workers. The dependent civilian labour force consists of employees subject to social security contributions (including trainees/apprentices), those marginally employed, persons in work opportunities (additional expenditure option), civil servants (excluding the military), border commuters and unemployed people.

The unemployment rate only includes people who register as unemployed in person. People who are not in gainful employment and would like to take on work, but are not registered with the

Employment Agency are therefore not recorded. In particular, persons not entitled to unemployment benefits (I) have little incentive to register as unemployed. This leads to under-coverage of registered unemployed people. This applies in particular to people returning to work who are not entitled to unemployment benefits after a phase of unemployment, but would like to take on work. Therefore, it can be assumed that more women than men are affected by this under-coverage of unemployment statistics.

**Calculation**

Unemployment in total:

$$\frac{\text{Registered unemployed people}}{\text{The entire civilian labour force} + \text{Registered unemployed people}} * 100$$

Unemployment among adolescents and young adults:

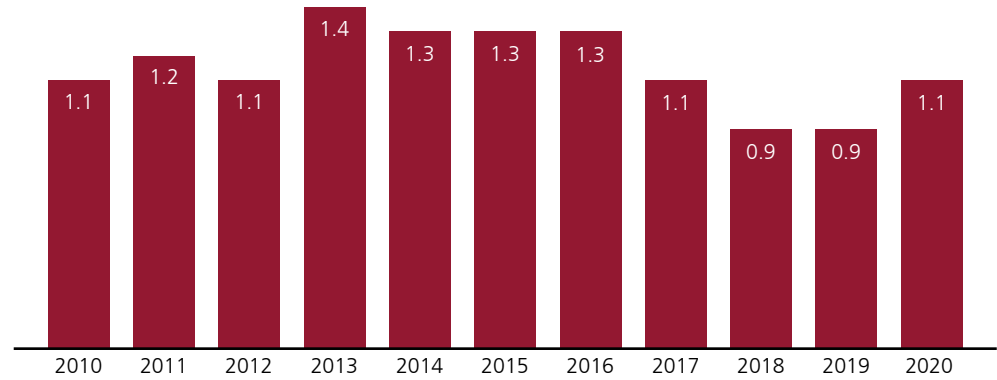
$$\frac{\text{Registered unemployed people under 25}}{\text{The entire civilian labour force under 25} + \text{Registered unemployed people under 25}} * 100$$



## Indicator 8-3: Long-term unemployment

“Full employment and decent work for all with equal pay”  
(Target 8.5)

Figure 61: Long-term unemployment in total (in per cent)



Source: Statistics of the Federal Employment Agency

From 2010 to 2013, long-term unemployment at first rose significantly. Between 2013 and 2016, it remained at a stable level of slightly more than 1.3 per cent. Most recently, a decline in long-term unemployment was determined between 2016 and 2019. For 2020, the first year of the COVID-19 pandemic, the figure rose again to 1.1 per cent.

### Classification / Definition

Unemployment is a major problem for those affected if it lasts for a longer period. Long-term unemployed people are people who are permanently unemployed for more than one year. Parallel to the definition of unemployment, the long-term unemployment rate relates the long-term unemployed to the civilian labour force and the registered unemployed.

### Calculation

Long-term unemployment in total:

$$\frac{\text{Registered unemployed people with a duration of unemployment > 1 year}}{\text{The entire civilian labour force + registered unemployed people}} \times 100$$

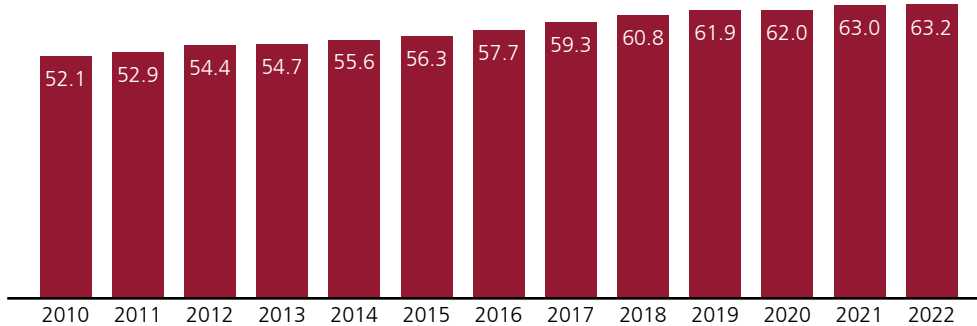






## Indicator 8-4: Employment rate

Figure 62: Employment rate (in per cent)



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

“Full employment and decent work for all with equal pay”  
(Target 8.5)

In the period under review, the employment rate rose steadily from 52.1 per cent to 63.2 per cent. The positive economic development is reflected in higher employment. Only in 2020, the increase in the employment rate slowed down due the COVID-19 pandemic. In 2022, the upturn continued and the employment rate rose to 63.2 per cent.

### Classification / Definition

The employment rate provides information on the number of residents who are able to work and are actually employed. While the unemployment rate records those without work, looking for work without success, the employment rate indicates the extent to which people enter the labour market. Accordingly, it is also relevant for the employment rate, how widespread it is to stay at home for housework and parenting or retiring before the statutory retiring age is reached.

The employment rate is defined as the ratio of employees subject to social security contributions (ssc) to the population of working age. Thus, the employment rate refers exclusively to employees, but not to self-employed people or family workers. Nor does the calculation include civil servants. Therefore, the number of people working outside the household is systematically underestimated. However, the changes in this labour segment are of great importance and an important add-on to the unemployment indicator. The values reflect the status as of 30 June of each year.

### Calculation

Employment rate:

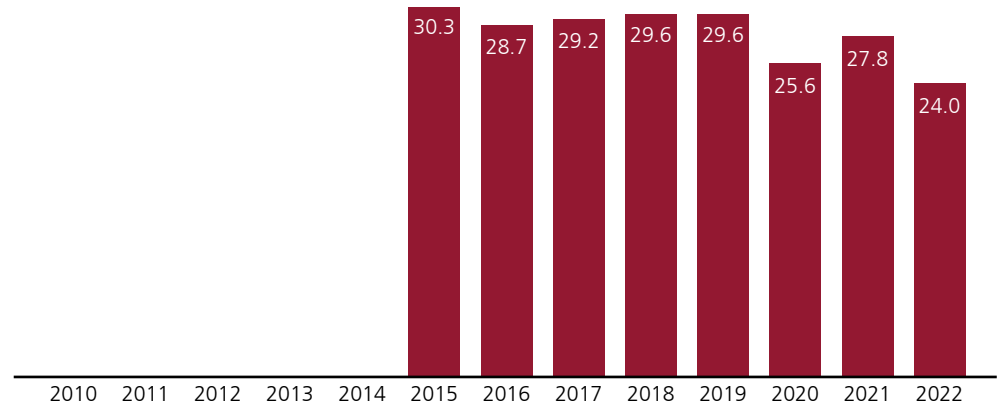
$$\frac{\text{Number of employees subject to social security contributions between 15 and 64 years at the place of residence}}{\text{Number of residents between 15 and 64 years}} \times 100$$



## Indicator 8-5: "People increasing earnings"

"Full employment and decent work for all with equal pay"  
(Target 8.5)

**Figure 63:** Employed persons eligible for benefits ("people increasing earnings") (in per cent)



Source: Statistics of the Federal Employment Agency

In 2015, when the data was collected, the relation of people increasing earnings to all people eligible for benefits is some 30 per cent.<sup>63</sup> An increasing proportion of people who received unemployment benefits were at least in a low-paid job. As of 2020, the value has been declining (with a slight peak in 2021) to recently 24.0 per cent in 2022. This decline can be explained to a large extent by the elimination of mini-jobs (marginal employment).

In recent years, the employment rate has continued to rise, which also has an impact on the SGB II sector. Although a rising share of people in employment is generally welcome, the high proportion of people increasing earnings indicates that – despite being in employment – an increasing number of people depend on state benefits. This applies in particular to women and non-nationals eligible for benefits.

### Classification / Definition

Not every employment means a sufficient income. People with low income are entitled to unemployment benefit II. These people increasing earnings are either in employment subject to social security contributions or marginally employed or self-employed and can receive additional state support.

The indicator "People increasing earnings" is the relation of employees receiving unemployment benefits II to the total number of recipients of unemployment benefits. It indicates the proportion of recipients of unemployment benefits II in employment subject to social security contributions, in marginal employment or self-employed. This indicates the range of the low-wage sector, but also the proportion of unemployment benefit II recipients integrated into a social job context, even if poorly paid.

The citizens' basic income, newly introduced in 2023, replaces unemployment benefits II. The qualification for basic income and getting people into permanent work is to be improved. The calculation of basic needs was given a new structure.<sup>64</sup> The deadline for data collection is the 31 December of each year.

### Calculation

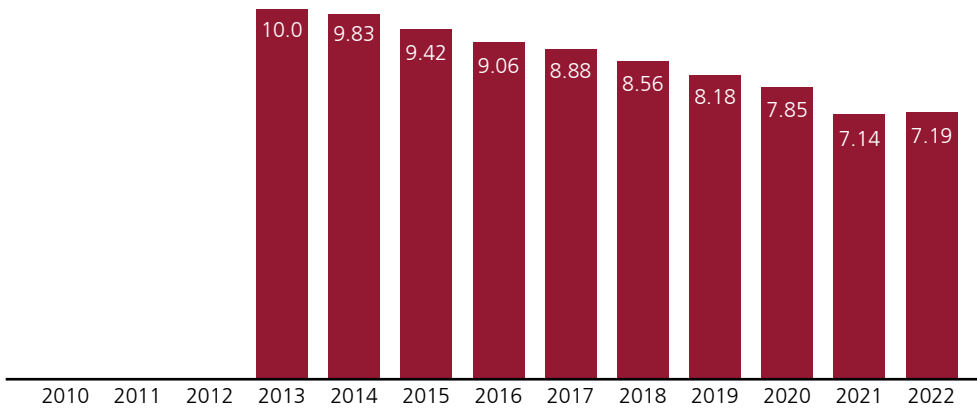
"People increasing earnings":

$$\frac{\text{Number of unemployment benefit II recipients in employment}}{\text{Total number of recipients of unemployment benefits II who are able to work}} \times 100$$



## Indicator 8-6: Marginal employment

**Figure 64:** Proportion of people in marginal employment in the total number of people in employment subject to social security contributions ssc (in per cent)



Source: Statistics of the Federal Employment Agency, State Statistical Office Baden-Württemberg

“Full employment and decent work for all with equal pay”  
(Target 8.5)

Since 2013, when the minor employment threshold was raised to 450 euro, the proportion of employees exclusively in marginal employment has declined from 10 per cent to some seven per cent.

### Classification / Definition

The indicator shows the relation of employees in marginal employment to the total number of employees subject to social security contributions (ssc), plus the employees exclusively in marginal employment. Marginal employment is when the total wage does not exceed the minor employment threshold. In 2013, this threshold was raised to 450 euro, the next rise was in October 2022 to 520 euro.<sup>65</sup>

The minor employment threshold specifying the amount of pay for marginal employment is flexible and will rise parallel to minimum wage. So, it is ensured that with employment of not more than ten hours per week at a minimum wage it does constitute a mini-job.<sup>66</sup> The deadline for data collection is 30 June of each year.

### Calculation

Marginal employment:

$$\frac{\text{Number of exclusively marginally employed employees}}{\text{Ssc + exclusively marginally employed employees}} \times 100$$



## Indicator 8-7:

## Access to vocational education and training after secondary school

“Promotion of young people without employment and school or vocational education”

(Target 8.6)



# 54 %

of female pupils leave course of education without completion



# 60 %

male pupils in vocational preparation programmes

The education survey in vocational preparation programmes (e.g. Berufseinstiegsjahr (BEJ), Vorqualifizierungsjahr Arbeit/Beruf (VAB)) shows a majority of male pupils at the participating schools in the school year 2021/22 (60 per cent). These show more success in shaping their further educational path than the young women. Of the 155 women where information is available on finishing school, 54 per cent once again left their course of education without completion. While the teachers interviewed said the largest proportion of young men (21.5 per cent) went on to dual vocational training, 39 per cent of the young women had no idea as to their future education, although teachers consider the programmes currently offered as suitable for 92.2 per cent of the female pupils.

These results of the education survey indicate a need for development in vocational preparation programmes at Stuttgart schools with regard to equal access to high-quality education.

### Classification / Definition

Since the 2020/21 school year, the education survey of the Stuttgart Partnership for Education has been carried out every year. It addresses teachers of preparatory job-related programmes (e.g. BEJ, VAB) at vocational schools in Stuttgart. In an online questionnaire, the teachers participating provide information on the prerequisites the pupils started their present course of education with and how they will continue. In addition to this overview of further education following the preparatory vocational programmes, the education survey asks if the support programme at preparatory vocational programmes (e.g. German lessons for new immigrants in the VABO programme) meets the needs of pupils.

### Calculation

Access to vocational education and training after secondary school:

Number of pupils after secondary school

/

Number of pupils in the respective vocational programme

\* 100



## Correlation with other SDGs

Economic productivity is itself part of the economic sustainability dimension, but it also has a direct impact on the social and ecological sustainability dimension: decent work and full employment (SDG 8) lead to a reduction in poverty, as was made clear in the corresponding indicators (SDG 1 "No Poverty"). On the other hand, there is a risk that economic growth will lead to increasing environmental pollution and thus to negative impacts on water resources, the global climate and life on land and below water (SDG 6, SDG 13, SDG 14, SDG 15). The development and expansion of infrastructure (cf. targets in SDG 3, SDG 4, SDG 7, SDG 9, SDG 11) contributes to economic growth and job creation, at the same time it has a negative impact on the environment and climate. Therefore, sustainable consumption and production, as formulated in SDG 12, are essential for sustainable economic growth. There is also a direct link between energy and economic growth. Economic growth is often accompanied with increasing energy consumption. The sustainability and inclusivity of economic growth can, for instance, be measured by reducing greenhouse gas emissions and increasing the sustainable use of energy for all (SDG 7). Therefore, decoupling economic growth and environmental pollution is of crucial importance.

In Stuttgart, economic growth in recent years has been accompanied by decreasing greenhouse gas emissions (SDG 13) from industry and commerce. This development is positive at municipal level, but it has to be assessed in a broader context. The reduction of greenhouse gas emissions can also be partly due to a relocation of industries with high emissions to other regions and countries. Accordingly, locally better conditions do not necessarily lead to a globally improved situation. This restriction, however, should not fundamentally contest the positive development of Stuttgart with regard to economic growth and greenhouse gas emissions.

Another correlation with the social sustainability dimension is between unemployment and mental health as formulated in SDG 3. Moreover, the target of SDG 8 in view of educational justice and the reduction of young people without a qualification, apprenticeship and/or employment is closely related to SDG 4 ("Quality Education") and SDG 10 ("Reduced Inequality"). Eliminating any kind of discrimination at work to create decent work and full employment for all shows a direct link to SDG 5 ("Gender Equality") and SDG 10 ("Reduced Inequalities").

For SDG 8 "Decent Work and Economic Growth", the following indicators are directly relevant:

- SDG 1:** "Poverty"
- SDG 4:** "School-leavers by school-leaving qualifications"
- SDG 4:** "Students"
- SDG 4:** "Vocational qualification"
- 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 12:** "EMAS-certified locations"
- SDG 12:** "Waste volume"
- SDG 12:** "Sustainable procurement"
- SDG 13:** "Greenhouse gas emissions"
- SDG 16:** "Digital municipalities"
- SDG 16:** "Trade tax rate"

## 8 DECENT WORK AND ECONOMIC GROWTH



### Practical example 19: The State Capital Stuttgart as a social employer

#### Context:

On 1 January 2019, the Federal Government created two new funding opportunities for long-term unemployed people with the Participation Opportunities Act and the Federal Ministry for Labour and Social Affairs programme “MitArbeit” [“WorkingTogether”]. Employment relationships subject to social security contributions in enterprises, at municipalities and public institutions and welfare work agencies are eligible.

In 2019, the Stuttgart Municipal Council decided to make it possible for long-term recipients of benefits pursuant to Volume Two of the Social Insurance Code (SGB II) to find work at the State Capital Stuttgart. In doing so, the State Capital Stuttgart as an employer is making an exemplary contribution to reducing long-term unemployment.

#### Description / Realisation:

The funding opportunities refer to two different target groups:

The integration of long-term unemployed people pursuant to Section 16e SGB II applies to beneficiaries who are able to work and have been unemployed for at least two years. Enterprises recruiting these people are funded in the first year with 75 per cent of the regular pay and in the second year 50 per cent.

Section 16i SGB II ensures participation in the working world for persons above the age of 25 who received unemployment benefit II for at least six years during the past seven years but were not unemployed – or only for a short time. Beneficiaries who consistently received benefits during the last five years are also eligible for support pursuant to this section, if they live in a household with at least one child under the age of 18 or are severely disabled. Employers recruiting these people

are provided with a 100 per cent wage subsidy in the first two years. This subsidy is reduced by ten per cent in each of the following years, with a maximum subsidy period of five years. During the employment period, coaches support the (former) beneficiaries in finding their feet again in working life, for instance by intervening if there are problems at the new place of work, supporting the whole family or just helping to organise everyday life.

Since 1 January 2020, up to 30 long-term beneficiaries can be employed at the State Capital Stuttgart with funding pursuant to Section 16i SGB II.

#### Experience / Results:

With these employment opportunities, the State Capital provides recipients of long-term beneficiaries the opportunity to return to long-term employment subject to social security contributions, it combats long-term unemployment and funds labour rather than unemployment, and the additional employees help reduce the staff’s workload.

The 25 employees now employed under Section 16i SGB II work mainly in facility management and housekeeping and help with general administrative activities in the State Capital Stuttgart with the prospect of being employed under an open-ended contract.

#### Division / Office / Public Undertaking:

Job Centre in the Social Affairs and Integration Division



Practical example 20:

## “AktivA – Aktive Bewältigung von Arbeitslosigkeit” [Actively overcoming unemployment] as a psychosocial group offer



### Context:

Long-term unemployment can affect physical and mental health, often experienced as very stressful. This is substantiated by numerous studies. The Job Centre Stuttgart has trained employees in the health-coaching sector to support the people affected as regards physical and mental health issues.

The AktivA programme is a psychosocial training developed at the Dresden University of Technology that aims at improving the health of long-term unemployed people and giving them support in building up their competence in applying problem solution techniques, finding and strengthening health-promoting resources. The focus of the programme is on anti-stress training, relaxation methods, the planning of day-to-day routines and activities.

### Description / Realisation:

Since spring 2022, the Job Centre Stuttgart has been offering the seminar AktivA for beneficiaries of the network ABC. AktivA is a one-week stress and life-training course aimed at reducing stress caused by unemployment. The four subject areas of the AktivA training are managed by specifically trained coaches: activity planning (organising your day), constructive thinking (my thoughts), social skills (self-confidence) and systematic problem-solving.

Practical application examples can be linked by the mix of knowledge transfer, self-reflection, exchange of experience, role-playing and group discussions to give the participants confidence. Physical components are also integrated by active breaks.

### Experience / Results:

At the beginning, the participants are often sceptical, yet also curious. In the course of the seminar, it becomes clear how the participants' motivation increases and how they engage. The feedback in most cases is positive that the programme is very helpful. Not least all discussions going beyond the subject build up good group dynamics and a sense of solidarity.

After the week-long seminar it can be seen that the participants have taken heart, because they can see there are new prospects and ideas for the working world. The programme can also boost a feeling of being an important member of society – even if still without employment.

### Division / Office / Public Undertaking:

Job Centre in the Social Affairs and Integration Division

### Further reading / Links:

<https://www.sgb2.info/DE/Themen/ABC-Netzwerke/5-Netzwerke-ABC-in-der-Praxis/Praxisbeitraege/gesund-gecoach.html>  
(Last access 27.03.2023)



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://www.stuttgart.de/lebenswertes-stuttgart)







SDG 9

## Industry, Innovation and Infrastructure

“Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation”

Relevant targets of SDG 9 are in particular the establishment of a sustainable infrastructure, the modernisation of all industries and infrastructures in terms of sustainability, the expansion of research and the improvement of industrial technologies, international cooperation for a sustainable development of infrastructure, development support of local technologies and the industrial diversification and promotion of general access to information and communication technology.



### Overview of the relevant targets

The following targets of SDG 9 are relevant to German municipalities and are already covered in the VLR by indicators:



**9.5** Improvement of research and expansion of industrial technologies and promotion of innovation



**9.c** Universal access to information and communication technology

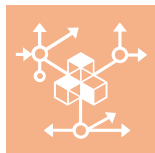
The following relevant targets have not yet been represented by indicators:



**9.1** Development of a sustainable, resilient and inclusive infrastructure



**9.4** Modernisation of all industrial branches and infrastructures with regard to sustainability



**9.a** Facilitating a sustainable infrastructure for developing countries

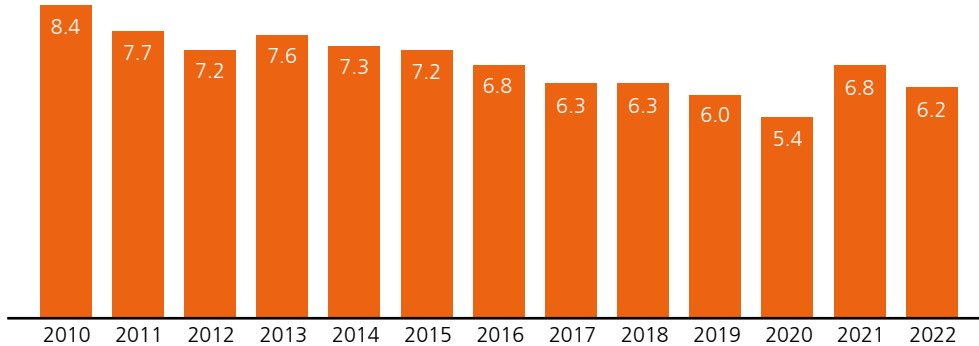


**9.b** Support of local technology development and industrial transition



Indicator 9-1:  
Start-ups

Figure 65: Start-ups (in number/1,000 residents)

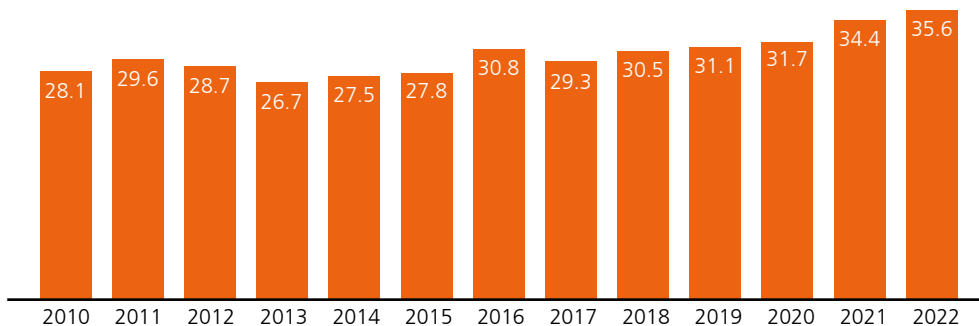


Source: State Statistical Office Baden-Württemberg

“Improvement of research and expansion of industrial technologies and promotion of innovation”  
(Target 9.5)

The years following the economic crisis, i.e. between 2010 and 2012, saw a decline in start-ups. This continued after a brief recovery in 2013. Most recently, the figure dropped again significantly to 5.4 start-ups per 1,000 residents in 2020, due to the uncertain economic situation during the COVID-19 pandemic. However, the expected decline for 2021 has not been confirmed: the number of start-ups rose to 6.8 per cent, the highest value since 2016. However, in 2022, it saw a slight decline to 6.2 start-ups per 1,000 residents.

Figure 66: Start-ups by women (in per cent)



Source: State Statistical Office Baden-Württemberg

The proportion of start-ups by women fluctuated slightly until 2015 without a clear tendency. Although the figures have continued to fluctuate since 2016, they are still slightly higher than those of the previous years (29.3 to 35.6 per cent).

**Why are there fewer business start-ups initiated by women?**



Only slightly more than one third of all start-ups in Stuttgart can be attributed to women, almost two thirds to men. Most of all, this very significant difference is based on structural reasons. According to the magazine “Wirtschaftsdienst”, women work more often in sectors where start-up opportunities are, as a whole, more limited. What also plays a part is the insufficient financial security after the birth of a child or the uncertain old-age provision. Statutory maternity leave/protection does not apply for self-employed women, i.e. they do not receive maternity benefits 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 sector<sup>67</sup>, but not for social innovations.<sup>68</sup>



### Classification / Definition

New establishment of commercial enterprises creates jobs, promotes competition and contributes to economic growth. Technological and cultural change requires a constant adjustment of the economic structure and with that, new business start-ups.

The start-up indicator reflects the frequency of new establishments of commercial enterprises relative to the population. It is an accurate, albeit rather rough description of a phenomenon, because the indicator includes new innovative enterprises with high growth potential as well as small businesses, for instance a new hairdresser's shop or take-away.

Generally speaking, women tend to start businesses less often than men. The proportion of start-ups by women indicates the extent to which women also establish commercial enterprises.

### Calculation

Start-ups in total:

$$\frac{\text{Number of new establishment of commercial enterprises}}{\text{Number of residents}} \times 1,000$$

Start-ups by women:

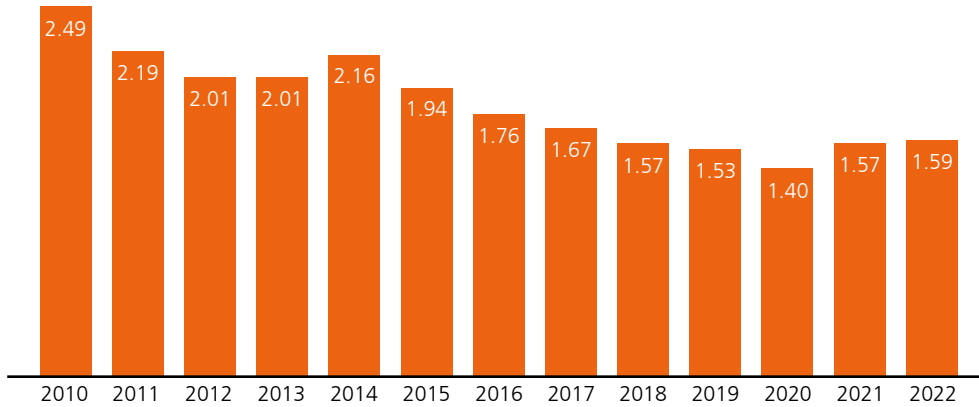
$$\frac{\text{Number of new establishment of commercial enterprises by women}}{\text{Number of new establishment of commercial enterprises in total}} \times 100$$





## Indicator 9-2: Start-up volume

Figure 67: Start-ups with economic substance (in number/1,000 residents)



Source: State Statistical Office Baden-Württemberg

“Improvement of research and expansion of industrial technologies and promotion of innovation”  
(Target 9.5)

In recent years, the number of new enterprises with economic substance established, i.e. as a main occupation, has constantly declined. In 2010, there were approximately 2.5 start-ups per 1,000 residents and in 2022, only approximately 1.6. In absolute figures, the number of start-ups with economic substance declined from approximately 1,400 in 2010 to 970 in 2022. The declining number over the years also dropped further in the first year of the COVID-19 pandemic. In the second pandemic year, 2021, the number increased for the first time since 2014 and there were even more start-ups with economic substance than before the pandemic.

### Start-up volume according to economic sections



The differentiation of start-up volume according to economic sections<sup>69</sup> in Stuttgart shows that, except for 2021, most start-ups with economic substance have been in the motor vehicle section: “trade, maintenance and repair”, most recently 193 enterprises. In the economic section “provision of freelance, scientific and technical services” there were only 3 start-ups in 2021. Between 2010 and 2020, in the section “health and social work”, an average of 8.5 companies with economic substance were started. In 2021, however, there was a sudden rise and the figure more than doubled compared to the previous year. After 26 start-ups in 2021, the figure was almost threefold in the following year with 77 enterprises in the section “health and social services”.

### Classification / Definition

The indicator start-up volume indicates the number of start-ups with economic substance. The setting-up of a main branch and subsidiary is regarded as a start-up with probably higher economic substance if the enterprise is listed in the commercial register or at least one person is employed full-time on the business premises. In the State Capital Stuttgart the start-ups with economic substance were divided in 19 economic sections to assign the enterprises according to their activities.<sup>70</sup>

The indicator was introduced in 2023 for the first time and is to be updated.

### Calculation

Start-up intensity:

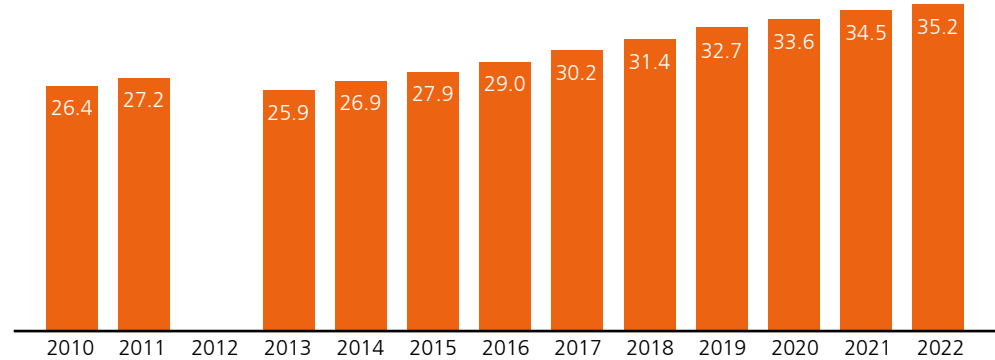
$$\frac{\text{Number of start-ups with economic substance}}{\text{Residents}} \times 1,000$$



## Indicator 9-3: Highly qualified people

“Improvement  
of research and  
expansion of  
industrial  
technologies  
and promotion of  
innovation”  
(Target 9.5)

Figure 68: Highly qualified people (in per cent)



Source: State Statistical Office Baden-Württemberg

The proportion of highly qualified people among employees subject to social security contributions (ssc) in the State Capital Stuttgart is on the upward trend. This applies both to the period up to 2011 and since 2012. Due to a change in statistical recording, no values were recorded for 2012.<sup>71</sup> In 2022, almost 35 per cent of the employees subject to social security contributions in Stuttgart had a university degree.

### Classification / Definition

Highly qualified people are of particular importance for the economy, because their competence and creativity make a valuable contribution to an innovative economy. In view of the shortage of skilled workers and executive personnel, highly qualified people play an important role in the location factor. Therefore, highly qualified people are an important basis for excellent research and the promotion of innovation (see target 9.5).

The reflection on highly qualified people can only be made on a very general level. For the local economy and the individual companies, specific qualifications are relevant in every case. These need not necessarily be academic qualifications. Depending on the economic structure, the requirements can greatly vary.

The indicator “Highly qualified people” indicates the ratio of employees with academic qualifications subject to social security contributions to all employees subject to social security contributions.

### Calculation

Highly qualified people:

Number of employees with an academic degree subject  
to social security contributions at the place of work

/

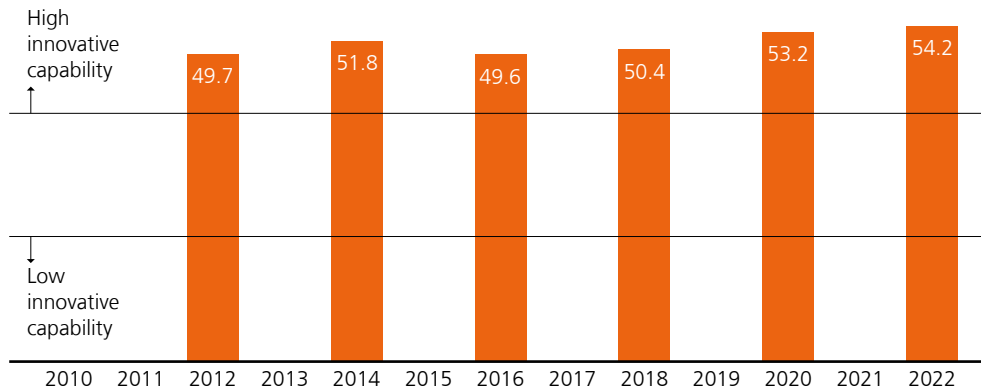
Total number of employees subject to social  
security contributions at the place of work

\* 100



## Indicator 9-4: Innovation index

**Figure 69:** Innovation index (in index points in the range 0–100)



Source: State Statistical Office Baden-Württemberg

“Improvement of research and expansion of industrial technologies and promotion of innovation”  
(Target 9.5)

In recent years, the innovation index has mostly remained stable. In 2022, with some 54 index points it reached a new peak, improving by 4.5 points in the scale of values since 2012.

### Classification / Definition

Innovative products and innovations in the service sector are decisive for the success of a national economy. To promote such innovation, it is important to recognise the innovative capability of a region. The purpose of the innovation index is to make innovative capability and innovation potential more comparable at various economic levels. This indicator summarises several innovation indicators so that there is an adequate individual index for comparison and presentation.<sup>72</sup> The indicator was introduced in 2023 for the first time and is to be updated.

The value range of the innovation index is from 0 to 100 and expressed in index points. Once the indicator has reached 40 points, the innovative capability is classified as high and then among the top group. With an index value of less than 20 points, the state, the district, the region or the city is assigned to the lowest group.

According to the State Statistical Office Baden-Württemberg, in 2022, Stuttgart ranks 4th in the top group behind Böblingen, Heidelberg and the Lake Constance region in a comparison of all city and rural districts of Baden-Württemberg.<sup>73</sup>

### Calculation

Innovation index:

The index is calculated from the values of the following six standardised individual indicators.<sup>69</sup> Further information is available on the website of the State Statistical Office Baden-Württemberg.<sup>72</sup>

1. Research and development (R&D) expenses in total / nominal gross domestic product
2. R&D staff (VZÄ)\* / labour force in total
3. Employees in industrial high technology segments / employees in total
4. Employees in knowledge-intensive service segments / employees in total
5. Employees in scientific-technical professions (HRST-O)\*\* / employees in total
6. Patent application / 1 million residents

\* Full-time equivalent

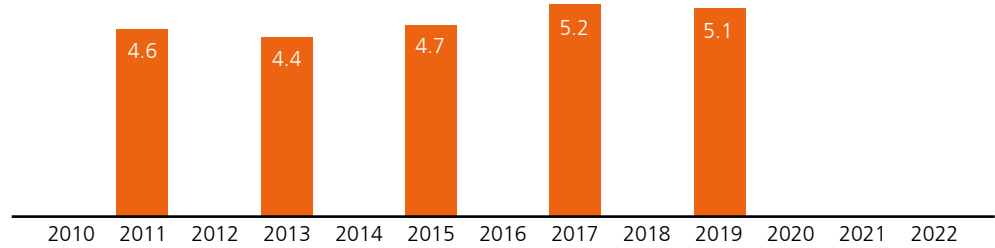
\*\* Human Resources in Science and Technology by Occupation (HRSTO)



## Indicator 9-5: Research and development in the economy

“Improvement of research and expansion of industrial technologies and promotion of innovation”  
(Target 9.5)

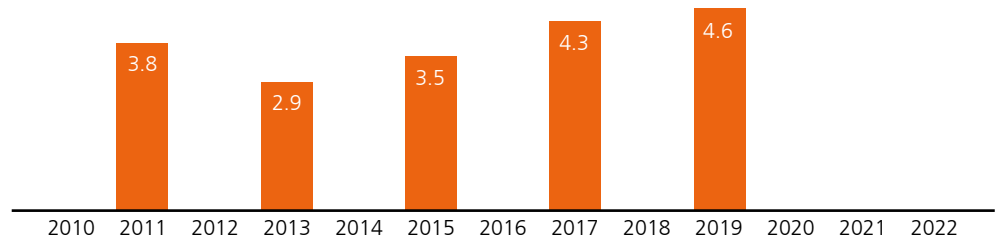
**Figure 70:** R&D employees in the economy working in Stuttgart (in per cent of the employees subject to social security contributions (ssc))



Source: State Statistical Office Baden-Württemberg, Association of German Academic Foundations – Science Statistics

The proportion of employees subject to social security contributions working in the economy in research and development fluctuated between 2011 to 2019 between 4.4 and 5.2 per cent. Most recently, with 5.1 per cent, the second highest value of the time series was achieved.

**Figure 71:** R&D expenditure of the economy in Stuttgart (in billion euro)



Source: State Statistical Office Baden-Württemberg, Association of German Academic Foundations – Science Statistics

In 2019, the business expenditure for research and development (R&D) was some 4.6 billion euro. Between 2011 and 2013 there was a decline by just under one billion euro. Since 2013, however, the expenses have again been constantly rising.

### Classification / Definition

The indicator was introduced for the first time in 2023 and is to be updated. It represents the expenditure and number of staff employed in research and development in the economy.

The staff working in research and development in the economy is indicated in full-time equivalents and related to 100 employees subject to social security contributions.

The expenditure for research and development in the economy sector is measured in billion euro. The high proportion of investments in this field can be explained in particular by the strong automotive sector in Stuttgart.<sup>74</sup>

Although no data is available for 2020 due to the two-year collection cycle, it could be determined on the basis of the data of the Association of German Academic Foundation that in 2020, during the COVID-19 pandemic, research and development in businesses saw a downward trend. However, there were industries that benefitted from the difficult situation, for instance information and communication technology, which due to an upturn in programming activities could

increase their R&D expenditure. Medical-technology and biotech enterprises also had a positive development. On the other hand, short-time work due to the COVID-19 pandemic led to a reduction in labour costs, which in turn leads to a reduction in R&D expenditure. Nevertheless, the number of researchers hardly decreased in 2020.<sup>75</sup>

### Calculation

R&D employees in the economy working in Stuttgart:

$$\frac{\text{R\&D employees in the economic sector Stuttgart}}{\text{Number of employees subject to social security contributions}} \times 100$$

R&D expenditure of the business sector of Stuttgart:

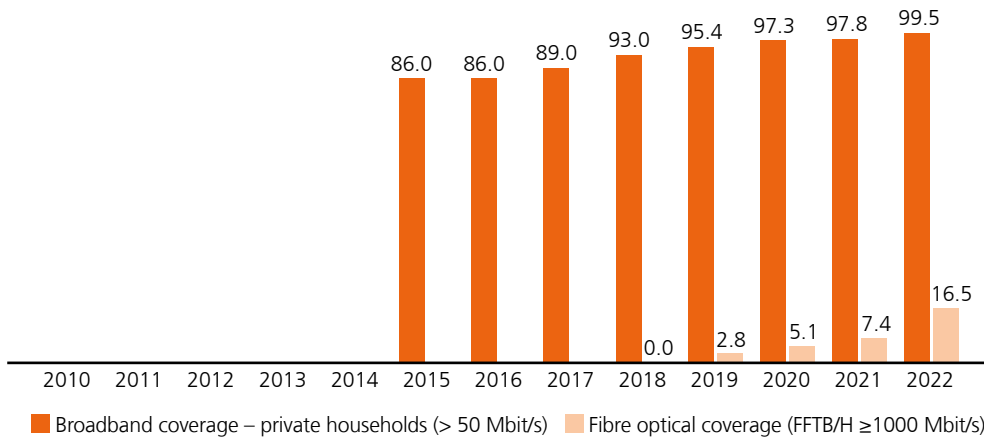
$$\text{Internal R\&D expenditure in the business sector Stuttgart in billion euro}$$





## Indicator 9-6: Broadband coverage

**Figure 72:** Broadband and fibre optical coverage – private households (in per cent)



Source: Broadband atlas

“Universal access to information and communication technology”  
(Target 9.c)

According to the broadband atlas, in 2022, almost 100 per cent of private households in Stuttgart have a broadband coverage of at least 50 Mbit/s. In 2015, the figure was 86 per cent and has since risen significantly. Since 2019, the proportion of households with fibre optical coverage has been increasing. In 2022, some 17 per cent of all private households have a fibre optical connection.

According to the broadband atlas, 88.74 per cent of the area of the State Capital Stuttgart is provided with 5G network. In addition, 17.19 per cent of the enterprises are provided with fibre optics.<sup>76</sup>

### Classification / Definition

The broadband coverage of private households indicates the ratio of private households connected to the broadband network with a minimum speed of 50 Mbit/s. This indicator was supplemented in 2023 by information on fibre optical coverage.

The data is provided voluntarily by the provider and can be incomplete and is updated at irregular intervals. The deadline for a data update is December of every year, except for 2021, when the data was already updated in July.

### Calculation

Broadband coverage of private households:

Number of households with broadband coverage > 50 Mbit/s

/

Number of all households in total

\* 100

Fibre optical coverage of private households:

Number of households with fibre optical coverage FFTB/H ≥ 1000 Mbit/s

/

Number of all households

\* 100



## Correlation with other SDGs

Innovation and infrastructure are essential to ensure a long-term dynamic and successful economy (SDG 8 “Decent Work and Economic Growth”). This requires the continuous new establishment of commercial enterprises and companies, but also a high level of creativity and competence. The availability of qualified workers and executives, as well as business founders is therefore of crucial importance. This is a direct connection to the subject of education (SDG 4).

The subject area infrastructure also comprises housing, traffic and urban planning, as listed in SDG 11. A sustainable use of resources such as construction material (SDG 11) contributes to mitigate the ecological consequences. Moreover, adaptation to climate change (SDG 13) requires a resilient infrastructure. The establishment and expansion of sustainable infrastructure is also reflected in SDG 2 (“Zero Hunger”, here in particular sustainable farming), SDG 3 (“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”) one or several explicit targets, revealing the direct relation to SDG 9 “Innovation and Infrastructure”. Here, measures should be ecologically sustainable and planned and implemented with a view to energy and resource efficiency to ease conflicting objectives in the area of ecological sustainability (SDG 6, SDG 13, SDG 14, SDG 15). The infrastructural strategy also determines the consumption and production patterns to a large extent and is therefore related to almost all targets of SDG 12.

Digitalisation in particular is of increasing importance for SDG 9, which is also described in SDG 16 alongside with indicators “Digital municipality” and “Mobile working”.

Innovation, research and development aiming at a more sustainable economy and environment-friendlier practices in many fields will be decisive for achieving the sustainable development goals as a whole.

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 medical care close to home – distance to the nearest GP”
- SDG 7:** “Energy productivity”
- SDG 7:** “Energy consumption”
- SDG 7:** “Charging station infrastructure”
- SDG 7:** “Generation of renewable energy in the city area”
- SDG 7:** “Power from photovoltaics”
- SDG 11:** “Means of transport for getting to work (including walking)”
- SDG 11:** “Bicycle traffic”
- SDG 11:** “Passenger cars with electric drive”
- SDG 11:** “Accommodation service for social housing”
- SDG 12:** “EMAS-certified locations”
- 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 21:

## Sustainable, efficient and intelligent delivery traffic by digitalisation



### Context:

Freight transport in the city is a special challenge for Stuttgart. With its topographic basin location, there are not many flat routes. In addition, traffic density is very high and so there are often disruptions in the traffic flow with negative impacts on the prevention of air pollution. Therefore, it is a major concern of the city to organise an intelligent commercial transport system, as environment-friendly as possible. This is also underlined by the appointment of a commercial transport commissioner at the State Capital Stuttgart.

### Description / Realisation:

The city also focuses on city logistics – i.e. the supply of the retail trade, commerce and consumers. Traffic is indispensable for a functional and livable city. Therefore, measures are to be taken to make commercial and delivery transport as environment-friendly as possible.

For instance, the pilot project “Smart Zone Stuttgart” for digital delivery zone management that was implemented and completed in 2021. In a one-off Germany-wide test, the City of Stuttgart, together with the Fraunhofer Institut IAO examined how delivery traffic could be intelligently supported in selected areas of the city via a smartphone app to avoid unnecessary emissions. The project provided important findings and data on urban delivery traffic, which serve as the basis for further projects on the digitalisation of delivery zones and the future provision of real-time data for the use of traffic areas.

In addition, in 2021, the project “Flottes Gewerbe” [“Quick business”] was initiated to promote the commercial use of cargo bikes. The State Capital provided cargo bikes free of charge for testing in everyday operation. This way, commercial traffic

operators are supported in converting their vehicle fleet to vehicles with sustainable drives. At the same time, the test and service programme for commercial cargo bikes makes commercial cargo bikes more visible and can be further expanded so that commercial traffic in Stuttgart can in the long run be greener.

### Division / Office / Public Undertaking:

Administrative Coordination, Communication and International Relations Division, Coordination S21/Rosenstein and Future Projects Department

### Further reading / Links:

<https://www.stuttgart.de/service/aktuelle-meldungen/februar-2022/programm-flottes-gewerbe-zur-foerderung-der-gewerblichen-lastenradnutzung-in-stuttgart-umsteiger-gesucht.php>

<https://www.stuttgart.de/service/aktuelle-meldungen/november-2022/flottes-gewerbe-fuer-landesauszeichnung-wir-machen-mobilitaetswende-nominiert.php>

<https://www.stuttgart-steigt-um.de/aktuelles/>

<https://www.stuttgart.de/leben/mobilitaet/logistik/city-logistik.php>  
(Last access 12.04.2023)



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://www.stuttgart.de/lebenswertes-stuttgart)





## SDG 10 Reduced Inequalities

“Reduce inequality within and among countries”

Relevant targets of SDG 10 for German municipalities are in particular enabling all people – irrespective of age, gender, disability, ethnicity, origin, religion, economic or other status – to have self-determination over their lives and helping them in a process of inclusion. It is also about ensuring equal opportunities, in particular about questions of migration and integration.

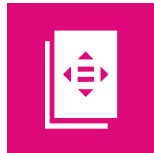


### Overview of the relevant targets

The following targets of SDG 10 are relevant to German municipalities and are already covered in the VLR by indicators:



**10.2** Promotion of 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



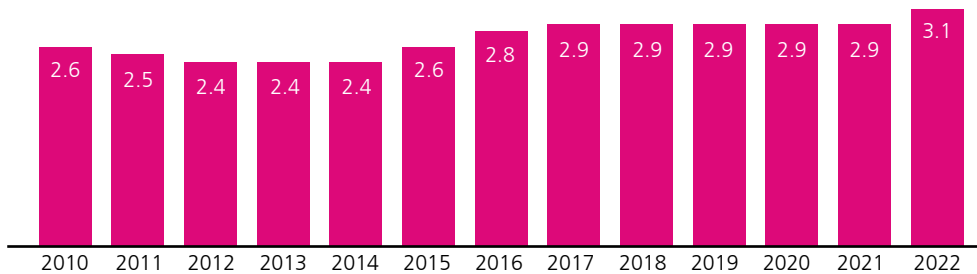
**10.b** Promote development aid and investments in the least developed countries



## Indicator 10-1:

## Relative poverty rate among recipients of benefits without German citizenship

**Figure 73:** Relative poverty rate among persons without German citizenship (as relation)



Source: Federal and State Statistical Offices; Statistics of the Federal Employment Agency; State Capital Stuttgart, Social Welfare Office, Statistics Office

“Promotion of social, economic and political inclusion of all people”

(Target 10.2)

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 pursuant to 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 to 2017 and has remained constant at 2.9 ever since compared to Germans. In 2022, it slightly rose to 3.1. From 2015 to 2017, the large increase in the number of people without German citizenship was a result of the refugee influx. The higher poverty rate among people without German citizenship is partly related to their higher labour market risks and lower hourly wages, as well as other features of precarious employment.

### Classification / Definition

Poverty affects some population groups more than others. In addition to the poverty rates among children, adolescents and the elderly discussed in SDG 1, people without German citizenship are also more often affected by poverty. The indication is the ratio of people without German citizenship who receive benefits pursuant to SGB II (persons entitled to standard benefits), SGB XII (recipients of welfare allowance and basic social security, whether in facilities or not, also according to AsylbLG [Asylum Seekers Benefit Act]) to the corresponding share of people with German citizenship.<sup>77</sup>

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, because the poverty rate among people without German citizenship is significantly higher than the poverty rate among people with German citizenship. If the poverty rates among people without German citizenship and people with German citizenship were equal, the indicator would be 1. Values above 1 indicate how many times higher the poverty rate among people without German citizenship is compared to the poverty rate among people with German citizenship. Compared to the previous VLR, the indicator has been revised and now also takes into account benefits pursuant to AsylbLG paid to persons

in asylum procedures and tolerated persons who do not receive benefits pursuant to SGB XII. The data shown includes both basic social security and welfare allowance. Regarding SGB II benefits, only persons entitled to standard benefits are taken into account, not other dependents in the community of dependence. The deadline for data collection is respectively 31 December.

### Calculation

Relative poverty rate among people without German citizenship:

$$\frac{\text{Number of benefit recipients pursuant to SGB II and SGB XII without German citizenship + Benefit recipients pursuant to AsylbLG}}{\text{Total number of people without German citizenship}}$$

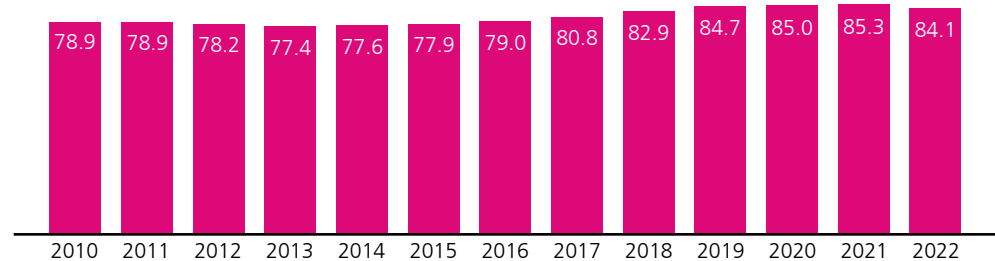
$$\frac{\text{Number of benefit recipients pursuant to SGB II and SGB XII with German citizenship}}{\text{Total number of people with German citizenship}}$$



“Promotion of social, economic and political inclusion of all people”  
(Target 10.2)

## Indicator 10-2: Relative employment rate of people without German citizenship

**Figure 74:** Relation of employment rate of people without German citizenship to total employment rate (in per cent)



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

The relation of the employment rate of people without German citizenship to the general employment rate has been on a rising trend since 2013. In 2022, the employment rate of people without German citizenship reached some 84 per cent of the general employment rate. People without German citizenship benefitted more than average from both the favourable economic development before the COVID-19 pandemic and the general increase in employment (cf. SDG 8 “Decent Work and Economic Growth”).

### Classification / Definition

Integration into the labour market is essential both for the economic and social situation of individuals. The measure for integration into the labour market is the employment rate.

The employment rate depends on the possibilities of finding a job. However, it is also influenced by how many households have only one or two adults able to work. This depends on the possibility of finding a job, the economic necessity for both adults of a household to take on a job, and the willingness to pursue gainful employment. The employment rate does not reflect the level of influence of these factors.

In a city like Stuttgart, home to people of more than 180 nations, integration is of particular relevance. Here the State Capital Stuttgart has a pioneering role with measures like the integration concept “Stuttgart Alliance for Integration”, an individual staff unit for integration policy, a Welcome Centre and a participation committee that is exemplary in Europe.

The relative employment rate of people without German citizenship indicates the relation of the employment rate of people without German citizenship to that of all employees. If it is less than 100 per cent, this means that the employment rate

of people without German citizenship is lower than that of all employees, whereas a value above 100 per cent indicates a higher employment rate of people without German citizenship. In future, the pension eligibility rate is to be adapted for this indicator, since more and more people retire when they are over 65.

### Calculation

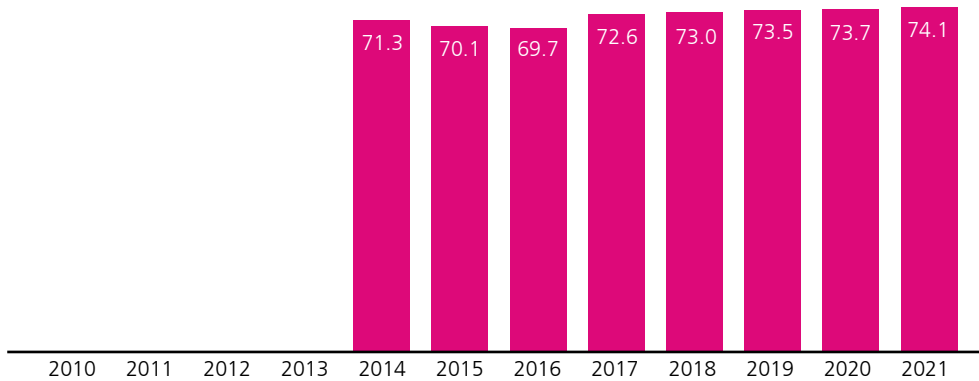
Relative employment rate of people without German citizenship:

$$\frac{\frac{\text{Number of employees ssc* without German citizenship at the place of residence between 15 and 64 years}}{\text{Total number of people without German citizenship between 15 and 64 years}}}{\frac{\text{Total number of employees ssc* at the place of residence between 15 and 64 years}}{\text{Total number of residents between 15 and 64 years}}} \times 100$$

\* employees subject to social security contributions



## Indicator 10-3:

**Relation of the median salary according to citizenship****Figure 75:** Relation of the median salary according to citizenship (in per cent)

Source: State Capital Stuttgart, Social Welfare Office and Youth Welfare Office

The relation of the median salary of people without German citizenship to the median salary of Germans saw a slight rise from 70 per cent in 2014 to some 74 per cent in 2021. This figure indicates a discrepancy of almost 30 per cent between the median salary of people without German citizenship in relation to the median salary of Germans. In 2021, the median salary of German full-time employees subject to social security contributions was 4,750 euro, whereas the median salary of people without German citizenship in Stuttgart is 3,520 euro. This indicator supplements the picture, since the relative employment rate of people without German citizenship is lower and the relative poverty rate higher, as shown in this VLR.

**Classification / Definition**

The median salary describes the median salary of all full-time employees subject to social security contributions. This indicator relates the medium salary of people without German citizenship to the medium salary of Germans. If the salaries are compared, a value of 100 per cent would mean that the median salary of people without German citizenship complies with the median salary of Germans.

The indicator only takes into account full-time employees. Data is provided by the Federal Labour Agency, where it is taken from the employers' social security declarations. Since wages and salaries for pension insurance are only reported up to the income threshold<sup>78</sup>, the salary actually achieved is not known for all employees. Data is collected as of 31 December of every year.<sup>79</sup>

This indicator was introduced in 2023 for the first time and is to be updated.

**Calculation**

Relation of median salary according to citizenship:

$$\frac{\text{Median salary of full-time employees subject to social security contributions without German citizenship}}{\text{Median salary of full-time German employees subject to social security contributions}} \times 100$$

/

$$\text{Median salary of full-time German employees subject to social security contributions}$$

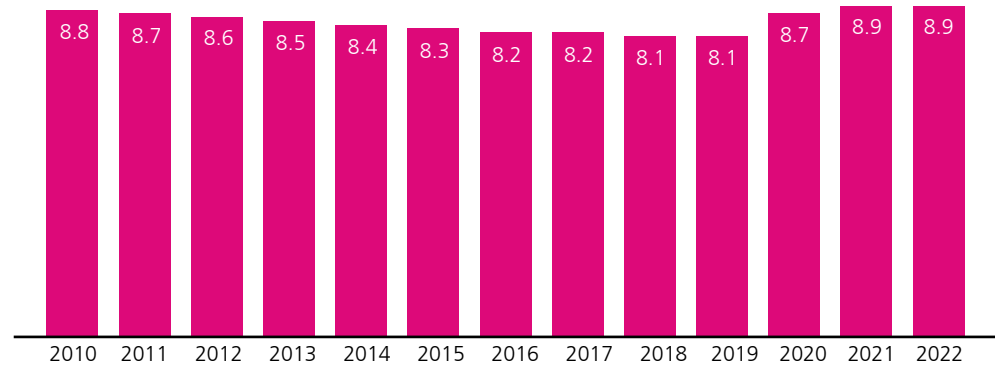
\* 100



## Indicator 10-4: Meeting points for citizens

“Promotion of social, economic and political inclusion of all people”  
(Target 10.2)

**Figure 76:** Meeting points for citizens (in number/100,000 residents)



Source: State Capital Stuttgart, Social Welfare Office and Youth Welfare Office

In the period under review – 2010 - 2019 – the number of meeting points for citizens per 100,000 residents dropped from 8.8 to 8.1. From 2020, the figure has been rising and reaches its peak with 8.9 meeting points per 100,000 residents. It has to be taken into account that the figure is subject to the fluctuations in the population in Stuttgart, which was on the increase until 2019, but since 2020 a decline can be observed.

Currently, there is a total of 53 meeting points for citizens in Stuttgart, 31 of which are meeting points for the elderly, 19 district and family centres and 3 district community centres (as of June 2023).

In the 2020/2021 budget, the Municipal Council made important decisions for local multi-generation meeting points in the neighbourhood: the conceptual framework and funding guidelines for district community centres specified the first two locations (Municipal Council document GRDRs 304/2020 “District community centres – resolutions on conceptual frameworks, space allocation programme, selection and funding criteria and on 2 locations”).

In addition to the district community centres, there will continue to be the “smaller version” of multi-generation meeting points: meeting points for the elderly and district and family centres.

### Classification / Definition

Meeting places in the neighbourhood make an important contribution to social inclusion and opportunities for social participation. This applies in particular to people who are otherwise not so involved for various reasons (for instance low financial resources or mobility restrictions).

### Calculation

Meeting points for the elderly, district and family centres as well as district community centres are summarised here and put in relation to the total population. Civic centres are not included in this list:

Meeting points for citizens:

Number of meeting points for the elderly, district  
community centres, district and family centres

/

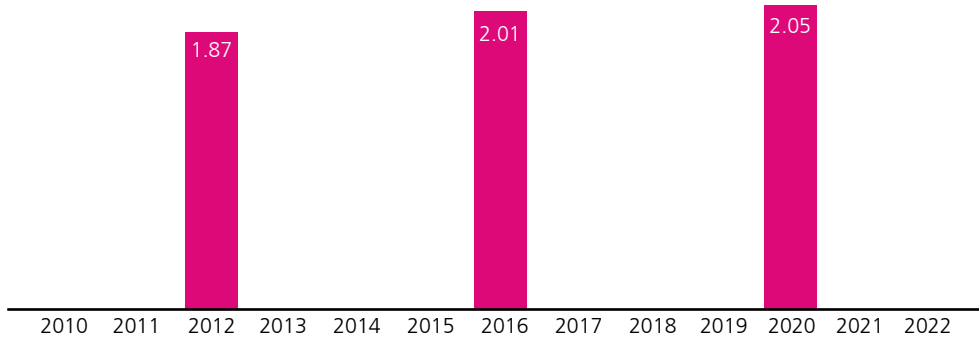
Number of residents

\* 100,000



Indicator 10-5:  
**Low-barrier housing**

**Figure 77:** Proportion of low-barrier housing in all private households in Stuttgart (in per cent)



Source: State Capital Stuttgart, Statistics Office (housing market surveys)

“Promotion of social, economic and political inclusion of all people”  
(Target 10.2)

Due to the demographic change, which also has an impact on Stuttgart, the subject low-barrier and age-appropriate living is becoming increasingly important. In the period from 2012 to 2020, the proportion of low-barrier housing in all private households in Stuttgart is relatively constant at some two per cent. However, the need due to physical constraints would be twice as high and would be some four per cent of all Stuttgart households.<sup>80</sup> With a target value of at least 30 per cent of low-barrier housing in new buildings, the increasing need could be satisfied in the foreseeable future. In addition, the State Capital Stuttgart wants to ensure that in rented social housing and other new buildings low-barrier housing is created for medium-income earners.<sup>81</sup>

**Classification / Definition**

The term low-barrier housing is not clearly defined, but is often described in the context of residential properties with terms like low-threshold or barrier-reduced. This means for instance, that a lift, a level-access shower or a stairlift is available. However, it can also mean that the barriers between separate rooms are very low and can be easily negotiated with a wheelchair. However, there are still areas in the rooms or entrance area which are not equipped for people with disabilities and where external help is necessary.<sup>82</sup>

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 sidewalk without steps,
- (b) The doors have a minimum width of 80 cm,
- (c) The apartment is equipped with a flat-access (no barrier) shower or a bathtub with a walk-in facility,
- (d) The wall clearance (e.g. also in the hall) is at least 1.20 m,
- (e) In the bathroom a potentially sufficient turning cycle for a wheelchair (approx. 1.50 m diameter) is available and

- (f) The kitchen has a potentially sufficient turning cycle for a wheelchair (approx. 1.50 m diameter) and
- (g) The apartment is on one level.<sup>80</sup>

The criteria and the data collected on their basis are from the 2020 housing market survey, which is carried out by the State Capital Stuttgart every two years.

This indicator was introduced in 2023 and is to be updated.

**Calculation**

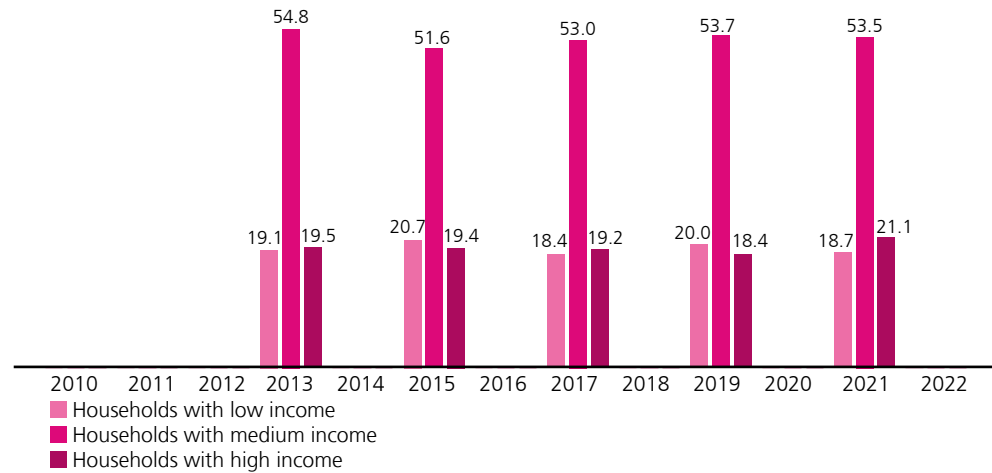
Low-barrier housing:

$$\frac{\text{Number of low-barrier apartments in Stuttgart}}{\text{Total number of private households}} \times 100$$



## Indicator 10-6: Income distribution (low, medium, high)

**Figure 78:** Households with low, medium, high income (in per cent)



Source: State Capital Stuttgart, Statistics Office (citizen surveys)

Slightly more than half of all Stuttgart households have a medium income (equivalent income between 60 and 150 per cent). Their proportion has hardly changed since 2013 and is fairly stable at slightly more than 50 per cent. The proportion of households with a low income (equivalent income of less than 60 per cent) and the proportion of households with a high income (equivalent income more than 150 per cent) has also hardly changed since 2013 and is stable between some 18 and 21 per cent.

The changes in the proportion of households in the three income groups are minor. It is difficult to judge whether there are real shifts here or whether the changes are due to imprecision in data gathering by chance.

### Classification / Definition

Income distribution provides information on the extent of income inequality in any society. A high level of social inequality tends to cause social tension, on the other hand, inequality can also be an incentive. Generally speaking, the global sustainability goals strive for a reduction of social inequality.

Compared to previous VLRs, the calculation of the indicator has changed. Income distribution is presented on the basis of the equivalent income in three income classes (low, medium, high) as of the third VLR. The calculation basis for the equivalent income is described in indicator "At-risk-of-poverty rate" (cf. SDG 1).

### Calculation

Households with low income:

$$\frac{\text{Number of households with an equivalent income of less than 60 per cent}}{\text{Total number of households}} \times 100$$

Households with medium income:

$$\frac{\text{Number of households with an equivalent income between 60 and 150 per cent}}{\text{Total number of households}} \times 100$$

Households with high income:

$$\frac{\text{Number of households with an equivalent income of more than 150 per cent}}{\text{Total number of households}} \times 100$$

"Pursue tax and social policies which foster equality"  
(Target 10.4)



### Income distribution and sustainability

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The citizen survey carried out in spring 2021 also provided data on the relation between income distribution and sustainability. In this context, 9,000 persons were randomly selected and addressed. 43 per cent of them provided analysable answers. The data analysis is to show whether the willingness to stand up for more sustainability depends on income. The respondents were divided into three groups on the basis of the regional net equivalent income to enable a comparison. The first finding from the data evaluation was that people with an income below average tend not to be familiar with the term sustainable development. However, with people with an income above average the proportion is lower than one per cent. The highest willingness to change one's own behaviour to achieve more sustainability is in the area of purchasing goods and services. Here, a difference of 15 percentage points between the groups with income below average and with income above average is found. Lowest willingness is found in the leisure activities section, where almost no differences could be found, with approximately 47 per cent. In summary, the willingness to more sustainability rises with the income available. However, this does not apply to travel behaviour: the willingness of people with above-average income to give up this privilege is below average in the strongly income-dependent sector.<sup>83</sup>

## Correlation with other SDGs

Reducing inequalities is often synonymous with pursuing other sustainable development goals, especially at a social level.

From a social point of view, the split of health burdens is very irregular. 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. In addition, numerous other factors, such as discrimination, also in gender equality (SDG 5), lead to social inequalities, and only a fraction of the unequal distribution of burdens and disadvantages across the population is reflected in this VLR. Studies show that the reduction of social inequalities can result in improved health and above all in an increased well-being (SDG 3).<sup>16</sup>

The following indicators are also reflected in SDG 10, although they are described in other chapters: End poverty (SDG 1) is primarily the fight against poverty among certain target groups. The inequality between genders is not discussed in detail in this chapter. Less inequality also includes access and participation opportunities of citizens from different backgrounds and the inclusive design of cities and communities (SDG 11 "Sustainable Cities and Communities" and SDG 16 "Peace, Justice and Strong Institutions").

In addition to inequalities within a society, SDG 10 also refers to inequality between societies in an international dimension (cf. SDG 17 "Partnership for the Goals").

The following indicators are directly relevant to SDG 10 "Reduced Inequalities":

- SDG 1:** "Recipients of social minimum 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 4:** "Vocational qualifications"
- SDG 4:** "Inclusively educated pupils"
- SDG 4:** "School-leaving qualifications according to qualification"
- SDG 4:** "Students"
- SDG 5:** "Relation of employment rates"
- SDG 5:** "Relative poverty of women"
- SDG 5:** "Pay gap between men and women"
- SDG 8:** "Access to vocational education and training after secondary school"
- SDG 11:** "Accommodation service for social housing"

10  
REDUCED  
INEQUALITIES

## Practical example 22: Together against loneliness

### Context:

Loneliness is one of the greatest problems of our time. Loneliness must not be confused with being alone or social isolation. Being alone can be a conscious decision. However, loneliness is the subjective feeling that personal relations do not correspond – neither quantitatively, nor qualitatively – with how one would like to live. Loneliness is always a negative feeling; people strive for closer relations or more frequent contacts.

Loneliness can occur at any age and in various situations in life. Often it is individual reasons, like starting to study in a new town, the separation from or the death of a partner, children leaving home, retirement. The feeling of being lonely and unhappy normally increases when a solution is not found. Loneliness is a burden and leads to physical and mental stress, but also chronic diseases and to withdrawal from society.

Many people in big cities feel lonely. This is also the case in Stuttgart. The COVID-19 pandemic exacerbated the problem and made the impacts of loneliness clear. Some 20,000 people in the State Capital Stuttgart feel lonely. And because loneliness makes ill, exit is important. Encounters and relations promote coherence of our urban society, in turn loneliness and withdrawal of residents jeopardise social cohesion.

Therefore, by mid-2022, the Social Affairs and Integration Division launched the initiative “Together – Find Cohesion” together with many partners. In the city, loneliness is to be addressed and people affected are to be shown how to overcome loneliness.

### Description / Realisation:

With the initiative “Together – Find Cohesion”, the City of Stuttgart provides information on the risks and effects of loneliness. The initiative wants to free loneliness from taboos and provide impartial information, it wants to prevent and ease loneliness in Stuttgart and at the same time promote mental health and social participation of all residents and sustainably strengthen cohesion in the city. Many municipal offices and departments take part and offer programmes. A close partner of this initiative is Liga der Wohlfahrtspflege Stuttgart e. V. with its social organisations.

The city's website ([www.stuttgart.de/gemeinsam](http://www.stuttgart.de/gemeinsam)) for initial information provides preventive and curative measures and programmes against loneliness. It addresses those affected, relatives, skilled workers and multipliers. Low-threshold opportunities to access community are provided via various programmes, for instance district community centres in the neighbourhood, the adult education centre, for target groups of social work, advisory services, sports and physical activity. Here, the various starting positions of the people affected are taken into account.

### Experience / Results:

Loneliness is also influenced by indirect factors, such as urban planning, the labour market or medical system. For this reason, a large conference against loneliness took place on 7 November 2022. Priorities of this conference were linking the various spheres of action and the development of guidelines for action, which are to be addressed with shared responsibility.

At the symposium, it became evident that the important basis of acting against loneliness is networking the individual fields of action. Work will continue on linking, public relations and merging various approaches. Current events can always be found on the website. The demand for cooperation is very high, since we are aware of the social implications. Loneliness has an impact on the city's life.

The Stuttgart study also revealed that in particular people with a migration background, poor health and with few material resources are particularly affected. Here, new ways are being pursued to reach those affected.

Loneliness is a challenge related to society as a whole; therefore, it is to be addressed via various fields of action, process-oriented and sustainably as a joint municipal task.

### Division / Office / Public Undertaking:

Strategic Social Planning in the Social Affairs and Integration Division and Liga der Wohlfahrtspflege Stuttgart e. V.

### Further reading / Links:

[www.stuttgart.de/gemeinsam](http://www.stuttgart.de/gemeinsam) (Last access 15.03.2023)

Monthly journal 4/2022 of the Statistics Office



## Practical example 23: “Nursery school for all” programme



### Context:

The “Nursery school for all” programme with the focus on care and participation of children with disabilities in nursery schools was approved by the Stuttgart Municipal Council with Municipal Council document GR Drs 84/2019. The City of Stuttgart pursues the guiding principle: nothing is standardised, every child is special, all are welcome. The objective of the “Nursery school for all” is that all nursery schools are open to all children and that they are cared for close to home. By doing so, the City of Stuttgart has opted for breaking new ground: in 2021, with reforming the Eighth Volume of the Social Security Statute Book (SGB VIII) by the Kinder- und Jugendstärkungsgesetz (KJSG) [Children and Youth Strengthening Act] the care of children with special needs in nursery schools was newly regulated in Section 22a (4) SGB VIII. The previous restriction that children with disabilities are to be cared for together with children without disabilities “to the extent allowed by assistance needs” was deleted. From this, children with disabilities have an unrestricted legal right to support and care in nursery schools.

### Description / Realisation:

Since 2020, new models and structures have been tested and developed in an ongoing basis with the “Nursery school for all” programme:

The “Central Information and Advisory Unit (ZIB) Nursery School for all”, which is part of the Public Health Office Stuttgart, provides families citywide with information on daycare for children with disabilities. It also provides information and training for nursery schools in Stuttgart as regards inclusion.

The establishment of pools of inclusion specialists enables the permanent employment of experts and their deployment in several daycare centres, which guarantees high flexibility for care on an hourly basis. In 2021, the municipal nursery school organisation established a pool; further pools at large nursery school organisations are planned and are to be started by 2024. For smaller nursery school organisations, a central pool of experts is planned at the Public Health Office, which is also planned to start in 2024.

In the structurally promoted “Kitas S-Plus” model, facilities receive funding for a full-time inclusion specialist. This way the permanent support and relationship work of up to five children and their families is possible, which only with support by specialists on an hourly fee basis, is not.

The model nursery school “Growing together” enables children with multiple disabilities, who are otherwise mostly cared for in special facilities, to be cared for in a nursery school. This complies with the inclusive concept and key objective of “Nursery school for all in Stuttgart”. In the model nursery school, the same conditions and participation are offered for all children and families. Following the completion of construction, the opening of the model nursery school is scheduled for 2025.

From May 2022 to February 2023, the Stuttgart guiding principle “Nursery school for all” was developed in a participative process. The objective is that every nursery school acknowledges that every child is unique and the best possible care is provided accordingly. Representatives of parents, organisations, institutions and administration, as well as early education specialists were involved. The guiding principle is to be adopted by the Municipal Council in spring 2023 and will come into force as of summer 2023.

### Experience / Results:

The experience and evaluation of the implementation so far show that the Stuttgart programme “Nursery school for all” makes a significant contribution to inclusion in nursery schools. Both children and families, as well as nursery schools, benefit from the new models and structures, which are in high demand and assessed positively by all involved.

### Division / Office / Public Undertaking:

Youth and Education Division/Youth Welfare Office/  
Youth Welfare Planning

### Further reading / Links:

<https://www.stuttgart.de/buergerinnen-und-buerger/kinder-und-jugendliche/jugendhilfeplanung/ kindertagesbetreuung.php>



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://www.stuttgart.de/lebenswertes-stuttgart)







**SDG 11**

## **Sustainable Cities and Communities**

“Make cities and human settlements inclusive, safe, resilient and sustainable”

Relevant targets of SDG 11 for German municipalities are in particular access to housing and basic public services, sustainable transport systems, sustainable urban planning, civil protection, reduction of environmental pollution and access to green areas.



### Overview of the relevant targets

The following targets of SDG 11 are relevant to German municipalities and are already covered in the VLR by indicators:



**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** Implementation of policies and plans for inclusion, resource efficiency and reduction of risk of disaster

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



**11.4** Protection of world heritage



**11.5** Reduction of negative impacts of natural disasters



**11.6** Reduction of environmental pollution by cities



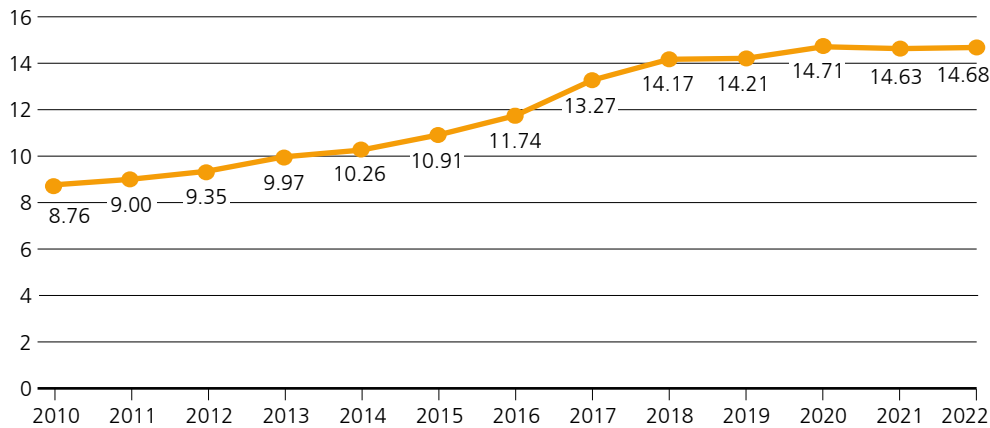
**11.a** Enhanced national and regional development planning



**11.c** Support of the least developed countries in sustainable and resilient construction

## Indicator 11-1: Rents on offer

**Figure 79:** Rents on offer (in euro/m<sup>2</sup>)



Source: State Capital Stuttgart, Statistics Office (immoscout24.de)

“Safe and affordable housing”  
(Target 11.1)

The “Rents on offer” indicator can only estimate the development on the rental market, nevertheless the development is clear: the rents of accommodation advertised online in Stuttgart have increased significantly during the period under review. In 2010, the average rent on offer per square metre (net rent) in Stuttgart was less than 9 euro. In the following years, the rent increased significantly. In 2015 and 2016, the average asking price was already at 10.90 to under 12 euro per square metre, in 2018 at 13.30 to more than 14 euro. From 2010 to 2022, rents on offer have increased by some 68 per cent. However, since 2020, a sideways trend at a level of 14.70 euro per square metre can be observed.

After Munich and Frankfurt am Main, Stuttgart has the third most expensive rents on offer in Germany.<sup>84</sup> The rents of online advertised apartments are considerably higher than those of existing tenancies. The local comparative rent of the rent index is based on tenancies on the free housing market concluded or altered within the last four years. In 2022, the average rent index per square metre in the State Capital was 11.04 euro; compared to 2010 (7.22 euro), an increase by 53 per cent.

### Classification / Definition

What the rental market has to offer is decisive for access to safe and affordable housing. In particular, for households with lower and medium income, home ownership is often not an option. The average rent provides information on the rental price of online advertised apartments by size with the arithmetic mean of net rent per square metre. The indicator shows the development of rental prices as an overall average. The fact that the square metre price depends on the condition and location of the apartment cannot be taken into account. In addition, the rents of apartments that are not advertised online, are not taken into account.

### Calculation

Rents on offer:

Asking market rents (net rent) per sqm for initial and re-letting

### Opinions on the housing market

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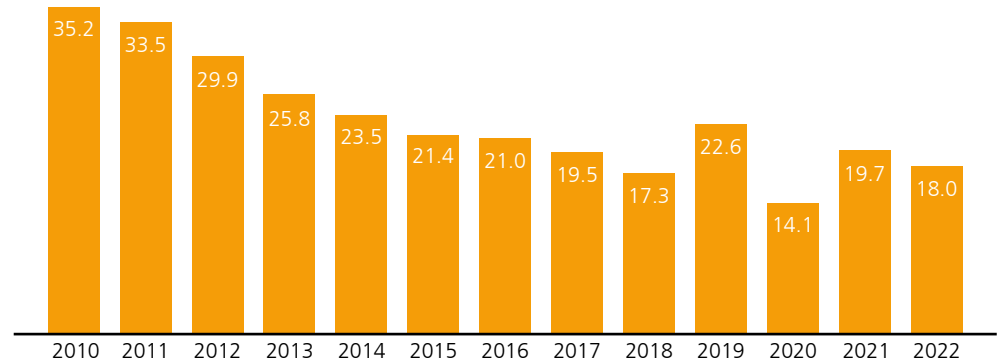
A general dissatisfaction with the supply of apartments and the housing market is reflected in the mood of the current 2021 citizen survey; 36 per cent are not satisfied and 34 per cent very unsatisfied with the situation. In addition, the Stuttgart citizen surveys also reveal that for years the unduly high rents and the low supply of apartments have been regarded by the residents as a key problem in the city. With 86 points in the urban barometer, the unduly high rents rank first in the list of problems.<sup>28</sup>



## Indicator 11-2: Accommodation service for social housing

“Safe and affordable housing”  
(Target 11.1)

**Figure 80:** Accommodation service rate for social housing (in per cent)

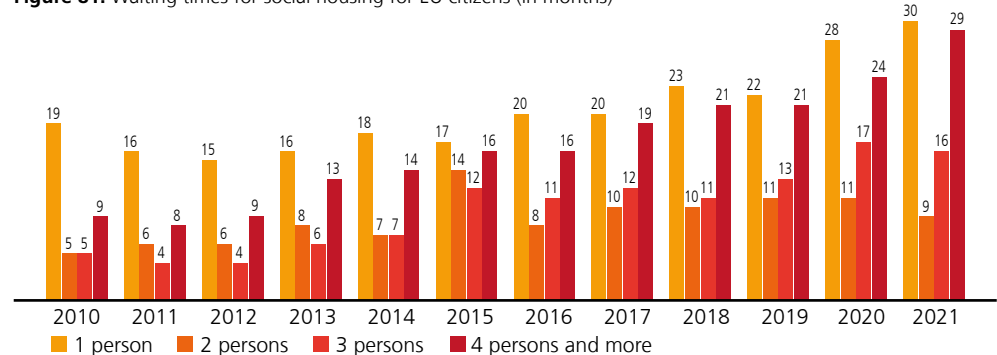


Source: State Capital Stuttgart, Urban Planning and Housing Office

In the last fifteen years, the number of social housing in Germany has been approximately halved, partly due to the elimination of rent regulation. The difficult housing market in large cities can also be seen in Stuttgart in the allocation rate of social housing and the average waiting time. The number of households allocated to social housing declined in the reporting period. In 2010, 35 per cent of the households in the planning file were allocated accommodation; by 2020, this proportion had dropped to more than half to 14.1 per cent. In 2019, a particularly high number of apartments were placed (22.6 per cent), as this year saw many new building projects with a high percentage of social housing.

The increased demand due to the influx of people to Stuttgart and the rising rents with the decline in existing social apartments at the same time are responsible for the increasingly difficult situation with social housing.<sup>84</sup>

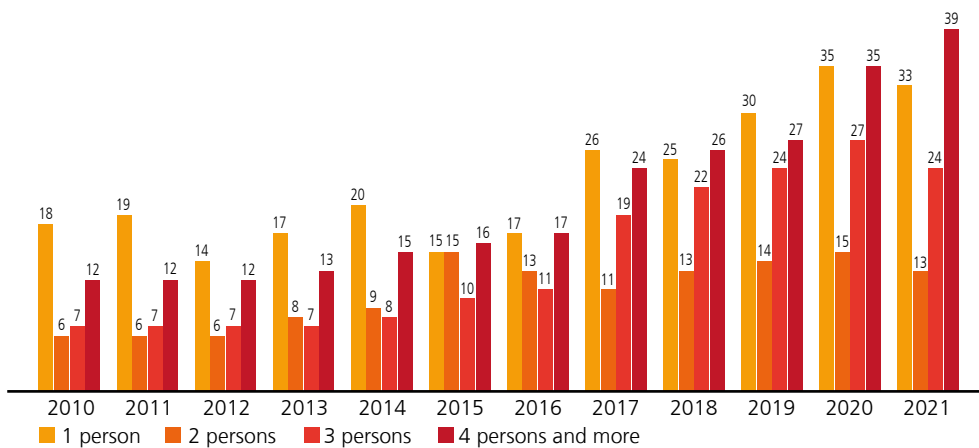
**Figure 81:** Waiting times for social housing for EU citizens (in months)



Source: State Capital Stuttgart, Urban Planning and Housing Office



Figure 82: Waiting times for social housing for non-EU citizens (in months)



Source: State Capital Stuttgart, Urban Planning and Housing Office

The development of average waiting times is less consistent over the same period. Waiting times for all household sizes have tended to increase. At present, the average waiting times for a one-person household and for larger households of four and more persons are the longest.

Non-EU citizens have to wait longer for housing than EU-citizens. This applies to the entire period under review and all household sizes. In 2021, the waiting time for non-EU citizens in a household with four or more persons was 39 months – the longest of all.

**Classification / Definition**

The provision of affordable housing is a problem, in particular for people with a low income. In addition to the rent, the accommodation service procedures for social housing give an idea of the difficulties that people with a low income have in finding affordable housing.

Two measured values reflect the extent to which people with a low income manage to obtain social housing. On the one hand, the placement rate of social housing indicates how often households were placed in an apartment relative to all households registered in the waiting list. On the other hand, the average waiting time indicated how long it takes to place people eligible for social housing.

The placement rate of social housing relates the number of households placed to all households registered in the municipal planning file.

The average time on the waiting list for social housing differs according to the size of the apartment required and is differentiated. The data is also differentiated according to EU citizens and non-EU citizens to make it visible how non-EU citizens are affected.

For the application for social housing in Stuttgart, proof of entitlement to accommodation is required.

**Calculation**

Accommodation service for social housing:

$$\frac{\text{Number of households placed}}{\text{Total number of households registered in the municipal planning file}} \times 100$$

Accommodation service for social housing (waiting list):

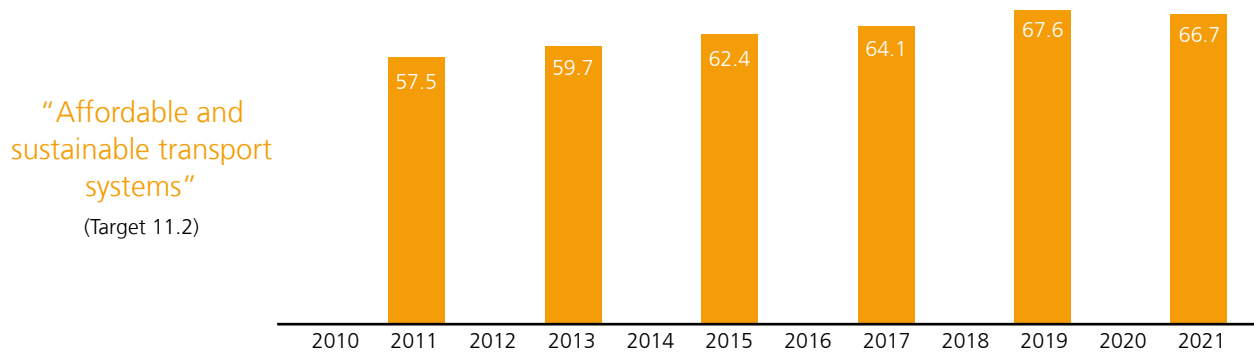
$$\text{Average time for an apartment – itemised by household size and citizenship}$$



## Indicator 11-3:

## Transport means for getting to work (including walking)

**Figure 83:** Selection of environment-friendly transport means for getting to work, including walking (in per cent of entries)



Source: State Capital Stuttgart, Statistics Office (citizen surveys)

The use of environment-friendly means of transport (bicycle, e-bike or public transport) and walking is widespread. More than half of the Stuttgart residents use environment-friendly means of transport for getting to work or training place or they walk. This proportion has been steadily increasing. In 2011, some 57 per cent of the respondents accounted for environment-friendly means of transport, by 2019 this figure had increased to some 68 per cent. During this time, the use of cars decreased in particular among young people. The number of car-owners in this group also decreased and they tend to use a bicycle, public transport or other alternatives. If, however, a car is available, it is often used for getting to work.<sup>85</sup>

In 2021, a standstill of the previous developments can be observed. Due to the COVID-19 pandemic, the proportion of public transport users decreased. This reduced the proportion in environment-friendly means of transport for getting to work, as the decline could not be fully compensated by increases in other environment-friendly means of transport.

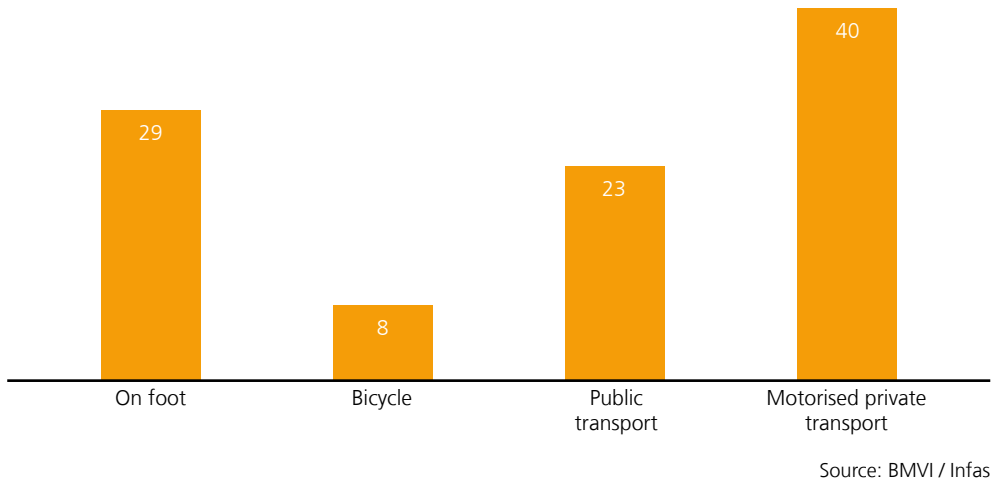
### Modal Split



The Modal Split, which does not only refer to the use of the most common means of transport for the way to work or training place, but reflects the actual mix of means of transport used by the residents, was carried out for Stuttgart in 2017 last in the context of the study “Mobility in Germany” by the Federal Ministry for Digital and Transport in cooperation with the Institute for Applied Sciences. With some 40 per cent, motorised private transport (MIV) accounts for the largest proportion. However, here some 60 per cent of everyday distances to be covered are actually carried out environment-friendly (public transport, bicycle) or on foot (cf. Figure 84).



Figure 84: Information on modal split in Stuttgart 2017 (in per cent)



**Classification / Definition**

As an approximation of the distribution according to modes of transport, primarily data from the Stuttgart citizen survey is used. Every two years, people are questioned about the means of transport primarily used for getting to work or training place, as this is a distance covered every working day – so very often. This means that the survey focuses on one important distance, although the total traffic volume includes many other trips, for instance for shopping or leisure purposes. Since multiple answers are possible, the individual values were standardised to 100.

**Calculation**

The indicator is calculated as the number or road users who use environment-friendly means of transport on their way to work, i.e. on foot, by bicycle, e-bike or public transport:

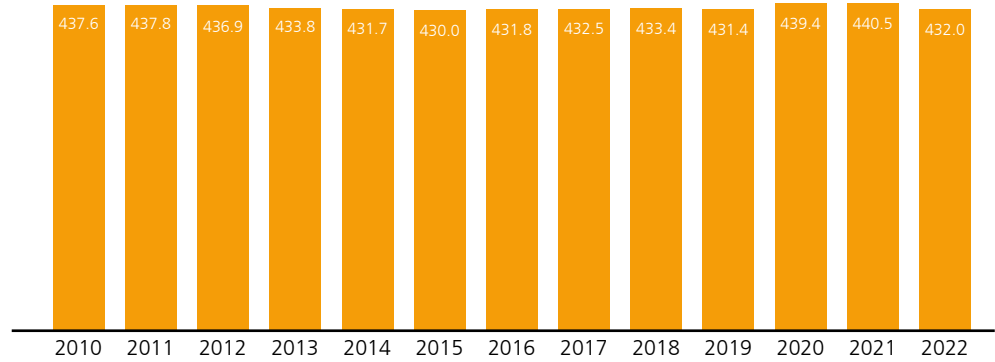
$$\frac{\text{Number of road users, who go to work or training place on foot, by bicycle, e-bike or public transport}}{\text{Total number of road users on the way to work or training place}} \times 100$$





Indicator 11-4:  
Car density

Figure 85: Car density (number of private cars/1,000 residents older than 18)



“Affordable and sustainable transport systems”  
(Target 11.2)

Source: State Capital Stuttgart, Statistics Office

The number of private cars per 1,000 residents above the age of 18 does not vary excessively in the period under review. From 2010 to 2015, it saw a decline from some 438 to 430 cars. In the following years, this figure has been slightly rising, except for 2019, increasing to some 440 cars in 2020 and 2021. In 2022, the figure dropped again to 432 cars.

The increase in the car density in 2020 and 2021 can be explained by the COVID-19 pandemic, because during this period many people appreciated owning a car and were worried about becoming infected from using public transport. After the infection situation was less acute in 2022, many of newly purchased or registered cars were deregistered again.<sup>86</sup>

**Classification / Definition**

The indicator described the level of motorisation in the State Capital Stuttgart, which is measured by the proportion of private cars per 1,000 residents over 18. All cars, including estate cars, which are registered according to the highway traffic act (StVZO) and have a registration number are taken into account.

The relation of the indicator to target 11.2 (Sustainable traffic systems) is made via the decline in car density and the increase in alternative and environment-friendly means of transport.

**Calculation**

Car density:

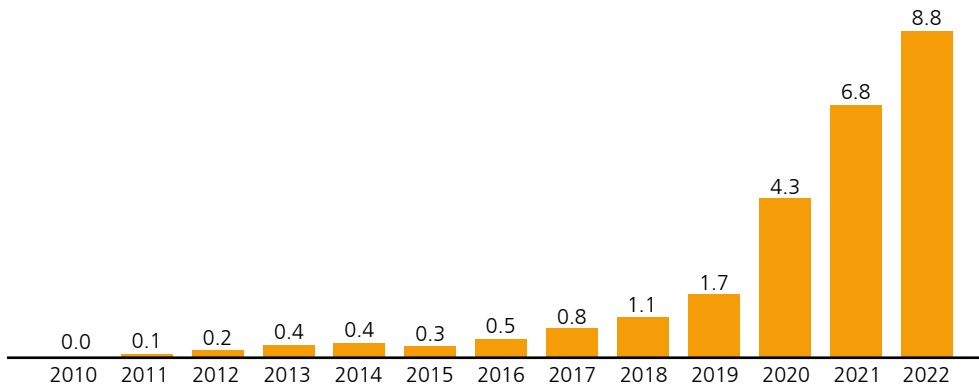
$$\frac{\text{Number of private cars}}{\text{Number of residents above 18}} \times 1,000$$





## Indicator 11-5: Passenger cars with electric drive

Figure 86: Passenger cars with electric drive (incl. plug-in hybrid) (in per cent)



Source: State Capital Stuttgart, Statistics Office

“Affordable and sustainable transport systems”  
(Target 11.2)

From 2010 to 2022, the proportion of passenger cars with electric drive saw a significant rise in Stuttgart. Except for 2015, a continuous increase can be observed. Since 2019, however, an ever-increasing rise with partly more than two percentage points per year can be observed, so that in 2022, some 8.8 per cent of cars are equipped with electric drive.

### Classification / Definition

Passenger cars with electric drive or plug-in hybrids are a more sustainable alternative to conventional combustion motors. They have a considerable saving potential when it comes to CO<sub>2</sub> equivalents, particulate matter pollution and noise relevance for urban traffic at a speed of up to 50 km/h (approx. 31 mph). The indicator includes both all-electric vehicles and plug-in hybrids equipped with an electric and a combustion motor. It shows the relationship of all registered passenger cars with electric drives (incl. plug-in hybrids) to the total number of passenger cars registered.

### Calculation

Passenger cars with electric drive:

$$\frac{\text{Number of registered passenger cars with electric drive}}{\text{Total number of registered passenger cars}} \times 100$$

### Are electric passenger cars environment-friendlier?



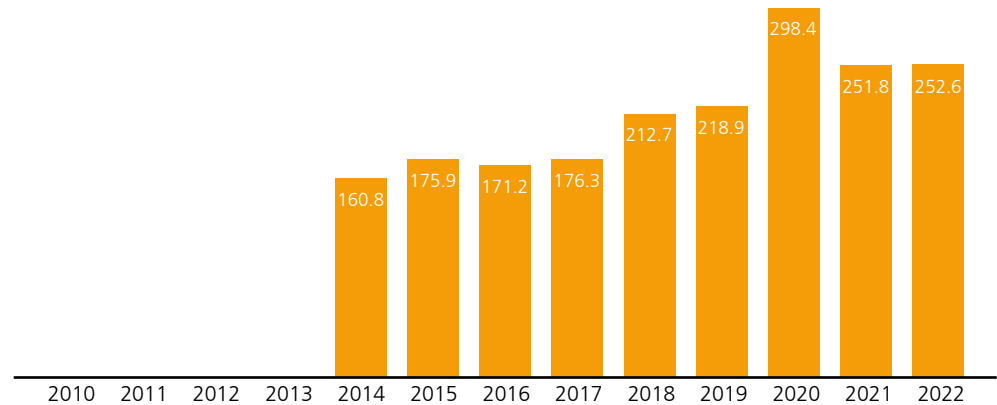
A frequent argument against the ecological advantage of electric passenger cars is the high consumption of resources for the batteries. According to information from the Fraunhofer-Institut on environmental friendliness of electric passenger cars, the batteries make a significant difference in the ecological life cycle assessment of the vehicles, in

particular in the production. However, if the entire life cycle is considered, these environmental impacts can easily be balanced by using a clean electricity mix for fuelling 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.<sup>87</sup>



## Indicator 11-6: Bicycle traffic

Figure 87: Cyclists at selected bicycle counting stations (bicycles / 100 residents)



Source: State Capital Stuttgart, Civil Engineering Office

“Affordable and sustainable transport systems”  
(Target 11.2)

The increase in bicycle traffic in Stuttgart is also reflected in the 15 permanently installed automatic bicycle counting stations in the city. In 2020, some 1.5 million cyclists were noted at the counting stations Böblinger Straße and König-Karls-Brücke. If this 2020 figure is related to the number of Stuttgart residents, the two counting stations had together almost 300 bicycles per 100 residents. This figure has almost doubled since the counting stations were set up in 2014. In 2020, there was an extreme increase. In 2021 and 2022 it decreased again to some 250 bicycles per 100 residents. The 2020 jump can partly be explained by the COVID-19 pandemic, when many users of public transport, worried about infection, turned to cycling.

### Classification / Definition

In Stuttgart, there are 15 permanent automatic bicycle counting stations. The first permanent counting station was set up 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. Since 10 December 2013, the number of cyclists passing this point has been registered. The indicator is based on the figures of these two counting stations since comparable data has been available since 2014. This can be extended to other bicycle counting stations. The indicator is the ratio of the number of cyclists counted at the two counting stations to the number of residents.

### Calculation

Bicycle traffic:

$$\frac{\text{Number of cyclists counted}}{\text{Number of residents}} \times 100$$



### Opinions on the situation of cyclists

Only 28 per cent of the persons who participated in the 2021 citizen survey are satisfied or very satisfied with the situation for cyclists in Stuttgart. With 41 per cent, the largest part of the respondents state that they are very unsatisfied or unsatisfied with the situation. 31 per cent answer the question with neither satisfied/nor unsatisfied.<sup>28</sup>



i

### Rental bikes in Stuttgart

Since 2011, not only cars, but also bicycles can be hired in Stuttgart. As a Stuttgart specialty – and as a concession to the city’s topography – pedelecs and e-cargo bikes have also been available alongside traditional bicycles since the outset. The total number of bicycles available has increased since 2011 from 500 (including 100 pedelecs) to some 800 in 2020 (including 188 pedelecs).<sup>88</sup> The number of rental bikes available per 10,000 residents has increased accordingly from almost nine in 2011 to almost 13 at present.

In cooperation with the partner RegioRadStuttgart the volume of rental bikes has continuously expanded in recent years. Since 2018, not only has the number of rental bikes increased, but the number of rental stations has also more than doubled from 45 in 2017 to currently 100. If the rental bike infrastructure of the municipalities in the region is included, where bicycles can be borrowed from and returned to RegioRadStuttgart, the number increases to some 1,400 bicycles at more than 180 stations. In addition to RegioRadStuttgart, Stuttgarter Rössle rents out electric cargo bikes and is another component for sustainable mobility in the City of Stuttgart. 60 new e-cargo bikes are available at various stations.

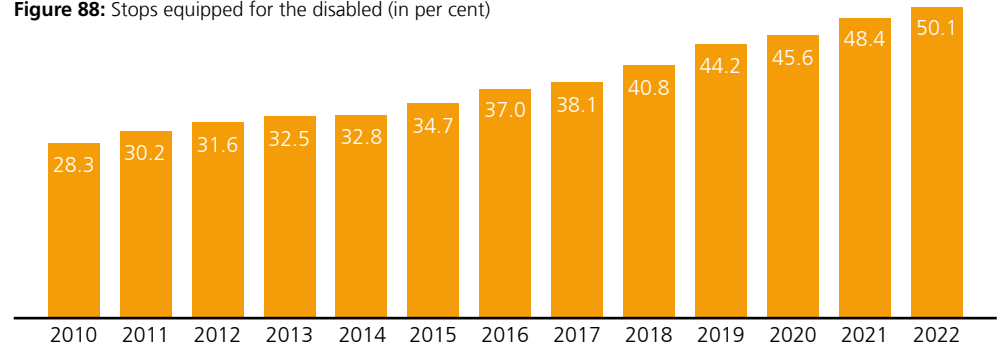
Nowadays, rental bikes are very much a character of public transport in many cities. In Stuttgart, the systems “RegioRadStuttgart” and “Stuttgarter Rössle” contribute to the reduction of motorised private transport and the relief of public transport.<sup>89 90</sup>



## Indicator 11-7: Accessibility of public transport

“Affordable and sustainable transport systems”  
(Target 11.2)

Figure 88: Stops equipped for the disabled (in per cent)



Source: State Capital Stuttgart, Civil Engineering Office

By mid-2023, profile verges were installed at 414 of 824 bus stops (kerb edges). These make it easier to board and facilitate orientation for people with visual impairment. In the period under review, the number of disabled-accessible stops had risen steadily, and most recently, half of Stuttgart’s bus stops have been barrier-free.

The stops of Stadtbahn (SSB) and S-Bahn (DB) are largely barrier-free.<sup>91</sup>

### Classification / Definition

The accessibility of local public transport (ÖPNV) is of great importance for people with physical disabilities so they can participate in public life.

Accessibility in public transport concerns a variety of aspects that cannot easily be shown in a single indicator. The indicator presents the number of disabled-accessible bus stops in Stuttgart as of 2010.

### Calculation

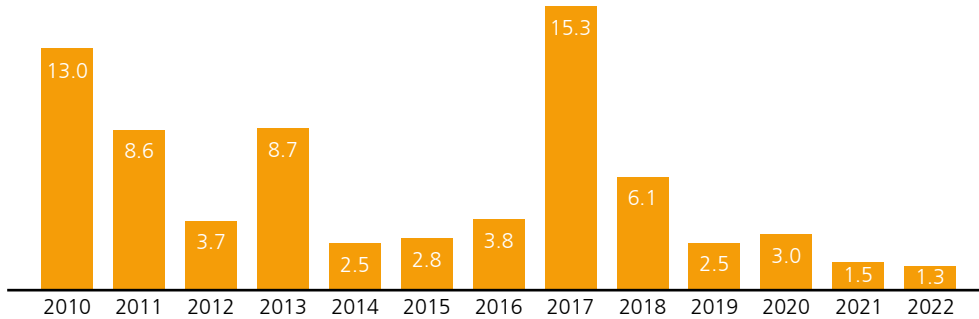
Accessibility of public transport:

$$\frac{\text{Number of barrier-free bus stops}}{\text{Total number of bus stops}} \times 100$$



Indicator 11-8:  
Land use

Figure 89: Annual land use (in hectares)



Source: State Capital Stuttgart, Statistics Office

“Inclusive and sustainable urbanisation”  
(Target 11.3)

Land use in Stuttgart has been reduced to a large extent by measures such as brownfield development, density of use and land recycling. In the 1980s, the residential and transport area increased by an average of 73 hectares per year. Since 2010, the average has been 5.6 hectares. Despite the general decline in land use, major urban development projects in individual years repeatedly result in a greater increase in the residential and transport area, for instance the expansion of the airport site in Plieningen in 2005. However, the indicator is also affected by special development projects, such as the amendment of the usage regulation of the special airfield Pattonville in Mühlhausen in 2008. The last major land use took place in 2017 when the area of the planned development area Langenäcker-Wiesert in Stuttgart-Stammheim was repurposed.

**Classification / Definition**

Ground is a non-renewable and therefore particularly valuable resource. The economical use of land is an important factor in sustainable urban development.

The annual increase in residential and transport areas is defined as land use. As a rule, areas previously undeveloped are used for building (residential) projects.

However, the residential and transport areas do not correspond to the sealed areas, as they include less built-up areas, such as green spaces, campsites and cemeteries. In addition, the residential and transport area also has unsealed area segments, which are subordinated to the respective main use, for instance front gardens or roadside greenery.

**Calculation**

Annual land use:

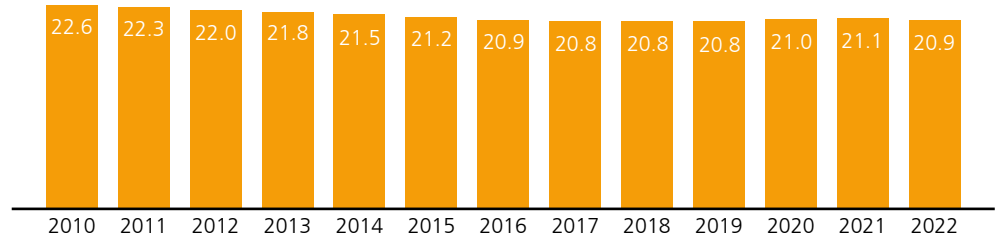
Area used for settlements and transport in ha – area used for settlements and transport in ha in the previous year



## Indicator 11-9: Recreational areas

“Ensure access to safe and inclusive green areas and public space”  
(Target 11.7)

Figure 90: Recreational areas (in m2 / resident)



Source: State Capital Stuttgart, Statistics Office

Mathematically, all residents have access to an average of some 20 square metres of sports, leisure and recreational areas per person – forests are not taken into account. In the period under review, this figure first fell slightly due to the changes in population numbers and then increased again to 21.1 square metres per person. In 2022, this figure fell again to 20.9 square metres per person.

The green and recreational areas constitute some two per cent of the recreational area of the State Capital Stuttgart. Some 600 hectares of the green areas in Stuttgart consist of high-quality landscaped and ecologically maintained parks and green areas.

The woods around Stuttgart form its largest recreational area. With an area of some 5,000 hectares, 24 per cent of the city is forested. The State Capital vineyard and the historical city centre vineyards are also a landmark of Stuttgart.

Preserving, developing and creating new green structures is an essential prerequisite for maintaining and improving the daily well-being of the Stuttgart residents. To maintain the social and ecological benefit of public green areas on a long-term basis and with a view to the future the importance of urban green areas with urban development policy goals and needs must be carefully weighed up.

### Classification / Definition

In urban areas, open and natural spaces fulfil important social and ecological functions. They have a high recreational value, can reduce stress and serve as places where people can get together, as they can improve air quality by climate regulation and air filtration – in particular in urban areas. The indicator relates the green and recreational areas to the city’s population. It also includes sports areas (see SDG 3 “Urban physical activity spaces”), but also goes beyond, as all green and recreational areas are included.

### Calculation

Recreational areas:

$$\frac{\text{Green areas and leisure space}}{\text{Number of residents}}$$

### Opinions on green spaces

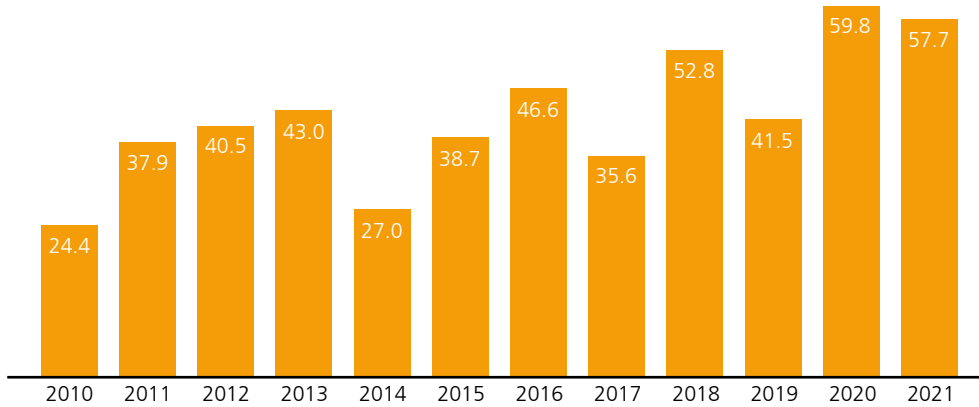


Around one third of the urban area of the State Capital consists of woods, vineyards, orchards and public green areas, which include playgrounds and cemeteries, in addition to various parks. They make a significant contribution to the quality of life and public amenities available to the population. According to the 2021 citizen survey, 69 per cent of the Stuttgart residents are satisfied or very satisfied with the parks and green areas.<sup>28</sup> However, in the 2023 participatory budgeting, the demand for creating new green areas is among the top places on the list.<sup>92</sup>



## Indicator 11-10: Completed residential buildings with renewable heating energy

Figure 91: Completed residential buildings with renewable heating energy (in per cent)



Source: State Capital Stuttgart, Statistics Office

“Implementation of policies and plans for inclusion, resource efficiency and disaster risk reduction”  
(Target 11.b)

Since 2018, the majority of new building projects have been equipped with renewable primary energy sources, such as environmental (mainly heat pumps) or geothermal energy or fuels from renewable sources (normally wood). So, in new buildings, gas has been replaced as the most important heating energy source. In 2021, the proportion of completed residential buildings using renewable heating energy was almost 60 per cent in contrast to gas-powered heating systems with almost 35 per cent.

### 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:

$$\frac{\text{Number of completed residential buildings with renewable primary heating energy}}{\text{Total number of completed residential buildings}} \times 100$$

### Energy efficiency of existing buildings



Not only the construction of new residential buildings with renewable heating sources contribute to sustainable urban development, but also energy-efficient modernisation of existing buildings offers a great potential for municipal climate protection. Stuttgart set itself the goal to be climate-neutral by 2035 and therefore promotes the energy-efficient refurbishment of buildings with the municipal energy saving programme. The 2022 energy turnaround review reveals that 22 per cent of property owners plan to modernise the energy efficiency of their houses within the next five years. The focus is on individual measures such as the installation of a photovoltaic system or the insulation of roofs to improve energy-efficiency. However, only very few owners take a complete refurbishment of the entire building into consideration.<sup>93</sup>



## 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). However, these dimensions of sustainability in a city also depend on traffic and consumer behaviour (SDG 12 “Sustainability in consumption and production”). Measures to restrain climate change (SDG 13) are often urban development measures. Here, however, there is a clash of opportunities and the target conflicts of sustainable development.

In addition, the social and cultural dimension of the sustainable development goals are particularly relevant with regard to social cohesion, i.e. the “Reduction of Poverty” (SDG 1) by access to economic resources and affordable housing, improve impacts on “Public health” (SDG 3) by reduced noise pollution or improved air quality and the development of a health infrastructure (SDG 3), ensure access to “Education” for all (SDG 4) by the development and expansion of education facilities, or the creation of barrier-free housing (SDG 10) in cities, “Gender equality” (SDG 5) such as ensuring the representation of women in the Stuttgart Municipal Council, as well as “Peace, Justice and Strong Institutions” (SDG 16) and “Global partnerships” (SDG 17).

In this context, urban development measures are to be planned and implemented in an ecologically sustainable and energy- and resource-saving way to ease conflicting targets in the field of ecological sustainability (SDG 6, SDG 13, SDG 14, SDG 15). The organisation of urban infrastructure also significantly determines the consumption and production patterns and is therefore also linked to almost all targets of SDG 12.

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 following indicators are 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 next GP practice”
- SDG 3:** “Urban physical activity spaces”
- SDG 4:** “Media collection of the Stuttgart City Library”
- SDG 4:** “Culture budget”
- SDG 6:** “Barrier-free or low-barrier sanitation”
- SDG 7:** “Charging station infrastructure”
- SDG 7:** “Energy productivity”
- SDG 10:** “Barrier-free or low-barrier apartments”
- SDG 12:** “Waste volume”
- SDG 13:** “Greenhouse gas emissions”
- SDG 13:** “Index: municipal climate adaptation”
- SDG 13:** “Trees in public spaces”
- SDG 15:** “Soil index”
- SDG 15:** “Nature conservation areas”
- SDG 15:** “Biodiversity”
- SDG 16:** “Registered users on the website “Stuttgart – my city””
- SDG 16:** “Digital municipality”
- SDG 16:** “Mobile working”
- SDG 16:** “Crimes”
- SDG 16:** “Cash surplus/deficit for permanent task fulfilment”





## Practical example 24: Münster – a Livable City – Commitment at a district level



### Context:

In the city district Münster, there are various points of reference for sustainable action with many projects and initiatives already campaigning to achieve sustainability goals. In terms of Münster – a Livable City – the city district’s objective is the low-threshold implementation of all UN Sustainable Development Goals (SDG) with regard to already existing projects and initiatives in the district. The residents of Münster are to be made aware of the sustainability goals and encouraged to participate actively in the accomplishment.

### Description / Realisation:

In cooperation with the Social City Münster 1 – city centre – (Urban Planning and Housing Office), it was already possible to assign some measures to individual SDGs. In recent years, sustainability has always been a topic in Münster in the context of projects and initiatives of various sizes and it will always be considered in future joint projects:

- 1) Since 2012, Münster has been a fair trade district. The contribution to the SDGs 12 (Responsible Consumption and Production) and 17 (Global Partnership for the Goals) became obvious during the local fair trade campaign days in 2020, 2021 and 2023.
- 2) Since winter 2020/2021, participating with the Kolping Family, the district town hall, the Regional Advisory Board, the Social City and Business Development, Münster has been offering a “Big winter feast at a small price”. The aim is to provide people with a low income in the city district access to food or goods (SDG 2 “Zero Hunger”). At the same time, the programme addresses local restaurants, helping them continue their business and get publicity (SDG 8 “Decent Work and Economic Growth”).
- 3) As part of the programme “Münster is flourishing”, that has been taken place since 2020, SDGs 13 (“Climate Action”) and 15 (“Life on Land”) provide information material on biodiversity and environment protection. The participation of children is an integral part of this: in 2021, the children had the idea to create a bed for insects and with their input a wildflower meadow with an insect hotel was set up – SDG 16 (Peace, Justice and Strong Institutions).

- 4) During the district festival “Münster celebrates” in 2022, all topics of the SDGs were brought up, for instance with a wheel of fortune on sustainability issues for Stuttgart and Münster, as well as a quiz question at the district game “Münster rally”.

### Experience / Results:

At the end of 2022, a project of the University of Stuttgart, the Regional Advisory Board and the social city team used further low-threshold participation formats (e.g. interviews, photo competition, mappings) to provide information on selected global sustainability goals and with the residents of the Münster district collect data on developments in the area of climate protection and adaptation, renewable energy and urban development on the spot.

The success of how they have acted locally has motivated the participants to continue with further practical measures. In future, further players from the district from trade and business, as well as various groups from the civil society are to be won over for communal action in implementing the sustainability goals.

### Division / Office / Public Undertaking:

District Town Hall Münster  
Urban Planning and Housing Office in the Urban Planning, Housing and Environment Division and various players from academia and civil society

### Further reading / Links:

[www.stm-muenster.de](http://www.stm-muenster.de) (last access 12.04.2023)



## Practical example 25: Brownfield development rather than greenfield development – potential assessment in housing

### Context:

Since 2001, the current land-use plan of the State Capital Stuttgart has been effective and is updated by current changes and corrections. Since 2010, the priority of the City of Stuttgart has primarily been on brownfield development rather than greenfield development. As a result of the new construction areas in the Stuttgart 21 project, the land-use plan 2010 did not include approximately 62.0 hectares of planned greenfield construction area (residential areas Langenäcker-Wiesert approximately 12.5 hectares and Viesenhäuser Hof approx. 24.5 hectares, industrial park Stammheim-Ost approx. 25 hectares). Since then, the land-use plan has been amended several times and the regional plan entirely updated. The objective of brownfield development rather than greenfield development is to be maintained. This means, refraining from larger new construction areas and requiring the mobilisation of existing construction area potentials. Density, mix of uses and polycentricity are to be promoted.

The methods for creating new housing in brownfields, which have been successively introduced since 2010 and applied to date, therefore do not directly result from an acute shortage of affordable housing. In fact, they can be attributed to the necessity to create substitutes for potential greenfield areas which for ecological reasons have been eradicated for resource-saving purposes.

### Description / Realisation:

The potential analysis Housing is for an overall collection of data regarding housing potential according to clearly-defined lots and so includes potential in the form of additions of another storey, extensions, redensification, conversions and the elimination of under-utilisation. The potential analysis started in 2020 and was presented to the committees before the 2021 summer break.

Approach and method are divided as follows:

#### 1. Basic evaluation

Determination of method, search criteria and other basics in the context of coordination within the administration and workshops. Based on this, the definition of 13 urban structure types, which provide information on potential density of development.

#### 2. Localisation

Filtering out areas of the same structural type of less density, which could be taken into consideration for compatible redensification by analysing available geoinformation systems, aerial photograph interpretation and inspections. Both individual plots (potential areas) and whole spaces with development potential (development areas) were considered. The development areas were always selected in the light of double brownfield development, i.e. redensification with, at the same time, an optimisation of existing infrastructures, such as green spaces and public transport connections.

#### 3. Plausibility check

The areas identified in the determination of basic evaluation and localisation were put up for discussion in the plausibility phase. However, potentials were only excluded if obstacles could be identified that could not be eliminated, such as fire protection, accessibility, building site or nature conservation.

#### 4. Consolidation of development opportunities

In this phase, the number of residential units that can be built in the area of the individual development areas was determined, taking into account the maximum justifiable density for the respective density type. All relevant aspects were summarised by means of fact sheets. For better comprehensibility, test designs were developed for five development areas to show how a potential redensification could actually look like.

#### 5. Presentation of results

The results were presented in the form of a final report. The potential areas were also entered in a GIS layer in order to transfer it to the urban databases.

### Experience / Results:

The result is a pool of some 5,500 plots on 300 hectares with 18,000 residential units.

Since synchronised activation is not possible, the administration has drawn up a list of proposals with 25 development areas with particularly promising efficiency. This results from an optimal mix of all factors relevant to the development, such as the number of residential units realisable, the availability of land, the development of the necessary planning law and the existing infrastructure.



The potentials are to be activated in five stages with the aim of raising the awareness among politicians, residents and property owners for the topic and encourage them to participate. The process includes the involvement of the districts, public relations work and a community dialogue, the development of integral concepts, activation and consultation of the property owners and ultimately the implementation of specific projects.

**Division / Office / Public Undertaking:**

Urban Planning and Housing Office in the Urban Planning, Housing and Environment Division

**Further reading / Links:**

[https://www.stuttgart.de/leben/wohnen/wohnbauentwicklung\\_170104.php](https://www.stuttgart.de/leben/wohnen/wohnbauentwicklung_170104.php)  
(Last access 27.03.2023)

Practical example 26:

**Clean transport: alternative drives in the Stuttgart Waste Management (AWS) fleet**



**Context:**

By 2035, Stuttgart wants to be climate-neutral. AWS is making a significant contribution to achieve this with its clear orientation and fleet of alternative drive vehicles. A decisive factor in this context is how mobility is developing in the city. The farewell to diesel and petrol means less emissions and thus less carbon dioxide emission. The air is cleaner and traffic noise lower.

**Description / Realisation:**

There are more than 800 vehicles in the State Capital's fleet, half of them passenger cars and the other half specialist vehicles with various requirements. AWS procures, manages and services all vehicles registered in the State Capital Stuttgart and has been steadily increasing the proportion of vehicles with alternative drive.

**Experience / Results:**

25 per cent of the vehicles have an alternative drive, i.e. electric, hybrid or natural gas: 15 per cent are driven by electricity, eight per cent by natural gas and two per cent by hybrid technology. Two specialist vehicles with a hydrogen drive have been ordered. By 2025, this should make up 40 per cent of vehicles.

Since 2021, if a municipality purchases new vehicles about 40 per cent of them must be equipped with low-emission or emission-free drives. Already in 2021, AWS exceeded the legal stipulation by purchasing 77 per cent emission-free vehicles.

Infrastructure: All places of business of AWS have charging stations.

In 2022, Mercedes-Benz Special Trucks and AWS jointly launched a sustainable and climate-friendly project: eEconic is one of the first fully electric heavy trucks for waste collection. AWS has the vehicle at its disposal for one year. In the course of this test phase, both project partners want to gain knowledge on the long-term municipal use of the vehicle in the tricky topography of Stuttgart.

**Division / Office / Public Undertaking:**

Stuttgart Waste Management (AWS)

**Further reading / Links:**

<https://www.stuttgart.de/service/entsorgung/aws-elektromobilitaet.php>

<https://www.stuttgart.de/pressemitteilungen/september/premiere-erstes-vollelektrisches-abfallsammelfahrzeug-in-stuttgart.php>

(Last access 12.04.2023)



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://www.stuttgart.de/lebenswertes-stuttgart)





**SDG 12**

## **Responsible Consumption and Production**

“Ensure sustainable consumption and production patterns”

Relevant targets of SDG 12 for German municipalities to ensure sustainable consumption and production patterns are in particular the sustainable use of natural resources, reducing food waste, reducing waste, 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 and are already covered in the VLR by indicators:



**12.1** Implement the ten-year programme framework for sustainable consumption and production patterns



**12.2** Sustainable farming and efficient use of natural resources



**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:



**12.3** Halving the global food waste per capita



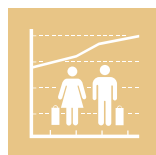
**12.4** Responsible management of chemicals and waste



**12.8** Promotion of a general understanding for sustainable lifestyles



**12.a** Support of scientific and technological capacities of developing countries for sustainable consumption and production patterns

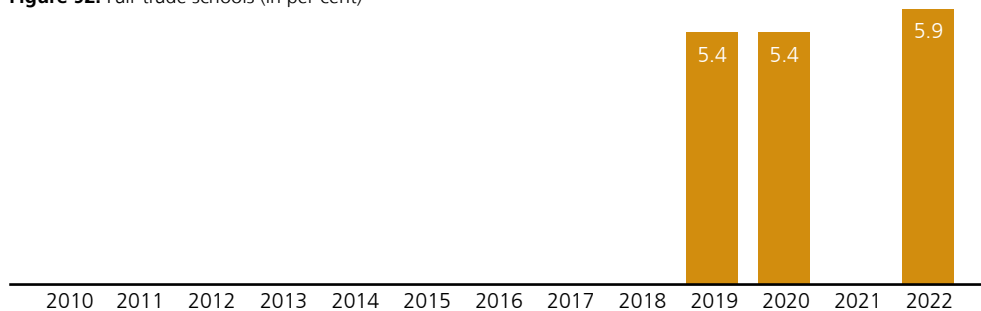


**12.b** Development and implementation of instruments to monitor sustainable tourism activities



## Indicator 12-1: Fair trade schools

Figure 92: Fair trade schools (in per cent)



Source: Fairtrade Deutschland e. V.; State Capital Stuttgart, Social Affairs and Integration Division

“Implement the ten-year programme framework for sustainable consumption and production patterns”  
(Target 12.1)

While the proportion of fair trade schools was constant at 5.4 per cent of all Stuttgart schools in 2019 and 2020, this figure increased to some 6 per cent in 2022. According to the current map of the “Fair Trade Schools” campaign, there is a total of nine fair trade schools in Stuttgart in relation to a total of 152 schools, another two are subject to the certification process.

### 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.<sup>94</sup> In addition, the participating schools can show their commitment and their creativity to the outside world. The campaign has been in existence since 2012 with the aim of supporting the international education campaign “Education for Sustainable Development” and promoting the cooperation between local fair trade towns and universities to implement joint projects. Schools have to fulfil five criteria that reflect fair trade and commitment at different levels to become part of the campaign. In addition, the campaign supports schools in developing local projects to spread information on fair trade.

### Calculation

Fair trade schools:

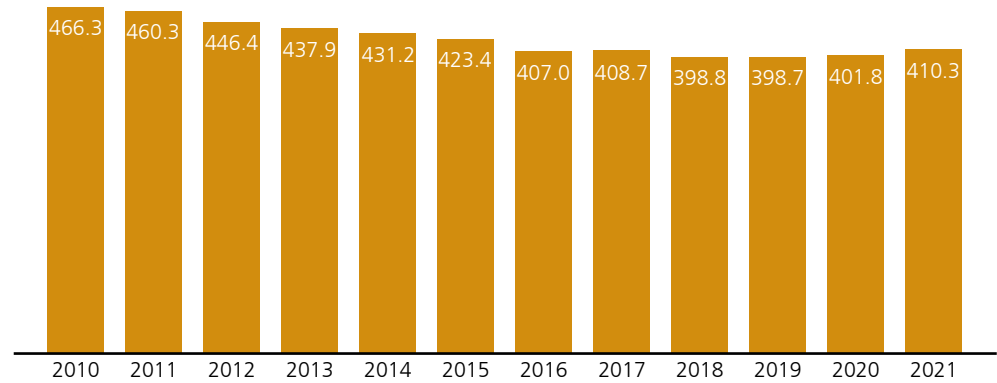
$$\frac{\text{Number of fair trade schools}}{\text{Total number of schools}} \times 100$$



## Indicator 12-2: Amount of waste

“Substantial reduction of waste”  
(Target 12.5)

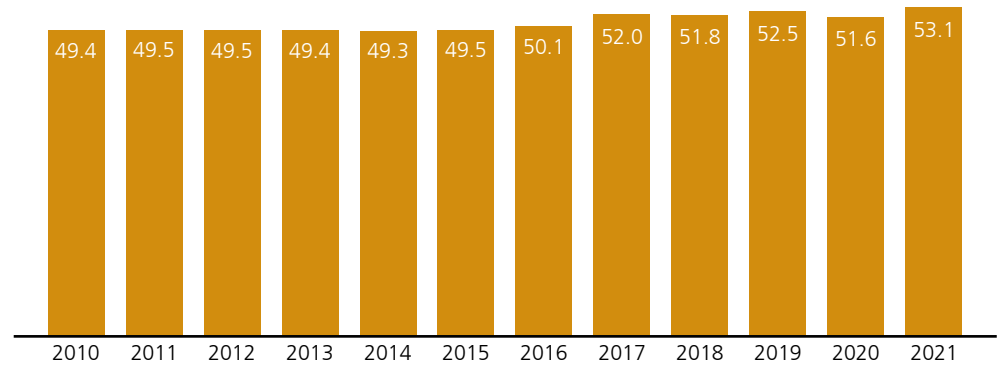
**Figure 93:** Amount of municipal waste (domestic, bulk, organic waste and recyclable material in kg / resident)



Source: State Capital Stuttgart, Public Undertaking Stuttgart Waste Management (AWS)

The municipal amount of waste in kilogrammes per resident has been declining since 2010 and has come to a standstill at some 400 kilogrammes per resident since 2018. However, recently the amount of municipal waste has increased to 410 kilogrammes per resident – probably caused by the COVID-19 pandemic.

**Figure 94:** Percentage of recyclable material and green waste in the amount of waste (in per cent)



Source: State Capital Stuttgart, Public Undertaking Stuttgart Waste Management (AWS)

The proportion of recyclable material and green waste in the amount of waste increased slightly between 2010 and 2021, by 3.7 percentage points to some 53 per cent. Reducing the amount of municipal waste is a development goal not to be ignored. However, there is a special focus on separating residual waste from recyclable material for the benefit of separately collecting a higher proportion of recyclable material. Recyclable material contained in residual waste should be screened and recycled. Thanks to the increase in collection stations for recyclable material, its proportion increased in recent years compared to the amount of residual waste. A positive development can also be expected in the coming years, after the introduction of the compulsory organic waste bin throughout the entire city, which started in 2015 and was completed in 2018. The organic waste bin was introduced on a voluntary basis more than 20 years ago. In 2020, however, data showed an interim decline in the proportion of recyclable material and green waste.



### Opinions on waste disposal i

In the 2021 citizen survey on satisfaction in various areas of life, almost 60 per cent of the respondents said that they are satisfied with waste disposal and collection. 24 per cent of the respondents are even very satisfied. However, the cleanliness of roads and parks is criticised. With 51 points on the municipal barometer, it ranks 16th in the middle range of the biggest problems in Stuttgart.<sup>28</sup>

### Classification / Definition

The reduction of waste and reuse of recyclable material is a sustainability issue with a long tradition. Two aspects play a role here. On the one hand, it is about the municipal amount of waste as a whole, and on the other hand, it is about the use of recyclable material. The indicator "Amount of waste" is limited to domestic waste and does not take industrial waste into account.

The calculation of municipal waste in kilogrammes per resident comprises the amount of household and bulk waste, green and organic waste, as well as all other separated recyclable materials (paper, glass, lightweight packaging, electronic waste etc.). The analysis does not include separately recorded commercial and construction waste, which can be deposited with the public waste disposal authorities, but is not subject to any direct municipal obligation. Therefore, they are not to be assigned directly to domestic waste or the per capita amounts of waste recorded by the municipalities. On the other hand, the problem waste of harmful substances recorded by the municipal collection is assigned to the residual and bulk waste.

The indicator reflects the amount of waste generated per year in relation to the residents living in the regional administrative unit. The proportion of recyclable material indicates the proportion of recyclable material in the waste.

### Calculation

Amount of waste – total:

Total amount of waste in kg

/

Number of residents

Proportion of recyclable material in the amount of waste:

Amount of recyclable material, green and organic waste in kg

/

Total amount of waste in kg

\* 100

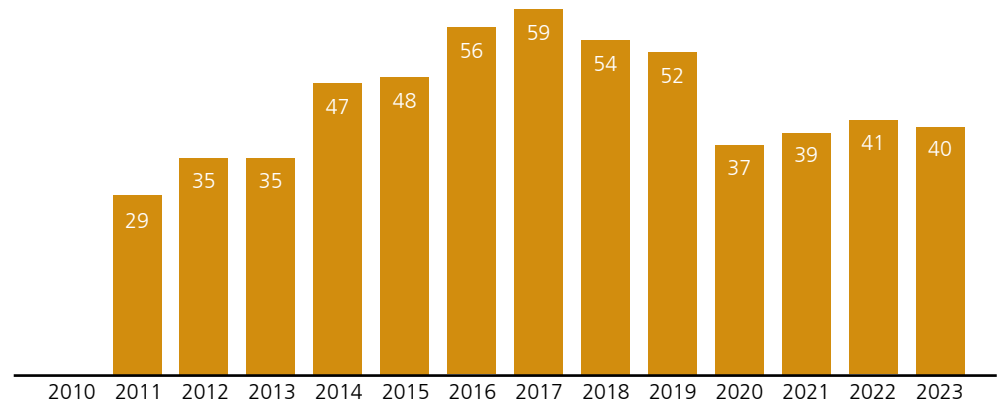




## Indicator 12-3: EMAS-certified sites

“Encouraging enterprises to introduce sustainable processes and sustainability reporting”  
(Target 12.6)

Figure 95: EMAS-certified sites (number of sites)



Source: 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. Between 2011 and 2017, the number doubled. Since 2018, the number of EMAS-certified sites decreased, in line with the general development in Germany – a decline since its peak in 2017.<sup>95</sup>

The 2023 figure is a provisional figure as of the end of April and may change in the course of the year.

### Classification / Definition

The Eco Management and Audit Scheme (EMAS) is a European certification system for assessing the environmental compatibility of companies. The companies undertake to ensure that their use of energy and resources is environment-friendly – far 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. However, non-certified companies can also orientate to these environmental criteria, bypassing the expenditure of certification. Therefore, the number of operating sites environmentally oriented is underestimated.

EMAS-certification is carried out for operating sites. The number of EMAS-sites refers to the postcode area of Stutt-

gart (postcode 70xxx). Since the number of operating sites in the State Capital Stuttgart is not known, it is not possible to determine the proportion of EMAS-sites. Data for the individual years is only approximate values, since certificates can be added or can expire in the course of a year.

### Calculation

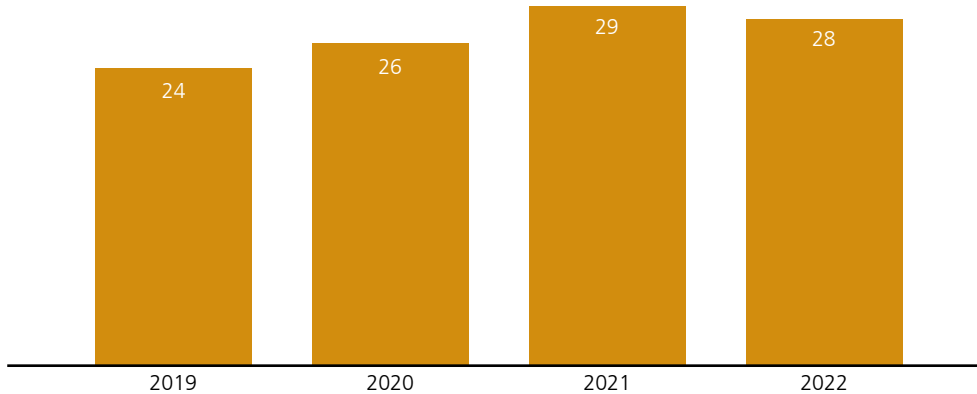
EMAS-certified sites:

Number of EMAS-certified sites



## Indicator 12-4: Sustainable procurement

**Figure 96:** Sustainable procurement procedure (in per cent)



Source: State Capital Stuttgart, Central purchasing

“Promotion of sustainable procedures in public procurement”  
(Target 12.7)

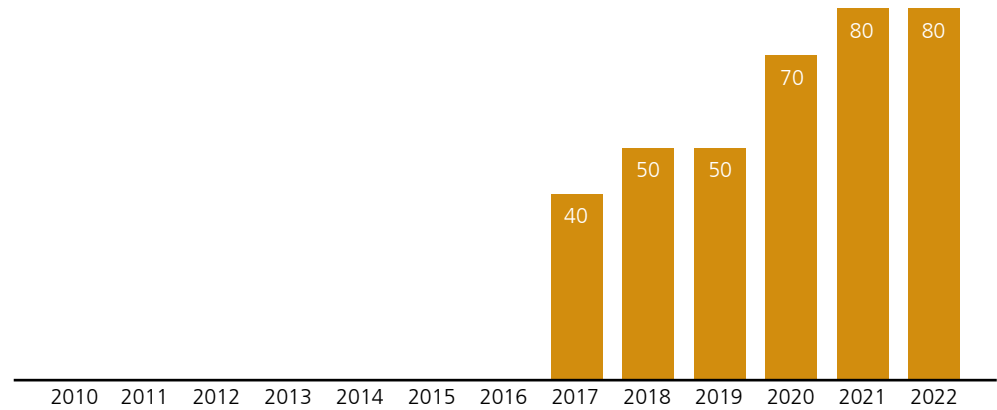
Approximately one quarter of the procurement procedures by the Central Purchasing Department of the State Capital Stuttgart is sustainable. Its proportion in all procurements has been determined since 2019 and has recently risen to 28 per cent. The “Sustainable Procurement” index, which gauges the procurement processes in municipalities, has also increased in Stuttgart since 2017 and recently reached seven of a maximum of ten points.

In accordance with municipal regulations, recycling paper has been standard for the procurement of paper and print products since 2014. The proportion of recycling paper in the total use of paper in the administration of the State Capital Stuttgart had therefore increased almost continuously from 2007 to 2018. While in 2007, just under a quarter of the paper consumed was not recycling paper, this now only applies to less than one per cent. This means the Stuttgart administration has practically completely switched to recycling paper.

Most public procurement processes are carried out by the municipalities. This involves a high responsibility and a role model character for sustainable development, which the State Capital Stuttgart would like to fulfil.

As early as in 2005, the Stuttgart Municipal Council decided to no longer purchase products originating from exploitative child labour. In general, Central Purchasing in the Administrative Services and Human Resources Office requires all bidders and their subsidiaries, as well as the suppliers to comply with the core labour standards of the International Labour Organisation of the United Nations (ILO) for all products, which shall ensure decent 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 fair trade cities.

Figure 97: “Sustainable Procurement” index (in per cent)



Source: State Capital Stuttgart, Central Purchasing

Since 2017, the figures of the “Sustainable Procurement” index have increased greatly. While 40 per cent of all criteria was met in 2017, the figure already rose to 80 per cent in 2022.

### Classification / Definition

The proportion of sustainable procurements is estimated annually by Central Purchasing on the basis of a list of allocation numbers.

The “Sustainable Procurement” index is an aggregate index of ten dichotomous variables based on a standardised questionnaire<sup>96</sup> with 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. Are quality requirements for sustainable production methods and supply chains established?
5. Are measures available to support suppliers / contractors in complying with the required standards?
6. Are business relations 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 there defined business processes for sustainable procurement available?
9. Does your municipality communicate the goals, activities and results of sustainable procurement management to the public?
10. Is there an office responsible for sustainable procurement management in the municipality?

### Calculation

Sustainable procurement procedures:

$$\frac{\text{Number of sustainable procurement procedures}}{\text{Number of all procurement procedures}} \times 100$$

“Sustainable Procurement” index:

$$\frac{\text{Number of measures for sustainable procurement implemented in the municipality (answers with yes)}}{\text{Total number of the measures to be examined}} \times 100$$

### Opinions on sustainability



The strong anchoring of “sustainability” with the citizens in Stuttgart is also underlined in the results of the 2021 citizen survey: almost all citizens (94 %) know the term – and 92.6 per cent of Stuttgart residents think that sustainability is very important (44.4 per cent) or important to a certain extent (48.3 per cent). For the majority of citizens, sustainability means that economy, environment and society (76 per cent) are taken into account in all political decisions and the interests of future generations are also taken into consideration (81 per cent).<sup>28</sup>



## Correlation with other SDGs

The individual and organisational attitude to sustainability in the form of sustainable consumption and production patterns has an impact on all spheres of sustainability. Here, the focus is on the social and environmental dimension, which in turn has a direct impact on the economic dimension.

Cities and municipalities, but also enterprises and private persons have a direct impact on improving people's living conditions along the global value chains – by means of socially accepted and environmentally compatible procurement and purchasing decisions – for instance on the reduction of poverty (SDG 1) and thus hunger (SDG 2) or the creation of decent work and fair pay (SDG 8). The impacts on health can also be improved by complying with health standards, which leads to a reduction of accidents at work or the release of harmful substances (SDG 3).

Environment-friendly consumption and production decisions offer the possibility of reducing direct environmental damage through lower consumption of drinking water, reduced waste and ecologically oriented management. This results in impacts on the environment (SDG 13, SDG 15), marine resources and pollution (SDG 14).

In a broader sense, sustainable consumption and production patterns aim at sustainable behaviour on the whole. SDG 12 refers to the necessity to adapt consumer behaviour and production patterns. This requires regulatory stipulations and innovations (SDG 9 "Industry, Innovation and Infrastructure"), but also implies a fundamental change in economic practices, which not only leads to growth in sustainably oriented sectors, but also to an exit from unsustainable economic activities. Here, possible target conflicts with the goals SDG 8 "Decent Work and Economic Growth" and SDG 1 "No Poverty" as well as directly related SDGs become apparent.

Information and education are basic prerequisites for the awareness of sustainable development and living.

The following indicators are also relevant to SDG 12 "Sustainability in Consumption and Production":

- SDG 2:** "Nitrogen surplus"
- SDG 2:** "Organic farming"
- SDG 3:** "Air quality"
- SDG 3:** "Noise pollution"
- SDG 4:** "Ecological sustainability-related educational programmes"
- 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:** "Generation of renewable energy in the urban area"
- SDG 11:** "Completed residential buildings with renewable heating energy"
- SDG 13:** "Greenhouse gas emission"
- SDG 15:** "Biodiversity"
- SDG 15:** "Soil index"

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



## Practical example 27: 10 years fair trade town Stuttgart

### Context:

In the age of globalisation, goods are traded worldwide. Most often, Europe comes out as the winner in this development, which is often detrimental to the people in the developing or emerging countries. Many clashes and armed conflicts are caused by the unequal distribution of resources and goods.

In Germany, there is a growing awareness of fair production conditions, as well as social and environment-friendly production and trade structures. At municipal level, fair trade plays an important role in many social areas, for instance in public procurement.

The nationwide “fair trade towns” campaign offers stakeholders from civil society, politics and economy an authentic option in contributing to the international sustainable development goals of the 2030 Agenda of the United Nations.

### Description / Realisation:

The State Capital Stuttgart assumes responsibility – on the one hand, by raising awareness among the population, and on the other hand by its own sustainable behaviour. In 2023, Stuttgart celebrates its 10th anniversary as a “fair trade town”.

Stuttgart is the 200th fair trade town in Germany. Between 2011 and 2013, TransFair e. V. acknowledged two thirds of the 23 districts. In March 2011, Degerloch – together with the Berlin district, Charlottenburg – was the first fair trade district in Germany.

Every year public contracts amounting to 540 million euro are awarded by the State Capital Stuttgart for products, construction work and services.

In Stuttgart, a variety of players work together for fair trade, with the districts playing a leading role. In self-governed civil society institutions, the member organisations of Welthaus e. V. ensure that Stuttgart fulfils its responsibility for global justice, sustainable development and peaceful coexistence of cultures.

### Experience / Results:

In 2014, a meeting place of cultures, a place for learning about global correlations and a forum for discussing our future sustainable development was created in the city centre with the support of the State Capital – with the associations, Welthaus Stuttgart e. V., the Global Classroom, the World Workshop, the World Café and the “World Shop at the Grade”.

### Division / Office / Public Undertaking:

Social Affairs and Integration Division;  
General Administration, Culture and Legal Affairs Division

### Further reading / Links:

[www.stuttgart.de/fairtrade](http://www.stuttgart.de/fairtrade)  
(Last access 12.04.2023)



## Practical example 28:

### Delivery concept "last mile"



#### Context:

In Germany, big cities (including Stuttgart) are especially challenged by air pollution caused by the high volume of car and delivery traffic. The basin location of Stuttgart has an additional negative impact on particulate matter pollution, since the particulate matter tends to stay put in the basin. Therefore, it is all the more important to develop concepts that reduce traffic in Stuttgart and/or make it climate-friendly.

Against this background, the delivery concept "last mile" was initiated which aims at significantly reducing delivery traffic for office-specific needs, in particular in the Stuttgart city area, and making it climate-friendly.

#### Description / Realisation:

All offices and public undertakings of the State Capital Stuttgart procure the majority of their requirements via framework agreements with different suppliers. Consequently, various suppliers bring their products individually to the respective points of use (e.g. offices, schools). This leads to an increase in delivery traffic within the Stuttgart urban area. Delivery traffic is particularly high for items required on a regular basis, such as office supplies or cleaning and hygiene items.

This problem is addressed by the new "last mile" delivery concept. Since 01.02.2023, suppliers of selected framework contracts bring all orders to a central handling warehouse. A new logistics partner sorts the orders and delivers them to the respective point of use once a week. Deliveries are only made using vehicles with an alternative drive (e.g. electric vehicles), so that the delivery is climate-neutral. The new logistics partner was found after an EU-wide invitation to tender.

In the pilot phase, three suppliers are involved in the concept. In the medium to long term, further suppliers are to be involved successively, so that delivery traffic associated with the procurement work of the State Capital Stuttgart is reduced and made sustainable.

#### Experience / Results:

The new "last mile" delivery concept has been widely approved, both within the city administration, but also externally. With the help of internal information events and dialogues with players from the logistics sector, the interests, expertise and requirements of internal and external stakeholders were matched so that one logistics partner complying with all requirements could be identified.

In any case, the new delivery method contributes to reducing traffic in the urban area and the harmful impacts on the urban climate caused by it.

#### Division / Office / Public Undertaking:

Administrative Services and Human Resources Office in the General Administration, Culture and Legal Affairs Division



## Practical example 29: Implement CSRD – and switch to sustainability

### Context:

In 2019<sup>97</sup>, with the European Green Deal a series of regulatory measures was started to establish transparency and the comparability of sustainability data of enterprises. This includes the Corporate Sustainability Reporting Directive (CSRD), mandatory sustainability reporting that will in future affect enterprises with 250 and more employees and a turnover > 40 million euro or a balance sheet total > 20 million euro.

The requirements of these new standards are complex and very challenging, in particular for enterprises, which have not been reporting so far. This not only affects enterprises subject to reporting, but also the business partners along the supply chain. It can be assumed that the market for products and services will be more and more aligned to the major sustainability topic set by CSRD, as banks are also subject to this regulation, and credits and investments will be synchronised with these criteria. Therefore, it is recommended that each enterprise at least familiarises itself with the basics of CSRD priorities. At the same time, early knowledge of the relevant topics offers opportunities to adapt one's own business model accordingly, to initiate innovation and position oneself in the market with sustainable, CSRD-compliant offers.

### Description / Realisation:

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 where companies can together prepare for sustainability reporting. This includes understanding the regulatory requirements and professionally positioning themselves with regard to the relevant topics of CSRD.
2. Monthly online 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. Three network meetings will be organised per year to promote networking and community building to provide enterprises interested in getting together to deal with the topics sustainability and reporting.

The programme will start on 10 May 2023 with a central kick-off meeting where the funding modules will be presented and like-minded enterprises can come together.

The CSRD funding programme replaces the common welfare balancing system, which, from 2018 to 2022, enabled Stuttgart enterprises to get access to these methods of sustainability reporting.

### Division / Office / Public Undertaking:

Economic Development Department

### Further reading / Links:

GRDRs 225/2023 [Municipal Council document]



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://www.stuttgart.de/lebenswertes-stuttgart)





## SDG 13 Climate Action

“Take urgent action to combat climate change and its impacts”

Relevant targets of SDG 13 for German municipalities are in particular to strengthen resilience and versatility towards climate change, take climate action and develop knowledge and capacities on how to handle climate change and to promote methods to strengthen planning and management capacities.





### Overview of the relevant targets

The following targets of SDG 13 are relevant to German municipalities and are already covered in the VLR by indicators:



**13.1** Strengthening resilience and adaptability to climate-related disasters



**13.2** Integration of climate protection programmes in politics and planning

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



**13.3** Develop knowledge and capacities to come to terms with the climate change



**13.b** Mechanisms to expand effective planning and management capacities in the climate change sector



Indicator 13-1:  
Forest area



“Strengthening resilience and adaptability to climate-related disasters”  
(Target 13.1)

Large forest areas are relevant for climate protection, since they reduce CO<sub>2</sub>. They can bind CO<sub>2</sub> emissions and thus improve the CO<sub>2</sub> balance. The proportion of forest areas generally only changes over long periods of time. The forest area in Stuttgart is constant at 23.5 per cent of the total area. This means that Stuttgart citizens have some 80 square metres of forest area per capita. The city owns more than half of the forest area (2,700 ha). Stuttgart’s municipal forest has been PEFC- and FSC-certified. For climate protection not only the size of forest area is important, but also the condition of the forest. According to the 2022 state-of-the-forest report, 46 per cent of all woods in Baden-Württemberg are severely damaged. Reliable data on the forest condition in Stuttgart is not available.<sup>98</sup>

**Classification / Definition**

The “Forest area” indicator is defined as the proportion of forested area in the total area of the State Capital Stuttgart. Forest areas are not only important for climate protection, but also to preserve biodiversity. In this context, biodiversity-friendly forest management plays a major role; this includes the dead wood proportion, the structure and development of micro-habitats, the tree species variety or the age of trees. So, the indicator is directly related to target 15.2, which focuses on sustainable forest management.

**Calculation**

Forest area:

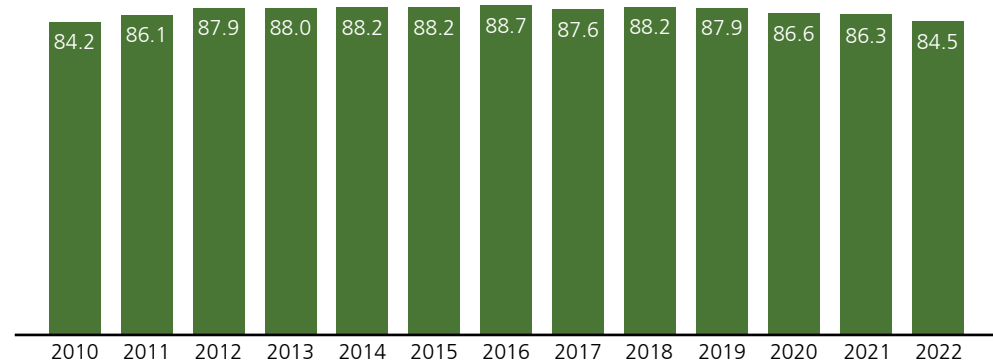
Forest area	/	Total area
		* 100



## Indicator 13-2: Trees in public spaces

“Integration of climate protection programmes in politics and planning”  
(Target 13.1)

**Figure 98:** Trees in public spaces (trees per hectare)



Source: State Capital Stuttgart, Parks, Cemeteries and Forestry Office

In the reporting period, the density of trees in public spaces has stabilised. An average of some 87 trees per hectare can be counted in public spaces in Stuttgart. With some 85 trees in 2022, this figure slightly decreased. The annual fluctuations are caused by felling of trees to be carried out for large construction projects or safety reasons.

Furthermore, it has to be taken into account that some 25 per cent of the tree population consist of young trees, which have a lower climate-improving effect than adult specimens. The proportion of urban trees in the total public space tree population is more than 40 per cent. While the life of an urban tree is only some 40 years, trees in natural locations can reach many times this age. Stuttgart has a tree protection statute to protect trees on private properties.

### Classification / Definition

In addition to large forest areas, free-standing individual trees are also favourable to local air quality and the microclimate. The age and size of the trees are important for the climatic effect. Mature trees with large treetops are more efficient than young trees with less foliage volume. More detailed data on the shape of urban trees is not available.

The data only shows trees in public green spaces and road-side environment. Trees in forest, forest-like populations and cemeteries are not included. The indicator is defined as the number of individual trees relative to the total public area.

### Calculation

Trees in public spaces:

Number of trees on public grounds

/

Total area public space in ha



## Indicator 13-3: “Municipal Climate Adaptation” index



“Strengthening  
resilience and  
adaptability to  
climate-related  
disasters”  
(Target 13.1)

Since 2013, 90 per cent of the criteria of the Municipal Climate Adaptation index has been complied with. The missing 10 per cent refers to the heat action plan in question 8. At present, this is being developed in the context of updating the Climate Change Adaptation Concept Stuttgart (KLIMAKS).

### Classification / Definition

The “Municipal Climate Adaptation” index is an aggregate index of ten dichotomous variables on the basis of a standardised questionnaire <sup>1</sup> containing 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. Does a concept exist that deals with the effects of climate change in the municipality, taking into account the municipal involvement and threat and developing a local strategy with appropriate adaptation measures on the basis of this (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 much more) or will they be implemented?
7. Does an interdisciplinary/cross-departmental “climate adaptation” working group exist in your municipality?
8. Does a municipal heat action plan or a similar instrument for preparation for heat waves exist?
9. Do programmes exist to raise the people’s awareness for climate change and adaptation?
10. Do municipal funding programmes exist for private climate adaptation measures and personal provision for stakeholders in the urban society?

### Calculation

“Municipal Climate Adaptation” index

Number of criteria implemented in the municipality  
(answers with yes)

/

Total number of criteria to be examined (questions: 10)

\* 100

### Climate change and heat

i

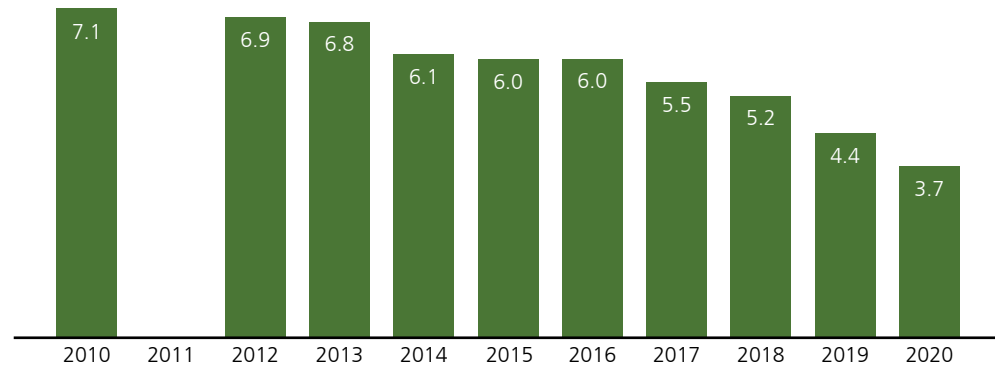
Data from the 2021 citizen survey was used to analyse how increasing temperatures stress Stuttgart residents. The stress caused by recent hot spells in Stuttgart often causes sleeping problems, tiredness, dizziness or cardiovascular problems. Women seem more often affected than men – by five to ten percentage points. In addition, it is surprising that not only the older population, but also a lot of younger respondents report of problems due to severe heat stress. This can possibly be explained by the higher awareness of the younger age-group for climate change or the differences in their living conditions. As a countermeasure, the City of Stuttgart wants to improve the general city climate. This is to be achieved by a 200 million euro campaign, “Global climate in distress – Stuttgart takes action”.<sup>99</sup> This also includes the creation and maintenance of green and blue infrastructures, such as wildflower strips or drinking fountains.



## Indicator 13-4: Greenhouse gas emissions

“Integrate climate change measures into policies and planning”  
(Target 13.2)

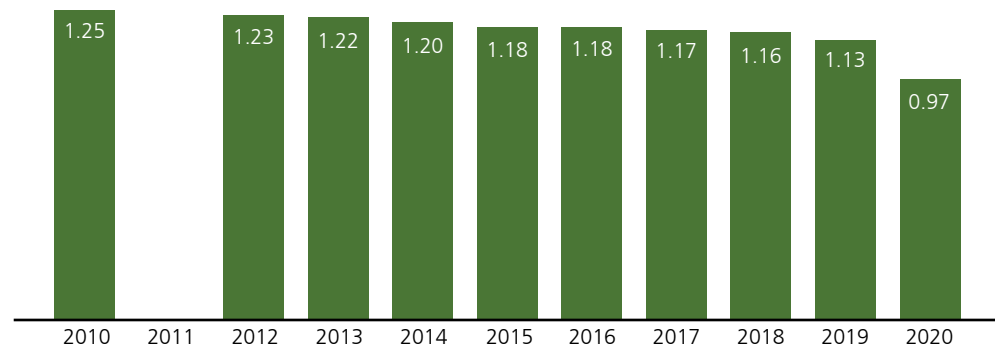
**Figure 99:** Energy-related greenhouse gas emissions from industry, trade, commerce and services (in t CO<sub>2</sub> eq/ssc)



Source: State Capital Stuttgart, Environmental Protection Office

In the period under review, the greenhouse gas emissions of trade, commerce, services and industry per employee subject to social security contributions (ssc) and year have steadily decreased from 7 to 3.7 tonnes CO<sub>2</sub> equivalent per employee subject to social security contributions and year. In the long term, this figure decreased more significantly: in the mid-1990s, it was still at 9.8 tonnes CO<sub>2</sub> equivalent per employee subject to social security contributions.

**Figure 100:** Energy-related greenhouse gas emissions in transport (in t CO<sub>2</sub> eq/resident)

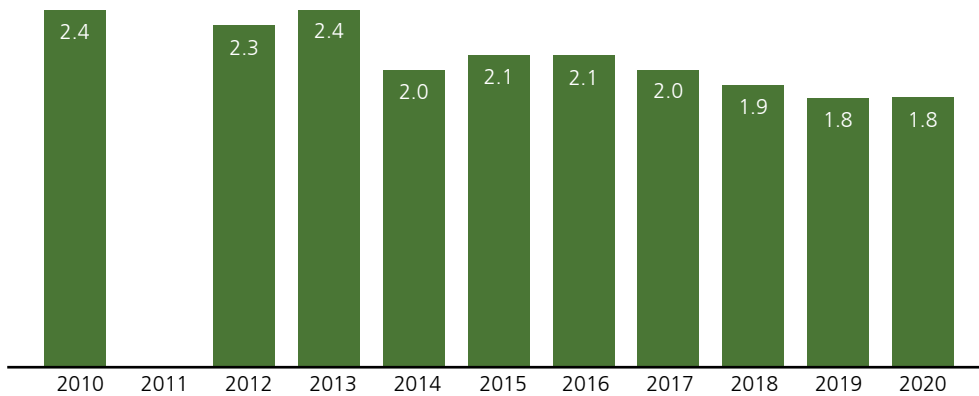


Source: State Capital Stuttgart, Environmental Protection Office

In the period under review, the energy-related greenhouse gas emissions in transport per resident and year have decreased slightly from 1.25 in 2010 to 1.13 tonnes CO<sub>2</sub> equivalent per resident in 2019. In 2020, the figure decreased for the first time to less than 1 tonne CO<sub>2</sub> equivalent per resident. This can be explained by the COVID-19 pandemic. In the 1990s, the figures were still above the value of 1.5 tonnes CO<sub>2</sub> equivalent per resident.



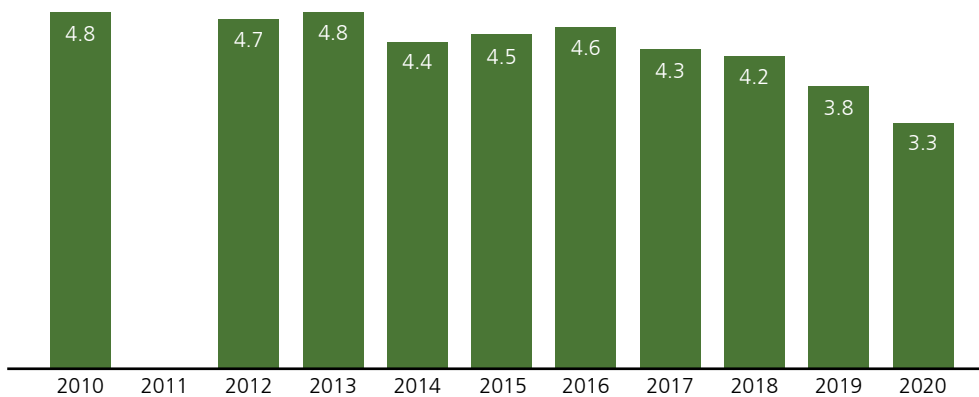
**Figure 101:** Energy-related greenhouse gas emissions from private households (in t CO<sub>2</sub> eq/resident)



Source: State Capital Stuttgart, Environmental Protection Office

In the period under review, the energy-related greenhouse gas emissions from private households per resident and year have ranged around 2.1 tonnes CO<sub>2</sub> equivalent per resident and recently decreased to 1.8 tonnes CO<sub>2</sub> equivalent per resident. Most of all, this development is based on the significant improvement of the CO<sub>2</sub> factor in electricity procurement. Due to the strong increase in renewable energy in the German electricity mix, the specific CO<sub>2</sub> emissions by energy consumption have declined.

**Figure 102:** Energy-related greenhouse gas emissions in the entire city (in million t CO<sub>2</sub> eq / a.)



Source: State Capital Stuttgart, Environmental Protection Office

The annual energy-related greenhouse gas emissions from all sectors of the city as a whole have decreased from 4.8 to 3.3 million tonnes CO<sub>2</sub> equivalent since 2010. In 1990, Stuttgart emitted 6.4 million tonnes CO<sub>2</sub> equivalent. Part of this development is due to the increase in the proportion of renewable energy in the federal electricity mix and thus the change of the CO<sub>2</sub> factor in electricity procurement.

The reasons for the significant reduction in energy-related greenhouse gas emissions are mainly due to the conversion of energy generation towards more renewable energy and to efficiency improvements in the individual sectors. In addition, however, the strong decline from 2019 to 2020 can also be explained by the COVID-19 pandemic.



### Classification / Definition

The reduction of greenhouse gas emissions is one of the central measures for achieving the goals of the Paris Agreement of 2015, according to which the warming of the Earth's atmosphere is to be limited to a maximum of two degrees on a longtime average.

The indicator respectively relates greenhouse gas emissions to users. In the case of greenhouse gas emissions from industry, commerce, trade and services, these are employees subject to social security contributions (ssc), in the case of transport and private households it is residents.

### Calculation

Greenhouse gas emissions – trade, commerce, services and industry:

Emissions of CO<sub>2</sub> equivalents due to trade, commerce, services and industry

/

Number of employees subject to social security contributions in trade, commerce, services and industry

All direct and indirect emissions of greenhouse gas (expressed in CO<sub>2</sub> equivalents) caused by trade, commerce, services and industry, including agriculture, are recorded. At present, the State Capital Stuttgart only has data on energy-related greenhouse gas emissions, to which all calculations refer.

Greenhouse gas emissions – transport:

Emission of CO<sub>2</sub> equivalents due to transport

/

Number of residents

All direct and indirect emissions of greenhouse gas caused by transport in the Stuttgart district are recorded. Balancing is done according to territories, however, transit traffic (airport, motorways and national railway traffic) is not taken into account.

Greenhouse gas emissions – private households:

Emission of CO<sub>2</sub> equivalents due to private households

/

Number of residents

All direct and indirect emissions of greenhouse gas caused by energy consumption of private households are recorded.

Greenhouse gas emissions – entire city:

Emission of CO<sub>2</sub> equivalents of all sectors







## Correlation with other SDGs

Climate change does not only have ecological impacts, but also has direct social and economic consequences.

The ecological consequences of climate change affect biological diversity, the condition of forests, soils and water quality (SDG 15), as well as fresh water resources (SDG 6) and marine ecosystems (SDG 15). The preservation of local soil reserves (SDG 15 "Life on Land"), forested and non-forested, makes an important contribution to climate resilience, since these soil reserves serve for cold air production and fresh air channels. Measures for CO<sub>2</sub> absorption by trees and forests are closely related to the concept of city planning as a whole, as well as public places of the city (SDG 11). While these aspects are beneficial for both sides and have a synergy effect, there can be a target conflict as to alternative land uses (SDG 2, SDG 15), as already mentioned in SDG 11. This applies, for instance, to the creation of infrastructure in all areas of housing and the housing market (cf. SDG 3, SDG 4, SDG 7 and SDG 9), transport organisation (SDG 11) or economic growth with start-ups or business expansions (SDG 8 and SDG 9). "Quality Education" (SDG 4) and sustainable consumption patterns (SDG 12) also influence the goal of sustainable and climate-friendly urban development. The reduction of greenhouse gas emissions in relation to sustainable consumption and sustainable production (SDG 12) is essential for curbing climate change, in particular by directly reducing consumption and production.

In a social dimension, greenhouse gas emissions especially affect marginalised and vulnerable groups (SDG 1 and SDG 10). They often suffer most from the consequences of climate change – such as droughts, floods or extreme heat and other extreme weather events – but do not have the financial resources for adaptation measures. It has been shown that climate change can directly affect human health (SDG 3).

Extreme weather events such as heavy rain and droughts have in turn a direct influence on water resources (SDG 6), agriculture and food production (SDG 2) and thus on the economic growth (SDG 8).

Not only do extreme weather events have a direct impact on the economic growth, but they also have an effect on the planning of sustainable cities and communities (SDG 11) and infrastructure in general and require innovations (SDG 9) to adapt to climate change, including resilient infrastructure.

Greenhouse gas emissions are closely related to the goals of reducing "energy consumption" in all sectors, increasing the "proportion of renewable energy" and increasing "energy generation" (cf. SDG 7). Therefore, SDG 13 is also reflected by the mentioned indicators of SDG 7. Non-energy emissions, for instance in industry and agriculture as well as emissions from imported goods and services must also be taken into account for a comprehensive delineation of greenhouse gas emission. However, at present there is no sufficient data available.

The following indicators are directly relevant to SDG 13 "Climate Action":

- SDG 2:** "Organic farming"
- SDG 4:** "Education programmes with ecological sustainability reference"
- SDG 7:** "Proportion of renewable energy in final energy consumption"
- SDG 7:** "Energy productivity"
- SDG 7:** "Energy consumption"
- SDG 11:** "Land use"
- SDG 11:** "Recreational areas"
- SDG 11:** "Completed residential buildings with renewable heating energy"
- SDG 11:** "Bicycle traffic"
- SDG 11:** "Passenger cars with electric drive"
- SDG 15:** "Soil index"
- SDG 15:** "Biodiversity"



## Practical example 30: Climate Action Programme and Climate Roadmap 2035

### Context:

The Climate Protection Action Programme has been running since 2020. At that time, the Municipal Council decided on a 200 million euro scheme to increase climate protection activities and be climate-neutral not later than 2050. At the beginning of 2022, the Municipal Council commissioned the administration to examine whether and under which conditions climate-neutrality could be achieved by 2035. In the summer of 2022, with the "Net Zero Stuttgart" study, the administration presented a climate schedule, which indicated that climate neutrality by 2035 is ambitious, but feasible! Thereupon, the Municipal Council, with a great majority, adopted the 2035 Climate Goal and commissioned the administration with the implementation.

### Description / Realisation:

Clear political goals were defined in the context of the resolution on climate neutrality: compared to 1990, the city is to reduce CO<sub>2</sub> emissions by 80 per cent by 2030 and be entirely climate-neutral by 2035. In doing so, the climate goal was brought forward by 15 years, a huge challenge for the city society as a whole.

In a parallel process, the Climate Protection Action Programme with a term from 2020 to 2023 and a budget of 200 million euro is implemented. Material measures and success are for example:

- With a total of almost 100 million euro over four years, the city supports the citizens in climate protection. Funds are available for solar energy, heat pumps, the replacement of old heating systems, energy-efficient renovation and installation of charging points.
- Within the administration a climate protection unit has been established to coordinate this sector.
- Many other colleagues are committed to climate protection: many new jobs have been created in the sectors – from commercial trade and sustainable procurement to energy services.
- All new municipal constructions and new buildings of public undertakings (including the Clinic Centre) will be built climate-neutrally with the aim of reaching the plus energy standard (Municipal Council document GRDRs 1493/2019 proposed resolution (2)).

- There are clear guidelines for the use of timber construction and recycling building materials in urban building projects. For instance, new buildings up to two storeys are built in timber or a timber hybrid construction. This is also aimed for buildings with more than two storeys, and is submitted to the Municipal Council for a ruling. In all building projects, at least 30 per cent recycling concrete is to be used.

### Experience / Results:

The administration draws up an annual report on the progress of the Climate Protection Action Programme. At mid-term of the programme at the end of 2021, the following interim balance can be drawn up: around 80 per cent of the new positions were filled, five new funding guidelines were passed, more than 40 million euro have gone directly into climate protection and many new projects initiated. In addition, the climate roadmap and the focus on 2035 gives a whole new and much broader awareness for the subject matter.

At the same time, many measures will have to be accelerated enormously, so that the city can achieve the goal of climate neutrality by 2035. These potentials must be boosted in the next years.

### Division / Office / Public Undertaking:

Climate Protection Staff Unit in the Climate Protection, Mobility and Housing Policy Unit;  
Environmental Protection Office in the Urban Planning, Housing and Environment Division

### Further reading / Links:

<https://www.stuttgart.de/leben/umwelt/klima/klimastrategie/>  
(Last access 27.03.2023)



## Practical example 31: Use of recycling concrete (RC concrete)



### Context:

In the course of the sustainability strategy of Baden-Württemberg, the State Baden-Württemberg carried out a project with the aim of developing criteria for sustainable building in municipal structural engineering: NBBW – Sustainable Building in Baden-Württemberg. With the project, the awareness in the administration, economy and society for sustainability is to be raised and incentives created to efficiently promote sustainability in the building industry. The focus is on improving the quality of buildings on the basis of ecological, economical and socio-cultural aspects. The processes and techniques around construction, which were optimised in the individual criteria of the programme, form an important basis. If the respective funding guideline applies, the criteria system “NBBW – Sustainable Building Baden-Württemberg” developed by the State is obligatory for subsidised new building projects.

### Description / Realisation:

For projects that are processed in accordance with the sustainability criteria of the State BW (NBBW), recycling concrete according to the system specifications is to be used for as many concrete parts as possible. The respective masses of RC concrete are to be documented.

The Climate Protection Action Programme of the State Capital Stuttgart contains the following target as to the subject recycling concrete: the use of recycling material is to be promoted, for instance, at least 30 per cent RC concrete should be used.

### Experience / Results:

In progress

### Division / Office / Public Undertaking:

Building Construction Office in the Engineering Division, as well as Awarding Authority

### Further reading / Links:

<https://www.nbbw.de/> (Last access 27.03.2023)



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://www.stuttgart.de/lebenswertes-stuttgart)





**SDG 14**

**Life below Water**

“Conserve and sustainably use the oceans, seas and marine resources for sustainable development”

Relevant targets of SDG 14 for German municipalities are, in particular, the reduction of all forms of pollution of the seas, in particular, by activities based on land, the sustainable use of marine resources and the conservation and sustainable use of the oceans and their resources.

14  
LIFE  
BELOW WATER

### Overview of the relevant targets

The following targets of SDG 14 are relevant to German municipalities and have not yet been represented in the VLR by indicators:



**14.1** Reduction of marine pollution



**14.7** Increase the economic benefit of sustainable use of marine resources



**14.c** Conservation and sustainable use of the oceans and improve their resources



## Water protection

i

The goal of the initiative of the Ministry of Environment Baden-Württemberg “Blue asset – we make water bodies better”<sup>100</sup> is to improve the general condition of water bodies. This initiative has provided approaches and already realised some projects. Since water is one of the most important assets for human beings, animals and plants, it must be specifically protected and cared for. To achieve the higher-level goal that all water bodies are in good condition, it is important to cooperate on a pan-European level. The “Blue Asset” initiative has based its actions on the European Water Framework Directive. Various areas of activity were developed to implement this goal in Stuttgart. This includes for instance the construction of fish ladders, the revitalisation of canals to create habitats. Rainwater utilisation systems are also included, since rain often flushes dirt and other substances from roofs, roads and the air into the water bodies. At present, in the context of the “Blue Asset” initiative three projects to improve the conditions of water bodies are being implemented in Stuttgart. In Schönberg, a retention basin is being built to store the water in the case of heavy rainfall and clear it in the water treatment plant after the rainfall event, since for capacity reasons this is often not possible during the event. As a result, the phosphorus content of the water body is reduced, which, in turn, leads to better living conditions for aquatic organisms. In addition, rain overflow basins are being built in Feuerbach and Plieningen to protect the natural habitat of the Feuerbach and Neckar.<sup>101</sup>

## Correlation with other SDGs

Although Stuttgart has no direct access to the sea or ocean, we still have an impact on their resources and the pollution of the seas by our consumer behaviour and production practices (SDG 12). Improper waste disposal, residuals from agriculture (SDG 2) or microplastics in clothes and cosmetics can reach the North Sea via the Neckar, it being a tributary of the Rhine. Plastic waste, which is exported abroad and not properly recycled on site additionally contributes to marine pollution. The microplastics generated in this context land back on our plates via the food chain and has a negative impact on human health (SDG 3). The consumption of fish and seafood in general and from unsustainable fishing in particular affects the conservation of marine ecosystems and aquatic biodiversity.

The following indicators are directly relevant to SDG 14 “Life below Water”:

- SDG 6:** “Quality of running water”
- SDG 6:** “Wastewater treatment”
- SDG 12:** “Waste volume”
- SDG 12:** “Sustainable procurement”
- SDG 13:** “Greenhouse gas emissions”
- SDG 15:** “Renaturation of running water”
- 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 targets of SDG 15 for German municipalities are, in particular, the protection of terrestrial ecosystems, the sustainable management of forests, the restoration of degraded land and the conservation of biodiversity.



### Overview of the relevant targets

The following targets of SDG 15 are relevant to German municipalities and are already covered in the VLR by indicators:



**15.1** Conservation and restoration of terrestrial and fresh water ecosystems



**15.3** Combat desertification and restore degraded land



**15.5** Protection of biodiversity and natural habitats

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



**15.2** Determination of deforestation and restoration of damaged forests



**15.7** Prevention of poaching and illegal trade with protected species



**15.8** Prevention of invasive non-resident species on land and in water ecosystems



**15.9** Integration of ecosystems and biodiversity in public planning



**15.a** Increase financial funds to preserve and sustainably use ecosystems and biodiversity



**15.b** Financing and incentives for the sustainable management of forests



Indicator 15-1:  
**Renaturation measures of watercourses**



“Preservation and restoration of terrestrial and fresh water ecosystems”  
 (Target 15.1)

The State Capital Stuttgart is responsible for the maintenance of the waters of the second category in the city. This includes some 70 watercourses with a total length of circa 150 kilometres. In 1980, some 67 per cent were classified as natural or near-natural. In the past three decades, some 21 kilometres of watercourses have been renaturalised. For example, large parts of Feuerbach between Rotweg and Hohlgraben as well as in the area of the former sports field in Zazenhausen have been remediated to a near-natural state. In addition, parts of Tränkebach from Hoffeldstraße to the inlet to Ramsbach and Ramsbach between Degerloch and Schönberg were renaturalised. As a result, in 2022, the proportion of natural or renaturalised waters increased to some 82 per cent.

The Neckar is a category I watercourse. The state is responsible for the maintenance and development of category I waters, therefore, the Neckar is not included in the indicator “Renaturation measures of watercourses”.

**Classification / Definition**

In the past, many watercourses were shored, cased and straightened as flood control measures and for development reasons. The Water Framework Directive (2000/60/EC) obliges EU member states to return unnaturally developed surface waters to a good ecological state. The restoration of near-natural waters is also referred to as renaturation.

The primary fields of renaturation of streams and rivers are the creation of hydro-ecological passage, the initiation of self-dynamic water development and thus the improvement of the water structure. Exemplary measures are the removal of riverbed and bank linings, the planning of vegetation that suits local conditions and the elimination of linear waterways.

**Calculation**

The “Renaturation measures of watercourses” indicator indicates the proportion of watercourse kilometres of category II waters in the Stuttgart urban area that are in a near-natural or renaturalised state.

Renaturation measures of watercourses:

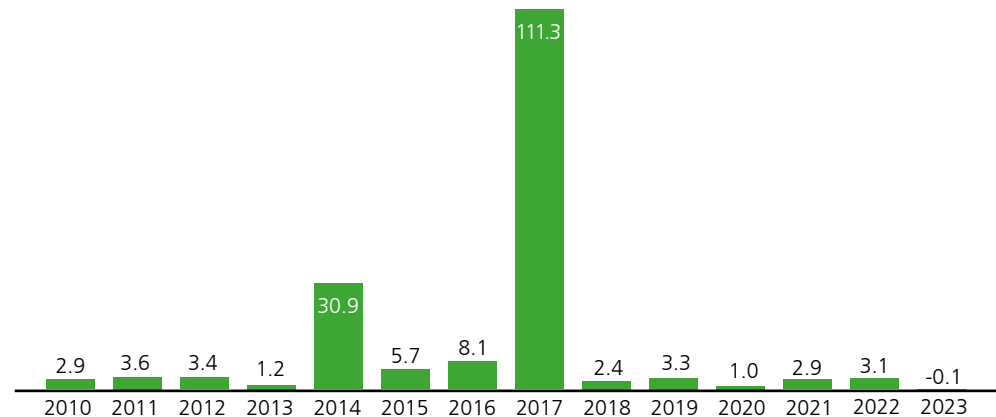
$$\frac{\text{Length of renaturalised watercourses}}{\text{Length of originally technically shored and drained watercourses}} \times 100$$

15  
LIFE  
ON LAND

## Indicator 15-2: Soil index

“Combat  
desertification  
and restore  
degraded land”  
(Target 15.3)

**Figure 103:** Loss of soil index points in Stuttgart (in soil index points)



Source: State Capital Stuttgart, Environmental Protection Office

The development of demands on soil is illustrated by the index points of the annual use of soil. In most years of the period under review since 2010, the loss was marginal due to consistent brownfield development. In the years with much higher consumption rates, plans were made for high-quality soil on the outskirts (cf. indicator “Land use”, SDG 11). For the balance year 2023, there was an accounting profit of 0.1 soil index points.

Further information is necessary to assess the loss of soil index points, for instance the total existing soil resource in soil index points or the annually permitted land use. Specific target agreements are necessary to control land use. In Stuttgart, the survey of the total resources of soil index points and in particular the determination of consumption rates and target values were carried out on the basis of resolutions of the Municipal Council passed in the Stuttgart Soil Protection Concept (BOKS) in 2006.

BOKS goes beyond the mere gauging of index points because clear target agreements were made. Soils of the quality levels “high” and “very high” are to be continuously safeguarded by a targeted monitoring of a “soil quota”, the initial value of which was 1,000 soil index points in 2006. The aim is to cover the demand for soil (ground) as completely as possible in the brownfield area and to achieve a recycling of land before the quota of 1,000 soil index points (BX) is used up.



### Classification / Definition

Overall, the survey of land use shows that the ratio of the residential to transport area is balanced. The quality of soil is of no relevance.

Soil is one of the resources that can hardly be regenerated in human time periods. Therefore, the economic management of local soil resources is a key component of successful concepts for sustainable soil protection. Since classic consumption patterns, such as the construction of detached houses on the outskirts, inevitably drain the resource and land use cannot be balanced effectively, sustainability can only be achieved if a constant preferably good soil condition (i.e. a defined standard of functional compliance = soil quality) can be guaranteed during a defined period under review. This is only possible if the new use of land is reduced consistently to achieve circular land use management. The focus of soil protection efforts in the State Capital Stuttgart is on the preservation of multifunctional soils, which fulfil the soil functions.

The "Soil index" indicator therefore takes into account not only the amount of land used, but also the soil quality. This is based on the planning map "Soil Quality Stuttgart", in which all

available information has been processed into a map covering the entire area. On this map, the soil quality is classified on a scale from 0 (= no soil quality) to 5 (= very high soil quality), so that planners and municipal decision-makers also have an understandable basis. To make appropriate decisions in planning processes it is necessary to map the soil quality of an area under consideration and to measure the land use planned.

The "Soil index" indicator directly refers to the restoration of degraded land, rather than indirectly to ecosystems and their conservation, as explained in target 15.1. For this reason, the indicator has been assigned to target 15.3 as of 2023.

### Calculation

For the calculation of the soil index, the specific quality of land is calculated by multiplying the ground (ha) by the value of the associated soil quality grades (value/ha) and quantified in soil index points (without dimensions). Data respectively refers to the deadline of 30 April of every year.

## Indicator 15-3:

### Conservation areas



"Protection of biodiversity and natural habitats"

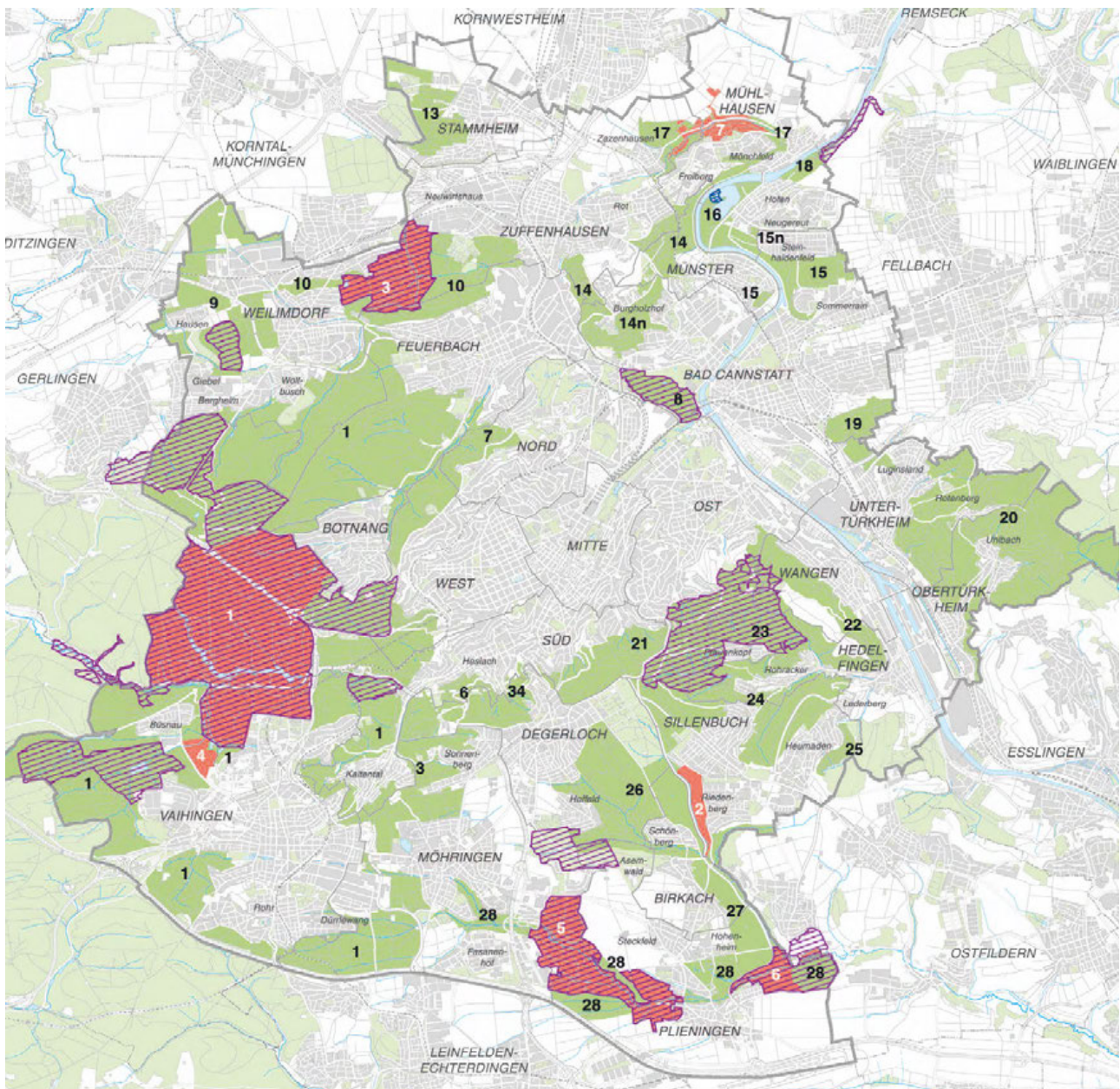
(Target 15.5)

A total of more than 40 per cent of the urban area is declared conservation areas, the highest proportion of which is nature reserves. As a general rule, there are only a few specifications for this protection category (e.g. no intensive agriculture, certain building restrictions). Therefore, the validity as to the quality of land is limited.



Figure 104: Conservation areas in Stuttgart

- |  |   |   |
|--|---|---|
| <p><b>Conservation areas</b></p> <ul style="list-style-type: none"> <li>1 Glenswald in the Stuttgart district area</li> <li>3 Dornhalde – Haldenwald</li> <li>6 Waldfriedhof – Dornhalde</li> <li>7 Feuerbacher Heide</li> <li>8 Rosensteinpark</li> <li>9 Weilimdorf – West</li> <li>10 Reisachmulde – Lemberg</li> <li>13 Stammheim West</li> <li>14 Schnarrenberg – Krailenshalde</li> <li>14n Prag – Wolfersberg</li> <li>15 Hochflur</li> <li>15n Zuckerberg – Muckensturm</li> <li>16 Max-Eyth-See</li> <li>17 Eschbach – Kirchberg</li> </ul> | <ul style="list-style-type: none"> <li>18 Eichenäcker</li> <li>19 Blick</li> <li>20 Wine and orcharding landscape Württemberg and Götzenberg</li> <li>21 Silberwald</li> <li>22 Wangener Höhe</li> <li>23 Frauenkopf – Dürrbach Burghalde – Allmendhülle</li> <li>24 Sillenbuch – Heumaden</li> <li>25 Heumaden Ost</li> <li>26 Ramsbachtal – Auener Bachtal</li> <li>27 Birkacher Osthang</li> <li>28 Körschtal</li> <li>34 Schimmelhüttenweg</li> </ul> | <p><b>Nature protection land</b></p> <ul style="list-style-type: none"> <li>1 Deer and wild boar park</li> <li>2 Eichenhain</li> <li>3 Greutterwald in the Stuttgart district area</li> <li>4 Bünsauer Wiesental</li> <li>5 Weidach and Zettach forest</li> <li>6 Häslach forest in the Stuttgart district area</li> <li>7 Lower Feuerbach valley with hillside forest and surrounding</li> </ul> <p><b>Natura 2000 areas:</b></p> <ul style="list-style-type: none"> <li> Fauna, flora and habitat areas: 2,346 ha</li> <li> Bird sanctuary: 3 ha</li> </ul> |
|--|---|---|



Map basis (2013): Surveyor and Land Records Office; Environmental Protection Office, State Institute for the Environment, Measurements and Nature Conservation. As of: July 2014



**Classification / Definition**

The indicator describes the area segments of three different conservation areas:

- (a) Pursuant to a resolution of 1992, as a European reserve system Natura 2000 areas (bird sanctuaries and fauna-flora-habitat areas) are for developing and conserving a network of natural and near-natural habitats.
- (b) Conservation areas are for conserving large natural monuments and in particular protected biotopes. Parts of the landscape are to be conserved, protected and maintained as undisturbed as possible. Any substantial 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:

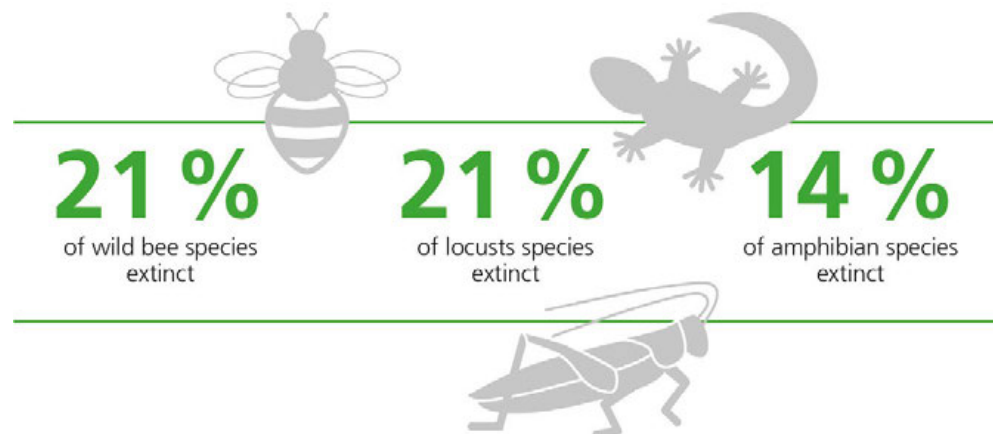
$$\frac{\text{Total area of protected areas in Stuttgart}}{\text{Total area Stuttgart}}$$





## Indicator 15-4: Biodiversity

“Protection of  
biodiversity and  
natural habitats”  
(Target 15.5)



The loss of biodiversity is exemplified by the loss of species of wild bees, locusts and amphibians.

In Stuttgart, some 270 wild bee species are known, at least 58 of which were already extinct in 2000. This corresponds to a loss of 21 per cent of the species. About a third of the wild bee species is threatened with extinction, endangered or on the watch list according to the Red List of Baden-Württemberg.<sup>102</sup>

Of some 43 locusts species, at least 9 were already extinct in 2005. Here, a species loss of 21 per cent 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.<sup>103</sup>

In addition, two (14 %) of Stuttgart's 14 amphibian species have become extinct. 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.<sup>104</sup>

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 citywide mapping from the beginning of the millennium, the basis for the aforementioned data, is still of significance today, since the population development of species usually takes place over a longer period of time. Compared to then, it is very likely that the threat to species diversity has worsened. Further species have become extinct, such as the lesser mottled grasshopper *Stenobothrus stigmaticus* at Eichenhain and local reductions in many other species have been recorded. The State Capital Stuttgart wants to counteract this with its species protection concept.

The species protection concept of the State Capital Stuttgart from 2018 provides for a complete as possible inventory of all animal and plant species in Stuttgart, as well as the evaluation of ecologically valuable species for the target and individual species protection concept. The target species concept lists typical species – target species with a protection species function – for the biotope types occurring in Stuttgart to promote not only the habitats, but also all location-typical flora and fauna occurring there via protection 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.





In 2018, the first steps towards implementation were taken with pilot areas. Some of them already show first recovery tendencies. 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. With a new mapping of species populations at specific locations and also in relation to the entire city, the success of the measures can be evaluated.

It is planned to examine the indicator groups on a regular basis to monitor the development of the species population. Since 2021, the mapping of Stuttgart's wild bees has been updated.

### **Classification / Definition**

Biodiversity aims at the diversity of species in their entire extent and is therefore difficult to manifest in a single indicator. However, the distribution of individual species is also closely related to the distribution of other species. The threat to individual species is an indication of a threat to other species, if they depend on one another via the food chain or respond to the same environmental factors.

The "Biodiversity" indicator reflects the species extinction, taking wild bees, locusts and amphibians as examples. The aim is to prevent species extinction and a deterioration of the status quo in Stuttgart's biodiversity by targeted habitat enhancement measures. In particular wild bees, locusts and amphibians are good bio-indicators for determining the quality of the habitat.

### **Calculation**

The indicator is based on the categorisation of three exemplary animal species according to their endangerment status:

#### **Biodiversity (Biodiversity A):**

Wild bee species according to endangerment status according to the Red List Baden-Württemberg

#### **Biodiversity (Biodiversity B):**

Locust species according to endangerment status according to the Red List Baden-Württemberg

#### **Biodiversity (Biodiversity C):**

Amphibian species according to endangerment status according to the Red List Baden-Württemberg

### **Invasive species**



In Stuttgart, the fauna and flora species that are not originally native to the area are on the increase. This becomes a problem when these species are more invasive than the native species and proliferate at their expense (invasive species). The total list of all of them would be many hundred species. Important harmful species are the Canada golden-rod and the Japanese knotweed when it comes to plants, and when it comes to animals, the racoon, dreissenidae mussels or the Egyptian goose. Eradication is seldom effective so that control measures most often are restricted to protection areas or other high-quality areas. Pathogens and diseases caused by them belong to invasive species such as ash dieback or many skin diseases of amphibians which were often brought in, and there are only very few opportunities to combat them (reduction of spreading) (Environmental Protection Office).

"Prevention of invasive non-resident species on land and water ecosystems"

(Target 15.8)



## Correlation with other SDGs

Organic farming (SDG 2 “Zero Hunger”) can also contribute to biodiversity due to its reduced use of biocides. However, in addition to avoiding material pollution, the development and preservation of habitats are also of particular importance for agriculture. Multifunctional land is generally used in agriculture. Securing soil resources also serves SDG 2, in particular for sustainable food production. Soil protection, as presented in the Stuttgart Soil Index, is related to combatting the climate change and its impacts (SDG 13 “Climate Action”), as intact soils can store large amounts of CO<sub>2</sub>. Soils counter summer heat stress by storing and evaporating water. Soil protection is in particular to safeguard soils of high and very high quality (“multifunctional soils”).

As an important reactor in environmental cycles, securing soil resources also supports the implementation of SDG 6 “Clean Water and Sanitation”, in particular sustainable water management, since soils filter and clean water on its way underground and thus support the groundwater recharge. At the same time, the water storage capacity of soils absorbs the discharge peaks at rainfalls.

In addition, there are synergies between healthier nutrition and the effects on biodiversity and ecosystems. It is a fact that nutrition with less animal products and more vegetable products not only has positive effects on health (SDG 3) and preventing malnutrition and overweight (SDG 2), but also on biodiversity and ecosystems, if only through less land usage which is significantly higher with animal products. In Germany, almost two thirds of the agricultural land is used for the production of meat, milk and eggs.<sup>105</sup>

Air quality not only affects human health (SDG 3), but air pollutants lead to the loss of biodiversity and are also harmful to natural ecosystems. Thus, improving air quality is a contribution to environment protection.<sup>106</sup> The same applies for high noise emissions which not only affects our health but also impacts native wildlife.<sup>107</sup>

Reference to SDG 7 “Affordable and Clean Energy” is made in particular to renewable resources as an energy source and land use competition with natural habitats. Therefore, bio-energy from waste is one of the sustainable opportunities to generate and use energy.

A higher proportion of renewable energy moderates climate change (SDG 13) and reduces pollution, which, in turn, has a positive effect on biodiversity, since climate change is one of the main drivers of the worldwide loss of biodiversity. So, combating climate change shows many synergies with combatting the loss of biodiversity. Conflicting targets can arise in relation with the development and expansion of infrastructure for clean energy (SDG 7).

Biodiversity is the basis for all ecosystem services and therefore decisive for safe food production (SDG 2). The majority of food products depends on the services provided by nature to mankind, such as pollination or the production of fertile soils by soil-dwelling organisms. Many enterprises, not only on the primary sector, are also dependent on biodiversity, ecosystem services and natural resources. Therefore, in the long term a decline in biodiversity is also harmful to enterprises and the gross domestic product (GDP). Natural capital has not been included in the calculation of the economic growth so far (SDG 8).

There is a positive relation to urban design (SDG 11), for instance by the creation of near-natural green areas, green façades and roofs, flower strips and wildflower meadows or natural water areas. The conservation of natural habitats and biodiversity in cities significantly depends on the design of the cities and often competes with built-up and sealed areas, as well as with the development of affordable housing. Biodiversity in the city is closely related to renaturalised and near-natural areas, but also to recreational facilities, which, in turn, have a positive effect on health and well-being (SDG 3).



Sustainable procurement (SDG 12) of products has global effects on biodiversity through exploitation of resources and the related waste generation. Therefore, the reduction of the ecological footprint of consumption and production patterns, for instance by environment-friendly procurement, has a positive effect on biodiversity. "Quality Education" (SDG 4) also influences the goal of protecting ecosystems and 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 emission"
- SDG 4:** "Educational programmes with ecological sustainability reference"
- SDG 6:** "Quality of running water"
- SDG 7:** "Proportion of renewable energy in the final energy consumption"
- SDG 11:** "Land use"
- SDG 11:** "Recreational areas"
- SDG 13:** "Trees in public spaces"
- SDG 13:** "Forest area"
- SDG 13:** "Greenhouse gas emissions"

15  
LIFE  
ON LAND

## Practical example 32: **Let it bloom! Together for insect diversity**

### **Context:**

According to the Red List, 31 of the 550 wild bee species in Germany are threatened by extinction, 197 endangered and 42 species are on the watch list. The reasons for the decline and endangerment of insects are the destruction of their nests and the destruction or decline of their food supply. This is counteracted by the initiative "Let it bloom! Together for insect diversity" by spreading seeds native to our area. In doing so, numerous small and larger "islands" are to be established in the urban area.

### **Description / Realisation:**

On the initiative of the Environmental Protection Office, the project has been running since 1999. In addition to roadshows, lectures and planting programmes in various urban districts, seed sachets containing a mix of native flowers are distributed.

The Urban Planning and Housing Office also participates – with the Social City neighbourhood projects in Neugereut, Münster and Dürrolewang, which promote the nature-oriented design of gardens, balconies and patios in their own information events.

A seed mix of 20 local flowers from area 11 (hilly region in south-west Germany) is used in the project, which is distributed in 2 g seed sachets together with an info leaflet. Interested citizens can obtain these at the district town halls and citizens' offices, district libraries and the Environmental Protection Office on request.

For clubs, schools or private initiatives, a mix of perennials is available, which can be spread at larger areas.

With the small wild flower islands in the Stuttgart home gardens, in kindergarten and numerous school and urban gardens, wild bees, butterflies and other insects are provided with an important supply of nectar and pollen. If set up as a species-rich flowered area, even a balcony box can make a small-scale contribution to help the insects.

### **Experience / Results:**

The programme attracts many citizens. Every year, approximately 7,000 leaflets with seed sachets were distributed. Numerous photos with the results of blooming balcony boxes or flower meadows have been received.

### **Division / Office / Public Undertaking:**

Environmental Protection Office in the Urban Planning, Housing and Environment Division

### **Further reading / Links:**

[www.stuttgart.de/Insektenvielfalt](http://www.stuttgart.de/Insektenvielfalt)  
(Last access 26.05.2023)



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://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 und inclusive institutions at all levels”

Relevant targets of SDG 16 for German municipalities are in particular the reduction of violence, the protection of children against abuse, exploitation, trafficking and violence, combatting organised crime, the reduction of corruption, the establishment of efficient, accountable and transparent institutions and the involvement of citizens.



### Overview of the relevant targets

The following targets of SDG 16 are relevant to German municipalities and are already covered in the VLR by indicators:



**16.4** Combatting organised crime



**16.5** Significant reduction of corruption and bribery



**16.6** Development of efficient, accountable and transparent institutions



**16.7** Ensuring demand-oriented, inclusive, participatory and representative decision-making



**16.10** Ensuring public access to information

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



**16.1** Reduce violence everywhere



**16.2** Protect children against abuse, exploitation, trafficking and violence

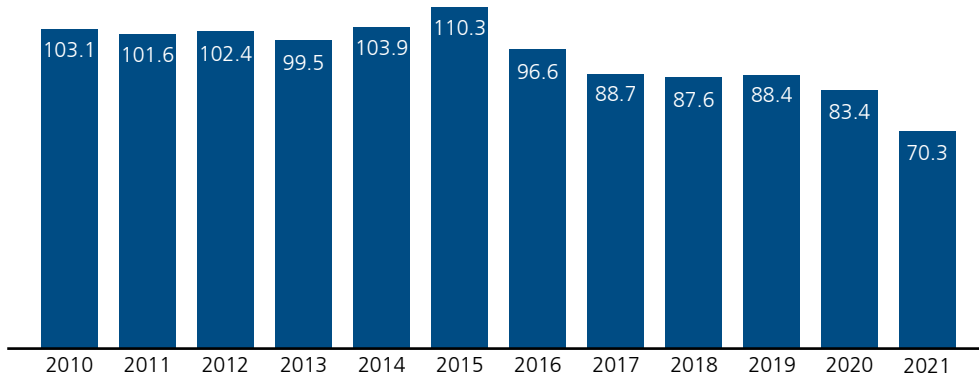


**16.b** Promote and implement non-discriminatory regulations



## Indicator 16-1: Crimes

**Figure 105:** Crimes (cases per 1,000 residents)



Source: State Office of Criminal Investigation Baden-Württemberg; State Capital Stuttgart, Statistics Office

“Combating organised crime”  
(Target 16.4)

Until 2013, the crime rate per resident slightly decreased. In 2014 and 2015, the number of crimes increased again and with 110 criminal offences per 1,000 residents in 2015 it reached its peak in the period under review. This increase is mainly due to more thefts and above all, more crimes against aliens and asylum legislation. It is particularly this area that the number of crimes has been decreasing significantly since 2016. 2021 was the year with the lowest value in the period under review. This can probably be explained by the regulations with regard to the COVID-19 pandemic. The 2021 citizen survey in Stuttgart reveals that some 23 per cent of the respondents regard the security and order sector, for example crime and burglaries, as a very large or rather large problem.<sup>28</sup>

### Classification / Definition

While the term “organised crime” is a specific form of crime, the indicator “Crimes” reflects a broad spectrum of crime, with very different degrees of organisation. The Police Crime Statistics (PKS) only registers crimes that come to the attention of the law enforcement authorities. These are a broad spectrum of infringements on the law, such as theft, fraud, but also violent crimes or infringements on aliens and asylum legislation.

The indicator reflects both the number of crimes reported to the police in relation to the population and the general trend in the city. In addition, the PKS enables more differentiated observations, for instance according to individual types of torts.

There is also a considerable number of unreported crimes. Therefore, the crime statistics only covers a part of the criminal offences that actually occur.

It is sensible to relate the number of cases to the population to take into account the number of potential offenders and victims. However, the calculation of the indicator does not take into account that potential offenders and victims can also be non-Stuttgart residents.

The figures provided differ from those of other publications since the number of residents according to the civil register is used as reference.

### Calculation

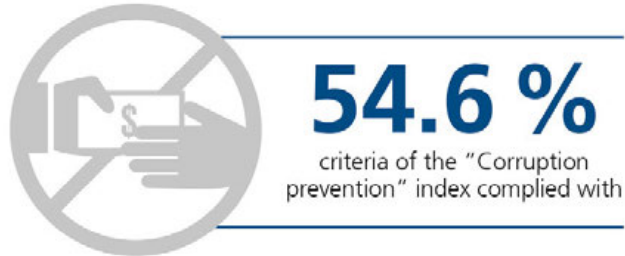
Crimes:

$$\frac{\text{Number of crimes reported to the police}}{\text{Number of residents}} \times 1,000$$



## Indicator 16-2: Corruption prevention

“Significant  
reduction of  
corruption and  
bribery”  
(Target 16.5)



Integrity and incorruptibility in the city administration have a very high priority at the State Capital Stuttgart. In addition to the administrative regulations, the anti-corruption directive and the regulation as to the prohibition of accepting personal benefits include the essential official responsibilities for employees to avoid corruption.

In Stuttgart, the tasks of corruption prevention and prosecution are performed by the Central Anti-corruption Unit (ZAKS). ZAKS is integrated in the Office for Revision of the State Capital Stuttgart. ZAKS is the contact point for all employees, citizens and all business partners of the State Capital Stuttgart.

Information on corruption can be reported to both ZAKS and the fiduciary counsel of the State Capital Stuttgart. In the near future, the State Capital Stuttgart plans to set up an office for reporting illegal behaviour in line with the EU Whistleblower directive and the Whistleblower Protection Act (HinSchG).

The German Institute of Urban Affairs developed a “Corruption Prevention” index to measure corruption prevention of municipalities. It is based on a standardised questionnaire of Transparency International Deutschland e. V and quantifies the proportion of implemented corruption prevention measures as an index of eleven dichotomous variables. For Stuttgart, the index was calculated for the first time for 2022 and evaluated at 54.6 per cent.





### Classification / Definition

Corruption has numerous negative effects, not only at an economic, but also at a political and social level. Corruption impairs economic development, leads to a deterioration in the health and education system, threatens social capital and therefore jeopardises the trust of the people in politics and administration. Effectively combatting corruption means acting before corrupt action takes place. What's more, the question is what can and must be done to prevent corruption and avoid the potential loss of trust of the citizens in the integrity of the public administration.

The "Corruption Prevention" index is an aggregate index of eleven dichotomous variables based on a standardised questionnaire with the following questions:

1. Is the prime responsibility for corruption prevention provisions clearly defined and publicly accessible?
2. Is a municipal transparency statute in place?
3. Does the existing State Transparency Law – as far as relevant – also apply for the municipality?
4. Is there an obligatory, publicly accessible register of interest for all senior civil servants and public officials?
5. Is there an obligatory, publicly accessible code of conduct for all senior civil servants and public officials?
6. Are there publicly known reporting channels, which enable civil servants, citizens and third parties to report unlawful conduct (not only corruption) – also without disclosure of their identity?
7. Does a publicly accessible policy (management directive) for municipal enterprises exist?
8. Are the management and employees of accounting control obliged to neutrality and objectivity and not bound by directives?
9. Are the audit reports of the municipal annual financial statements, individual organisational units and procurement and award processes published?
10. Are non-civil servants, who are entrusted with tendering, awarding and accounting, regularly and formally obliged to conscientiously fulfil their duty as regards corruption offences?
11. Does the municipality have a risk analysis (not older than five years), which identifies areas jeopardised by corruption and prescribes appropriate prevention measures?<sup>108</sup>

### Calculation

"Corruption Prevention" index:

Number of criteria implemented in the municipality  
(answers with yes)

/

Total number of criteria to be examined (11)

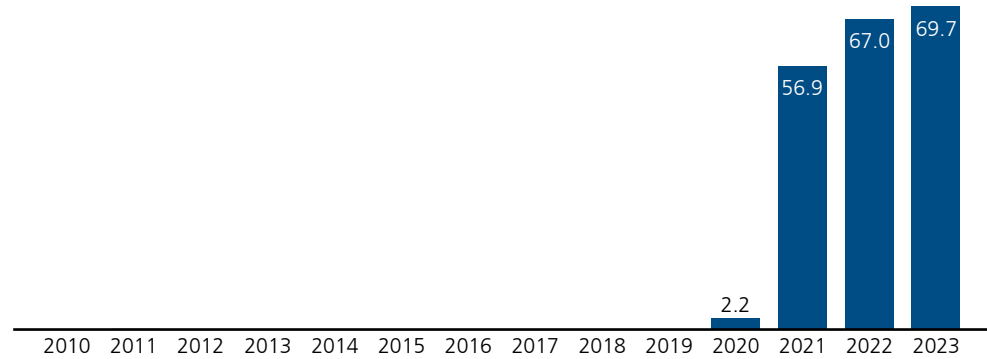
\* 100



## Indicator 16-3: Mobile working

“Development  
of efficient,  
accountable and  
transparent  
institutions”  
(Target 16.6)

**Figure 106:** VPN accounts for municipal employees (in per cent)



Source: State Capital Stuttgart, Administrative Services and Human Resources Office

Mobile working is becoming more and more important. For many years, the City of Stuttgart has offered the possibility of working from home. Further flexible working arrangements through mobile working was or is part of the digitalisation strategy Digital MoveS. The COVID-19 pandemic accelerated the planned expansion of flexible working arrangements. Some 11,000 of approx. 15,000 employees of the City of Stuttgart have an e-mail account. At the beginning of 2020, some 250 telework stations were active at the State Capital. By the end of 2020, the option of working from home with mobile devices was extended to some 4,750 employees. In July 2021, some 6,300 employees were already able to work mobile.

The mobile working rate (including telework) increased in the years under review from some two per cent to around 70 per cent. The basic rules of mobile working and telework are laid down in applicable work agreements. These are evaluated and developed on a regular basis.

### Classification / Definition

According to the Federal Office for Information Security, a VPN is a virtual network: in contrast to conventional networks, such as a home network, the different terminals here are not directly physically connected to each other or a central router – for instance via a network cable or a WLAN connection.

VPN normally uses the connection paths on the public Internet. In a private environment most often a connection is established from a terminal – for instance a notebook – to a VPN server. A VPN connection is the prerequisite for technically secured and mobile access to the system of the State Capital Stuttgart and for mobile working.

The number of employees with an e-mail account is approximately determined to calculate the “Mobile working” indicator. This is done on the basis of data on the accounts of the mail

databases and the relation of persons to functional accounts, on the assumption that the relation is always the same. The deadline for data reading is the 31 March.

### Calculation

VPN access for municipal employees:

Mobile terminals with VPN at the State Capital Stuttgart

/

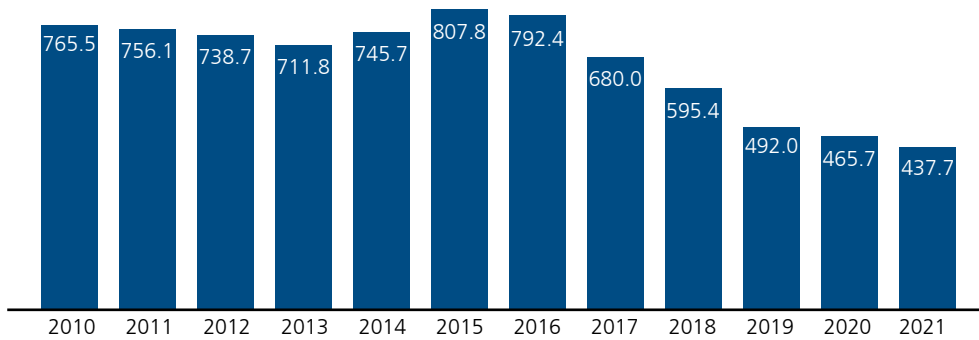
Number of employees with e-mail address

\* 100



## Indicator 16-4: Total municipal debt

**Figure 107:** Total municipal debt (in euro / resident)



Source: State Capital Stuttgart, Annual financial statements

“Development of efficient, accountable and transparent institutions”  
(Target 16.6)

The total municipal debt per resident is defined as the city’s debt including public undertakings towards the credit market. From 2010 to 2016, it was between some 712 and 808 euro per resident. The increased figures for 2015 and 2016 are due to loans for financing the construction of refugee accommodation. By 2021, the total municipal debt had finally fallen to a low of some 438 euro per resident.

Not only the total municipal debt, but also the debt of the municipal core budget as a whole has decreased significantly. Since 2018, the debts in the city’s core budget have been completely repaid. So, the city is debt-free as to the core budget, with debts only remaining in public undertakings. This opens up new financial margins for action, such as the Climate Action Programme. Despite special expenditures in the context of combatting and overcoming the COVID-19 pandemic, the debt level of the public undertakings was further reduced.

### Classification / Definition

Sustainable budget management is important for the municipality’s long-term capacity to act. Only with a stable budget situation can the municipality react to problems and undesirable developments.

Debt indicates the sustainability of budget management over a longer period. In this context, the total debt of the municipality, including that of public undertakings, is relevant.

The indicator reflects the debt level in the overall municipal budget, including the debt of public undertakings, relative to the population. The debts of independent municipal associate companies are not included in the analysis.

### Calculation

Total municipal debt:

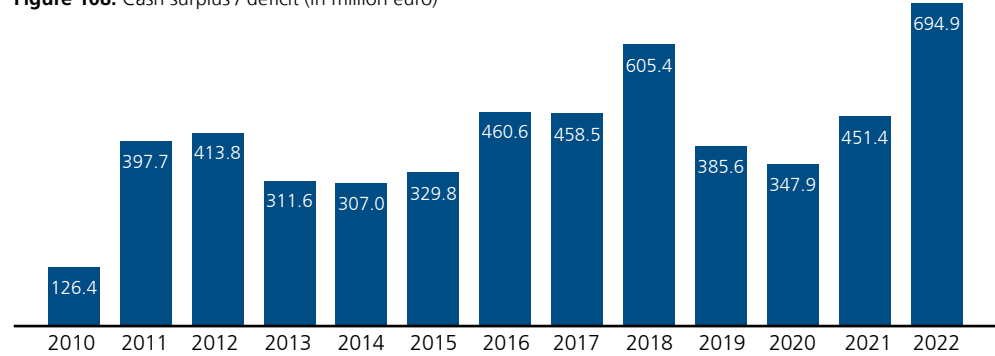
$$\frac{\text{Debt of the municipality in all partial budgets}}{\text{Number of residents}}$$



## Indicator 16-5: Cash surplus / deficit for the long-term fulfilment of tasks

“Development of efficient, accountable and transparent institutions”  
(Target 16.6)

Figure 108: Cash surplus / deficit (in million euro)



Source: State Capital Stuttgart, City Treasury

In the period under review, the cash surplus of the City of Stuttgart is – with exceptions of more than 600 million euro in 2018 – in the positive range and fluctuates between 300 and some 500 million euro. In 2022, with almost 700 million euro the highest figure was reached. As at the same time no ordinary repayments were budgeted, liquidity from cash surplus was available in the full amount for other financing purposes.

### Classification / Definition

Budget management must be planned and carried out in a way that a long-term fulfilment of municipal tasks is ensured. Municipalities are legally obliged to ensure continuous fulfilment of tasks. Appropriate planning must ensure that sufficient financial resources are available, for example to punctually pay wages, subsidies, grants or invoices.

The indicator provides information on the extent to which a municipality is able to make regular payments for current administrative activities from its own resources and without borrowing. A cash deficit, i.e. a negative sign, requires structural measures in the profit and loss budget. The cash surplus is an important indicator in assessing the financial situation of a municipality. It must at least be high enough to finance ordinary repayments.

### Calculation

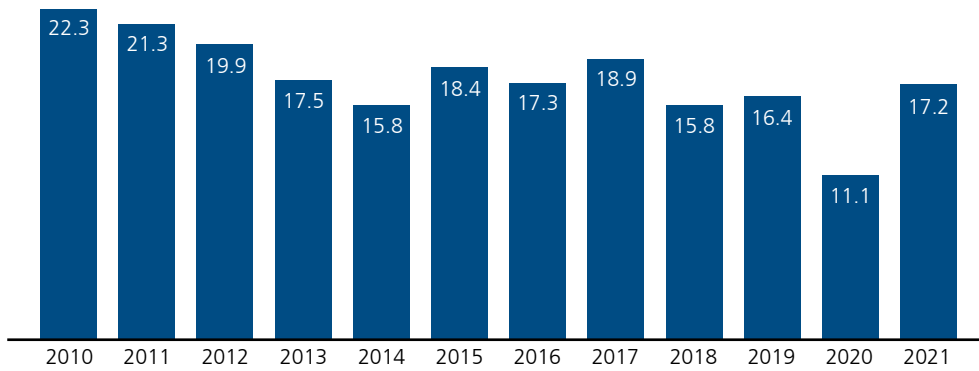
Cash surplus / deficit:

Balance of incoming and outgoing payments from current administrative activities



## Indicator 16-6: Trade tax rate

Figure 109: Trade tax rate (in per cent)



Source: State Capital Stuttgart, City Treasury

“Development of efficient, accountable and transparent institutions”  
(Target 16.6)

At the beginning of the period under review, the percentage of trade tax in ordinary income in the Stuttgart budget was slightly more than 22 per cent and has since tended to decrease despite the positive economic situation. In 2020, against the background of the COVID-19 pandemic, only around eleven per cent of the ordinary income was generated from trade tax, which, in turn, increased again to some 17 per cent in 2021.

### Classification / Definition

Trade tax is generally levied on commercially operative individual enterprises, partnerships and corporations. The object of the tax is the business enterprise and its objective earning power, i.e. the profit. Trade tax is one of the most important taxes of a municipality in Germany. It is one of the few relevant sources of income a municipality can directly influence. The amount of trade tax can be controlled by the Municipal Council by means of the assessment rate. The statutory minimum is 200 per cent. In Stuttgart, the current assessment rate is 420.

The income from trade tax is subject to strong fluctuations. The main factors in this context are the development of the economy and the structure of the industry. The trade tax levy, in turn, is intended to balance out regional differences. The indicator reveals the extent to which the fulfilment of the municipal services is dependent on a positive development of the economy or industry structure. The lower the trade tax

rate, the more dependent is the municipal budget on general federal and state tax revenues and allocations from the state. Municipalities depend on trade tax being as stable as possible to finance their portfolio of tasks reliably and sustainably.

Therefore, the trade tax indicator will be assigned to SDG 16 (previously SDG 8) as of the reporting year 2023, since trade tax as the main income source is indispensable for the development and preservation of an efficient municipality.

### Calculation

Trade tax rate:

$$\frac{\text{Trade tax revenue minus tax levy}}{\text{Ordinary income}} \times 100$$



## Indicator 16-7: Digital municipality

“Ensuring demand-oriented, inclusive, participatory and representative decision-making”

(Target 16.7)



To measure the level of digitalisation of municipalities, the German Institute of Urban Affairs has developed the “Digital Municipality” index. It is based on a standardised questionnaire and measures the share of digitalisation measures implemented as an aggregate index of 16 dichotomous variables.<sup>109</sup> In 2021, the index for Stuttgart was calculated for the first time and was unchanged at 75 per cent in 2022.

In 2019, the City of Stuttgart adopted its strategy for a digital city administration with “Digital MoveS – Stuttgart.Gestaltet.Zukunft” [Stuttgart.Shapes.Future]. Digital MoveS is intended to provide people with customer-oriented, efficient and effective administration processes based on modern and secure IT infrastructure in a fully digitalised form. For this purpose, the 2020/21 budget allowed to 10 million euro for the information and communication technology (ICT) project and created 98 jobs.

The COVID-19 pandemic as of March 2020 made the urgency of digitalisation very clear. It also caused a shift of priorities within the strategy. The need for digital solutions in the form of online services for the citizens escalated, as did the need for new digital forms of communication and working within the administration. Topics such as the rapid expansion of the administration’s online services, the introduction of digital communication forms (e.g. platforms for telephone and video conferences) and mobile working had top priority together with IT security and the development of the IT infrastructure. Other measures had to be put on hold.

### Strategy for a digital city administration



In the past two years, a large number of measures have been implemented in the four programmes of Digital MoveS. In programme 1 “Digital Citizen Services”, digital and seamless, i.e. only electronic service programmes for citizens and enterprises, are developed, innovation potentials identified on an ongoing basis and the performance of the OZG processes (Online Access Act) ensured. By the end of the first half of 2021, some 93 online services were available. Programme 2 “Digital Administration” is about the optimisation and increase in efficiency of the internal process portfolio, the development and description of what is required of internal processes and the establishment of administration-wide, seamless ICT services (e.g. the

introduction of the citywide e-file (pilot projects), e-recruiting, business process management). Programme 3 “Modern Working Environment” is about projects to ensure good framework 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. High-performance technology and tools are to be made available, as well as secure and high-performance IT operations ensured (e.g. information security management system, digital IT service office, document management system, broadband access).



Digitalisation will continue to be a challenge for the City of Stuttgart in the coming years. With digital transformation, Stuttgart is currently at a critical point where it is essential to get on the right track for the future. With its some 400 employees, the new Digitalisation, Organisation and IT Office, abbreviated DO.IT, is responsible for the digitalisation of some prioritised processes. In addition, the Office advises other offices and public undertakings of the City of Stuttgart and provides concepts and technology. With the formation of the new in-house consulting company, "Digital MoveS", processes previously carried out by external consulting companies are to be organised more efficiently.

### Classification / Definition

Digitalisation is an indicator for the sustainability of the State Capital Stuttgart. There is a dynamic progress in the most diverse working areas, which increasingly shapes the administration processes. Therefore, to maintain efficiency, it is necessary to intensify city administration activities in this field.

The indicator provides information on the degree of digitalisation in municipal processes. In this context, 16 questions are raised:

1. Does the municipality have a digital agenda / digital strategy?
2. Is the digital agenda / digital strategy fundamentally directed at sustainable urban development and does it include individual strategic fields of action for this purpose? (e. g. higher efficiency of the administration, more transparency and participation, achieving specific climate goals, optimised mobility and traffic flows, regional innovation and business promotion)
3. Does the municipality have a permanent working group / staff unit / competence centre as a steering committee to deal with the topics digitalisation and a smart city?
4. Are the effects and the achievement of the goals of the digital agenda / digital strategy monitored on a long-term basis?
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 dealing with large datasets? (Data protection and security)
7. Does the municipality publish its data as open data?
8. Does the digital agenda / digital strategy follow an inclusive and activating approach that ensures participation of all citizens and does not exclude individual groups? (E.g. continuous provision of all municipal services in analogue form)
9. Are there target-specific educational and support programmes for the use of information and communication technologies or media competence?
10. Does the municipality support the provision and access to devices and software?
11. Are digital platforms used in the municipality to provide easier access to local information that is important for democratic decisions?
12. Do industry and science cooperate in the field of digitalisation to support local innovation and development?
13. Does the digital agenda take into account improving the location and securing local knowledge and added value?
14. Does the municipality use digital technologies to support energy transition locally? (E.g. smart grids, smart metering, smart lighting)
15. Does the digital agenda / digital strategy include local sharing approaches and sustainable business models that promote a more resource-efficient economy or circular economy?
16. Does the digital agenda / digital strategy take into account possible spatial effects, such as land use and conversion potential or traffic volumes?

### Calculation

"Digital municipality" index:

Number of criteria met in the municipality  
(answers with yes)

/

Total number of criteria to be examined (16)

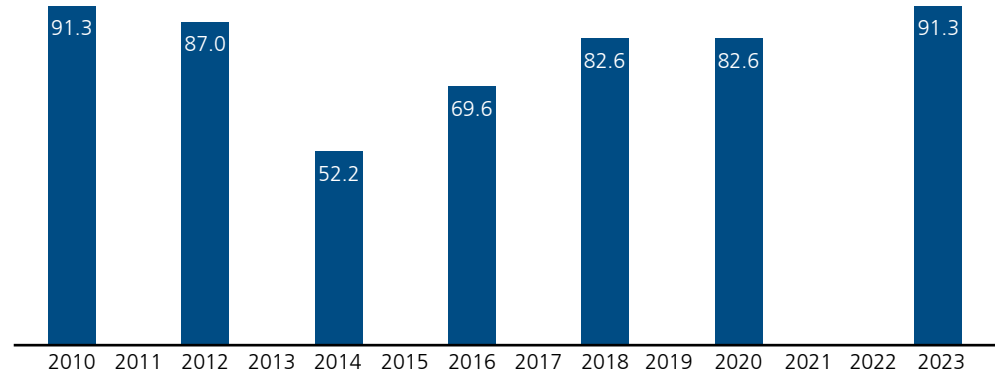
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## Indicator 16-8: Participation of adolescents

“Ensuring demand-oriented, inclusive, participatory and representative decision-making”  
(Target 16.7)

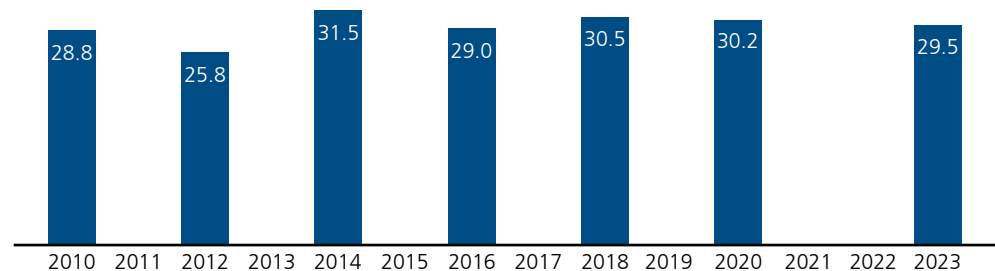
**Figure 110:** Number of districts with a youth council (in per cent)



Source: State Capital Stuttgart, Administrative Services and Human Resources Office

In 2010, some 91 per cent of districts (17 districts) had a youth council. In 2014, this proportion decreased to 52 per cent (11 districts), but increased again in 2016 and 2018 to some 70 and 83 per cent respectively (twelve and 15 districts). In 2023, this figure increased once again to some 91 per cent.

**Figure 111:** Participation in youth council elections (in per cent)



Source: State Capital Stuttgart, Administrative Services and Human Resources Office

In the past years, the participation in youth council elections was quite low – around 30 per cent. In 2014, the turnout was at 31.5 per cent (4,884 voters), in 2016 at 29 per cent (5,617 voters), in 2018 at 30.5 per cent (6,396 voters) and in 2023 at 29.5 per cent (7,493 voters). In Stuttgart, youth councils are elected every two years. In 2022, the election was postponed due to the COVID-19 pandemic. The diagram shows the figures from the election years. Between the election years, the figures remain the same.

### Classification / Definition

The participation of adolescents in decision-making processes and political representation can be a way of familiarising people with becoming involved at a young age and improving political participation in the long term. Youth councils in Stuttgart are institutionalised forums where adolescents can raise their concerns and discuss these.

The indicator “Participation of adolescents” reflects the institutionalised involvement of adolescents in two ways. On the one hand, it indicates the proportion of districts with a youth council, and on the other hand, the participation in the youth council elections is shown. Eligible voters are all adolescents who are at least 14, but not yet 19 years old on the reference date. Youth council elections in Stuttgart take place in all 23 districts. Some districts merged to form constituencies.





**Calculation**

Participation of adolescents (districts with youth councils):

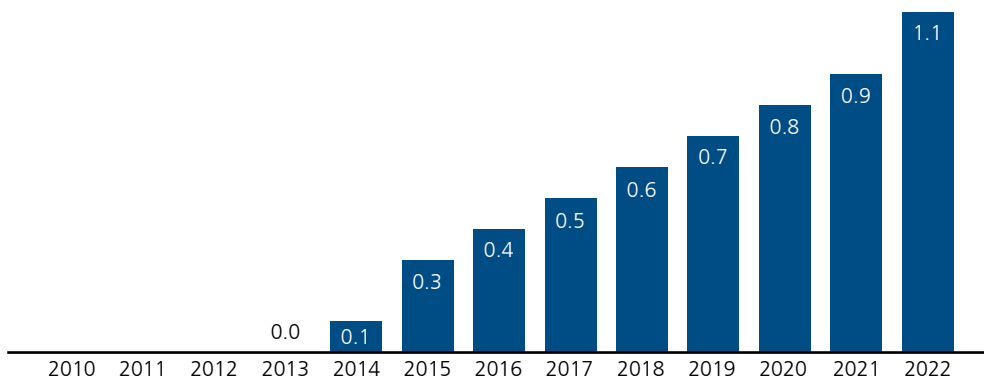
$$\frac{\text{Number of districts with a youth council}}{\text{Total number of districts}} \times 100$$

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 16-9:  
**Registered users at “Stuttgart – meine Stadt”  
 [Stuttgart – my City]**

**Figure 112:** Registered users at “Stuttgart – meine Stadt” (in per cent)



Source: State Capital Stuttgart, Administrative Services and Human Resources Office

“Ensuring demand-oriented, inclusive, participatory and representative decision-making”  
 (Target 16.7)

Development in recent years have shown that residents increasingly want to get involved in their environment and the development of their city. This is reflected both in the desire to become involved in political decision-making and policy-forming processes, but also in increased voluntary work. In August 2013, the State Capital Stuttgart launched a first pilot version of the participation portal [www.stuttgart-meine-stadt.de](http://www.stuttgart-meine-stadt.de).



Due to the increasing digitalisation of living and working environments, participation formats are becoming increasingly important in the network. Therefore, digital methods are to be used more as a positive addition to traditional face-to-face proceedings. The portfolio on the participation portal is to be expanded by innovative digital participation formats to further expand and improve usability for the users. This way, more Stuttgart residents are to be encouraged to become involved in the development of their city and social issues as a whole. A mandate from politicians to develop standards for citizen participation procedures resulted in the development of a guideline for informal citizen participation. It was unanimously adopted by the Municipal Council in April 2017 and came into effect in October 2017. The guideline regulated the entire subject area of informal citizen participation in Stuttgart – from initiating participation procedures to their organisation and decision-making. With the guideline, the city has created a transparent and binding framework for informal citizen participation in the form of commitment.

A central element of the guideline is the list of projects that was published on the municipal participation portal when the guideline came into effect. The list of projects provides clear information on projects of the city administration and how people can participate. Residents can actively participate in projects by means of reviews, forums and interactive maps. In December 2022, some 385 projects were online.

In 2021, 410 new registrations were recorded on the portal. In 2022, the number of new users more than doubled. Through online participation on topics with citywide relevance – for instance updating the Stuttgart Bicycle Traffic Concept (mid March to mid October 2022) or the creation of a Climate Mobility Plan (July 2022) – 987 new users used the portal. Recently (as of December 2022), 5,800 users were registered on the portal, in 2021 the figure was 4,813.

After eight years of operation, the participation portal no longer meets current requirements. Technology, media use and the presentation of contents have all changed. Against this background, the Municipal Council decided in June 2023 to relaunch the municipal participation portal “Stuttgart – meine Stadt”. The aim is an innovative, sustainable, technically up-to-date, modern, user-friendly and lively portal that makes people want to participate. This way, the State Capital Stuttgart wants to encourage more Stuttgart citizens to become involved in the development of their city and social issues as a whole.

### Classification / Definition

The portal “Stuttgart – meine Stadt” enables interested citizens to obtain information at an early stage about municipal participation projects and all other municipal projects. The project is an important step to more transparency and citizen participation. The indicator reflects the development of the number of users who have registered on the online portal.

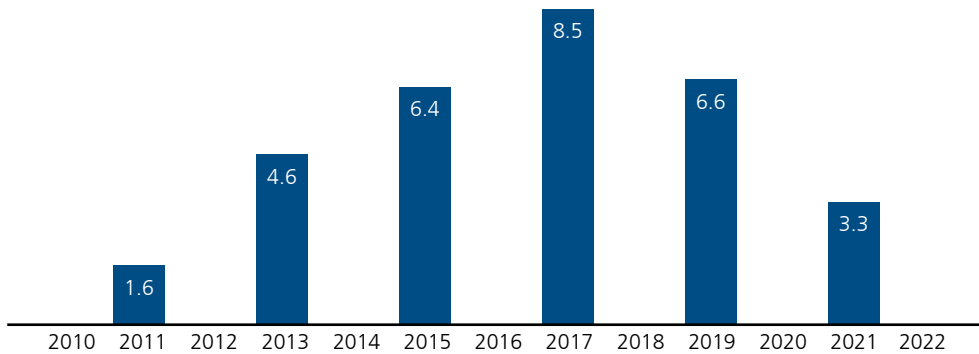
### Calculation

Registered users at “Stuttgart – meine Stadt”:

$$\frac{\text{Number of registered users at } \text{www.stuttgart-meine-stadt.de}}{\text{Number of residents older than 16}} \times 100$$

## Indicator 16-10: Participatory budgeting

**Figure 113:** Participants in Stuttgart's participatory budgeting (in per cent)



Source: State Capital Stuttgart, City Treasury

“Ensuring demand-oriented, inclusive, participatory and representative decision-making”

(Target 16.7)

In the first years following the introduction of Stuttgart's participatory budgeting, the number of participants increased significantly to 8.5 per cent of residents in 2017. Since then, the number of participants has been decreasing. In 2021, the figure was particularly low with only 3.3 per cent, primarily due to the COVID-19 pandemic. For the first time in 2021, the participation procedure was completely digital, since the normal information events in the districts were not possible. For infection control reasons the popular assessment on hardcopy signature lists, which had been used in recent years to acquire about half of the participants, were no longer allowed. To counteract these restrictions, there was a larger PR campaign for participatory budgeting than in the previous years. During the participation procedure, there were info screens (at the city railway stops and inside the trains), posters in buses and at suburban railway stops, as well as Citylight posters throughout Stuttgart.<sup>110</sup>

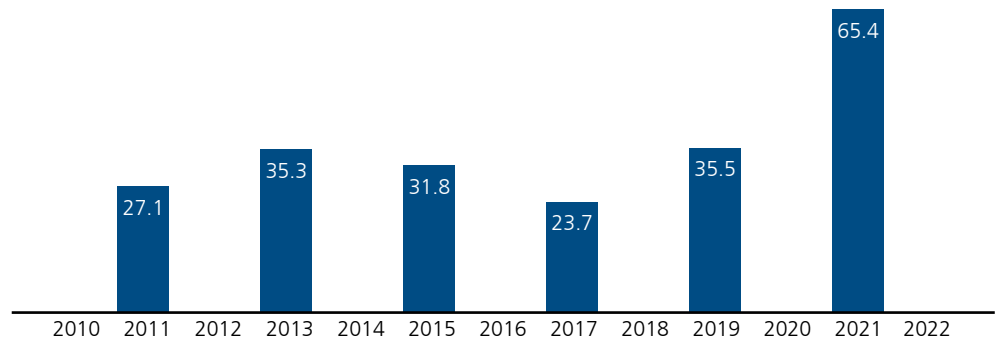
### Evaluation of the participatory budgeting



In 2021, almost 20,000 participants submitted a total of 2,853 proposals for participatory budgeting in many areas of responsibility of the State Capital. After pooling similar proposals, the remaining 2,156 proposals were evaluated with 1,306,395 votes. A special added value is the intensive discussion of the proposals on the platform [www.buergerhaushalt-stuttgart.de](http://www.buergerhaushalt-stuttgart.de). Some of the measures from the proposals of the 2021 participatory budgeting have already been implemented, such as the prohibition of gravel gardens or the barrier-free expansion of the suburban stop “Bopser”.<sup>111</sup> The new participatory budgeting 2023 ended on 8 March and the most positive evaluations were assigned to proposals from the topics: public transport, swimming lessons, green city structures, recreation and citizen service. In autumn 2023, the Municipal Council will decide in the budget discussions on the proposals to be implemented.<sup>112</sup>



Figure 114: Evaluation of participatory budgeting proposals per participant (in figures)



Source: State Capital Stuttgart, City Treasury

In 2021, a significant increase in evaluations of participatory budget proposals can be observed. From 2011 to 2019, the number of evaluations per resident fluctuated between 20 and 35. In 2021, it almost doubled to some 65 evaluations per participant.

### Classification / Definition

The participatory budgeting enables the Stuttgart citizens to actively participate in the budget plans every two years. In the proposal phase, there is the possibility to contribute one's own proposals to the participatory budgeting, in the following evaluation phase, registered users can rate all submitted proposals as "good for the city" or "not so good for the city".

The 100 proposals rated best and the two most popular proposals for each district are reviewed by the administration, then submitted to the district advisory council for its comment and then prepared for the autumn budget discussions. The proposals must be feasible and financially viable and fall within the responsibility of the city.

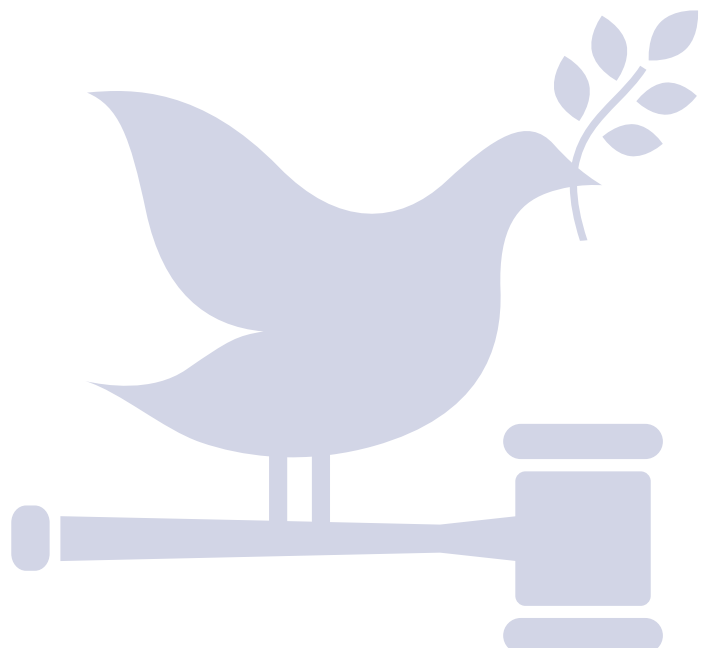
### Calculation

Participatory budgeting:

$$\frac{\text{Number of participants in the participatory budgeting}}{\text{Number of residents}} \times 100$$

Evaluation of participatory budgeting:

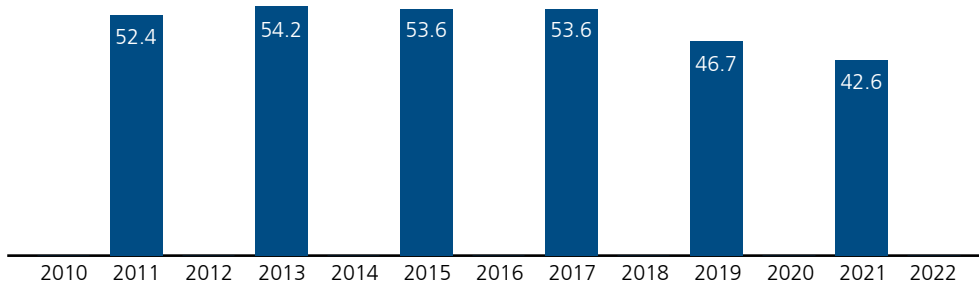
$$\frac{\text{Number of positive and negative evaluations}}{\text{Number of participants}}$$





## Indicator 16-11: Satisfaction with work of the city administration

**Figure 115:** Satisfaction with work of the city administration as a whole (proportion of satisfied and very satisfied citizens)



Source: State Capital Stuttgart, Statistics Office (citizen survey)

In the period under review, the satisfaction of citizens with the work of the city administration declined. According to the 2021 citizen survey, it was more than 50 per cent from 2011 to 2017. In 2021, some 43 per cent indicated to be satisfied or very satisfied with the work of the city administration, circa 42 per cent ticked neither /nor.

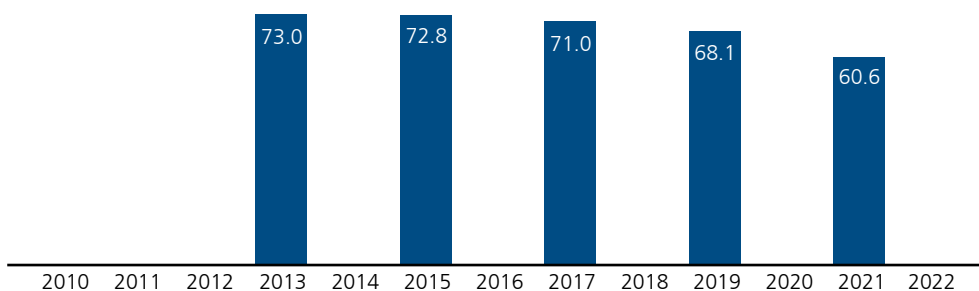
“Ensuring demand-oriented, inclusive, participatory and representative decision-making”  
(Target 16.7)

### Opinions on the work of the citizens’ offices



The satisfaction of Stuttgart residents with the work of the citizens’ offices has been declining since the survey in 2013. At the beginning, circa 73 per cent of the residents were satisfied or very satisfied. Following the 2021 citizen survey, this figure was only some 61 per cent of the citizens. Around 27 per cent answered the question as to satisfaction with work of the citizens’ offices with neither /nor (cf. fig. 116).

**Figure 116:** Opinions on the work of the citizens’ offices (percentage of satisfied and very satisfied citizens)



Source: State Capital Stuttgart, Statistics Office (citizen survey)

### Classification / Definition

The data as to satisfaction of the citizens with the work of the city administration (and citizens’ offices) is collected every two years in the context of the citizen survey. The indicator presents the percentage of citizens interviewed who indicate to be very satisfied or satisfied with the work of the city administration. The indicator was introduced in 2023 for the first time and is to be updated.

### Calculation

Satisfaction with the work of the city administration as a whole:

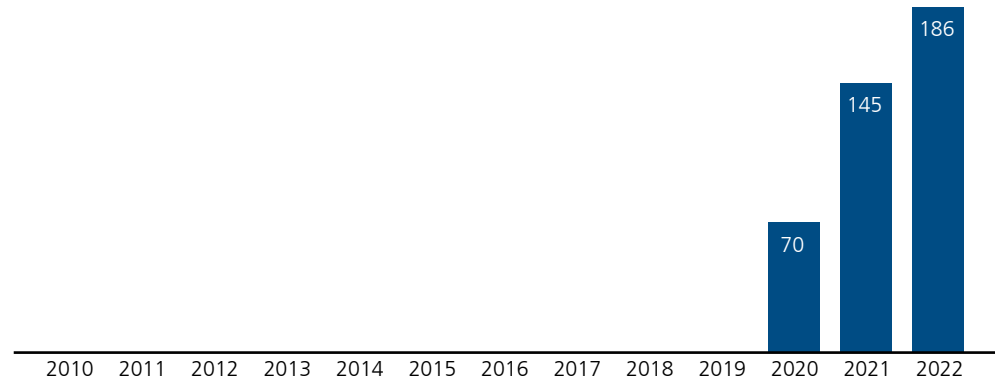
$$\frac{\text{Number of satisfied and very satisfied citizens}}{\text{Total number of citizens}} \times 100$$



## Indicator 16-12: Online administration services

**Figure 117:** Administration services offered online (in number)

“Ensure public access to information”  
(Target 16.10)



Source: State Capital Stuttgart, Digitalisation, Organisation and IT Office

The number of administration services for citizens offered online more than doubled from 70 in 2020 to 145 in the following year. Since 2022, it has 186 online administration services – and on the increase.

### Classification / Definition

The indicator describes the number of administration services citizens are already offered online. With the adoption of the Online Access Act, all municipalities are requested to offer their administration services also via online portals by the end of 2022.<sup>113</sup> At present, the draft of the Federal Government as to the Online Access Act 2.0 is subject to resolution and is expected to come into effect as of 1 January 2024. Digital administration services provide citizens with more efficient access to public information and facilitate interaction between the city administration and citizens.

### Calculation

Online administration services:

Number of online administration services offered



## Correlation with other SDGs

The governance dimension of sustainability (i.e. the participation of different stakeholders in the decision-making processes and their implementation) relating to decision-making and the political-administrative implementation of measures has an indirect impact on all remaining dimensions of sustainability. Political decisions, also at a local level, have direct effects 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”), the shaping of the city (SDG 11 “Sustainable Cities and Communities”), 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 the municipal commitment to support people and countries in other parts of the world (SDG 17 “Partnerships for the Goals”). However, the possibilities for these activities depend very much on the city’s capacity to act.

The debt level is greatly influenced by the economic development (SDG 8) and the requirements to provide particular support for poor residents (SDG 1 “No Poverty” and SDG 8 “Decent Work and Economic Growth”). The scope for governance depends on “good” governance, but also on external influences and long-term consequences of municipal action. These correlations are of particular importance for sustainable governance.

The sustainable development goal “Peace, Justice and Strong Institutions” is decisive for shaping the upcoming transformation processes, ensuring services for the public and social cohesion in the municipality.

The following indicators are directly relevant to SDG 16 “Peace, Justice and Strong Institutions”:

- SDG 3:** “Premature mortality”
- SDG 3:** “Level of organisation in sport”
- SDG 5:** “Women in the Stuttgart Municipal Council”
- SDG 5:** “Women in management positions”
- SDG 6:** “Barrier-free or low-barrier sanitation”
- SDG 8:** “Gross domestic product”
- SDG 10:** “Meeting points for citizens”
- SDG 10:** “Relative employment rate of people without German citizenship”
- SDG 10:** “Relative unemployment rate of benefit recipients without German citizenship”
- SDG 10:** “Relation of median income according to citizenship”
- SDG 10:** “Low-barrier housing”
- SDG 11:** “Accommodation service for social housing”
- SDG 11:** “Accessibility of public transport”

16 PEACE, JUSTICE AND STRONG INSTITUTIONS



## Practical example 33: Training municipal employees on children's rights

### Context:

Sustainable development is also and most of all a development that respects the future generations and their rights. Therefore, every sustainable development goal has a crucial significance for children and their well-being – sustainability can only be achieved if we take the living conditions of children into consideration.

### Description / Realisation:

In section 1 of the main statute of the City of Stuttgart, the implementation of children's rights is mentioned explicitly as a concern of the State Capital. In "Aktionsplan Kinderfreundliche Kommune – Lokale Umsetzung der UN-Kinderrechtskonvention 2020 bis 2022" [Action plan Child-friendly Municipality – Local Implementation of the UN Convention of the Rights of the Child 2020 to 2022] it was decided to qualify key persons of the city administration with a view to children's rights and to identify procedures how children's rights can specifically be taken into consideration in the regular administration. Together with the Steinbeis counselling centre Municipal Innovation Counselling and Implementation, the Department of the Children's Affairs Officer of the City of Stuttgart developed a training course aimed mainly at the children's representatives of the offices and districts and addresses the principle of a child's well-being under the aspect of politics, legislation, administration and attitude.

### Experience / Results:

In 2021, 43 persons participated in the pilot training "Priority of a child's well-being in administrative procedures". Since then, the course has been included in the municipal training programme. In 2022, nine persons participated. In addition, individual units, such as the Schools Administration Office, also carried out training sessions on children's rights. So far, 20 persons have been trained.

In addition, checklists have been drawn up for various office structures, which check the priority of the child's well-being in administrative processes. Procedures have also been developed in the offices to apply these checklists. These are used for internal processes and printed matters of the Municipal Council. The application of Section 3 (1) of the UN Convention on the Rights of the Child has already been identified by the individual offices and is to be implemented in all offices and districts.

### Division / Office / Public Undertaking:

Department of the Children's Affairs Officer and Schools Administration Office in the Youth and Education Division in cooperation with the Steinbeis-Counselling Centre Municipal Innovation Counselling and Implementation and "Kinderfreundliche Kommunen e.V."

### Further reading / Links:

<https://www.stuttgart.de/buergerinnen-und-buerger/kinder-und-jugendliche/kinderfreundliches-stuttgart/aktionsplan-kinderfreundliche-kommune.php>  
(Last access 27.03.2023)





Practical example 34:  
**Workplace Health Management as a value-added contribution for a strong institution**



**Context:**

The State Capital Stuttgart has been consistently expanding its Occupational Health Management (BGM). In June 2022, the newly founded AKR-BGM department was directly assigned to the First Deputy Mayor in the General Administration, Culture and Legal Affairs Division (AKR), which centrally controls the citywide concept development of BGM. The guideline is the vision coordinated at highest administrative level and the staff council:

“A resilient city administration for a functioning urban society!”  
 The concept can be directly connected to SDG 16. The strategic BGM goals “Promoting the ability to work” and “Retaining and attracting skilled labour” that are derived from the concept provide direct contributions to establishing an efficient and inclusive public service institution.

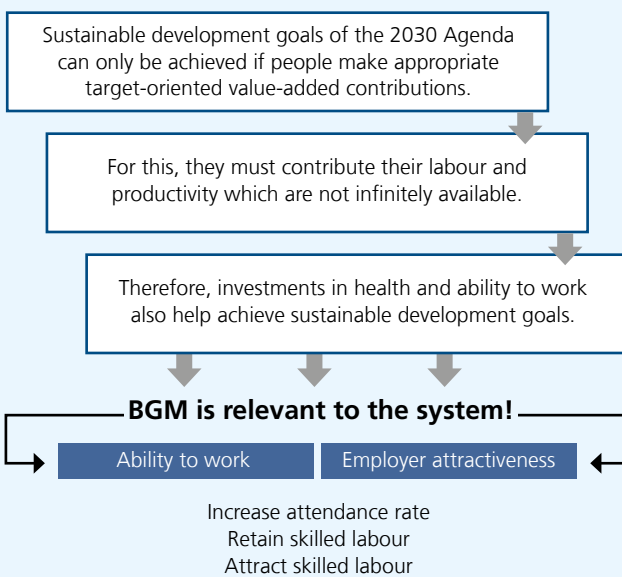
in the city including waste management (SDG 11) or care in nursery schools and nursing homes close to home (SDG 3, 4) are target-relevant parameters to implement the 2030 Global Agenda at a local level. It is the municipal employees in the respective offices and public undertakings of the city, who deserve respect for their productivity; many other examples can be found. Therefore, BGM as a driver of ability to work and employer attractiveness is relevant to the system and also for achieving SDGs. An additional benefit: direct contributions to climate protection (SDG 13) can be generated by consistently applying social and ecological sustainability criteria to the planning and implementation of Occupational Health Promotion (BGF) measures.

**Description / Realisation:**

As an innovative local government, the State Capital Stuttgart consistently dovetails its BGM processes and products with SDG requirements. Examples for indicators are:

*Indicator “Capability to work”*

- Capability to work can be measured as an index and thus the effectiveness of measures monitored over time. Positive effects, however, can only be expected if adequate planning, structure and process quality for occupational safety and health exist. The diversity of activities and organisational units in the State Capital Stuttgart (LHS) requires a set of analytical tools adapted to the target group to determine health prospects and risks. A practicable instrument for quality assessment and continuous – also cross-organisational – improvement is required (e.g. risk assessment, Common German Occupational Health and Safety (GDA) organisational check, prevention matrix, WAI index, indicator cockpit). Based on the BGM management cycle, sub-indicators can be derived that together reflect the probability of success and effectiveness, whether and how ability to work is promoted. An example of a structure indicator: number of LHS organisational units with participative BGM analytical methods / total number of all LHS organisational units.



People with their labour also contribute to achieving many other SDGs. Therefore, the ability to work is a decisive factor for success and a value-added contribution for other sustainable development goals. Examples: the city’s parks, order and safety



*Indicator "Proportion of women in BGF programmes"*

- The indicator "Number of women in relation to the total number of participants in programmes for occupational health promotion" gives information about the gender-specific acceptance of the measures. This provides control information on how to improve target group orientation and gender equality of BGF measures.

*Indicator: "Sustainable orientation of BGF programmes"*

- In the BGF fields of Nutrition and Physical Activity, a variety of synergetic effects between health and environmental sustainability can be identified. Specific framework conditions and infrastructure of BGF programmes, team events and for example health days can be matched with ecological and social sustainability criteria as early as during the concept development. Indicator: number of BGF programmes in LHS matched with sustainability criteria / total number of BGF programmes per year under the responsibility of AKR-BGM.

**Experience / Results:**

Occupational Health Management per se is oriented to sustainable development. The expansion of BGM in the State Capital has already made an impact: the demand for individual counselling and support services of occupational integration management and social counselling has been increased. For instance, they pursue sustainable targets to overcome inability to work, retain employees in the company, adapt workplaces so that they enhance performance and deal with disturbances and problems at an early stage. In addition, a comprehensive BGM improves the structural and procedural prerequisites to promote the ability to work and thus contributes to achieving sustainable development goals. Appropriate programmes for Occupational Health Promotion attract new target groups and promote climate-sensitive physical activity and nutrition behaviour. This also helps the participants identify with the sustainability strategies of the employer. AKR-BGM is active in exchanging ideas with other municipalities; Stuttgart wants to be a driving force here (SDG 17).

**Division / Office / Public Undertaking:**

Occupational Health Management Department in the General Administration, Culture and Legal Affairs Division

**Further reading / Links:**

<https://www.arbeitsschutz-aktuell.de/de/programm-reg-forum#/topic/1156017>  
(Last access 19.04.2023)

Initiative Gesundheit und Arbeit (iga)

[Health and Work Initiative]

iga.Wegweiser zum Thema Nachhaltigkeit, gesellschaftliche Verantwortung und Betriebliches Gesundheitsmanagement [iga Guide to Sustainability, Social Responsibility and Occupational Health Management]

<https://www.iga-info.de/veroeffentlichungen>  
(available as of spring 2024)



## Practical example 35: Arrival Ukraine Project



### Context:

On 9 May 2022, the State Capital Stuttgart opened the Welcome and Registration Centre "Arrival Ukraine" for people from the Ukraine seeking refuge. It makes the start easier for the refugees arriving and gives them a certain orientation.

### Description / Realisation:

Due to the close cooperation of the Social Welfare Office, the Public Health Office and the Public Order Office and further local partners, this central place is a transparent, structured and efficient reception area in the City of Stuttgart. Here, the programmes of the City's Coordination Unit "Civic involvement", the initiative "Wolja Stuttgart", the Stuttgart civic trust and the many committed people who personally support the arrival of refugees in this house and continue to assist them can be found. Programmes that were decentralised have now been pooled in the "Arrival Ukraine" centre.

Here, it is checked whether the refugees can stay in Stuttgart or will be transferred to other districts and counties. The refugees remaining in Stuttgart get a place in an emergency shelter or can live with relatives of friends. The Foreigners' Registration Office, the Social Welfare Office and the Public Health Office are also located in the same building. On the ground floor is the "Pop Up Social Welfare Office" – refugees can receive social maintenance benefits according to the Asylum Seekers' Benefits Act and health insurance certificates for necessary medical care. In the basement, the "MedPoint" health station offers outpatient paediatric or GP primary care.

The Strategic Social Planning Department took over the coordination of establishing this programme. The planning was developed in close coordination with the State (Regional Council) and the Federal Government (Federal Ministry of Migration and Refugees).

### Experience / Results:

This joint approach makes a safe and healthy arrival in Stuttgart possible, also as a basis for further integration and participation.

### Division / Office / Public Undertaking:

Strategic Social Planning Department (Coordination), Social Welfare Office and Public Health Office

### Further reading / Links:

<https://www.stuttgart.de/buergerinnen-und-buerger/migranten/fluechtlinge/ukraine-hilfe/ankommen/ankunftszentrum-arrival-ukraine.php>  
(Last access 19.04.2023)

16 PEACE, JUSTICE AND STRONG INSTITUTIONS



## Practical example 36: Citizens' Climate Council

### Context:

The State Capital Stuttgart established a Citizens' Climate Council based on the resolution of the Municipal Council of 16 December 2021. The Citizens' Council shall act as counsellor to the city administration and politics on climate protection.

The idea of a citizens' council came from the people of Stuttgart. In 2021, more than 2,500 Stuttgart residents signed a petition calling for a Citizens' Climate Council. Almost all factions of the Municipal Council took on this idea and motioned a citizens' climate council. The decision finally fell on this Citizens' Council in December 2021. In the meantime, many other cities in Germany have also implemented similar projects.

### Description / Realisation:

The Citizens' Climate Council is not made up of lobbyists and specialists, but some 60 randomly selected Stuttgart residents from the various groups and milieus. This way, the Citizens' Council has the chance that the results come close to a social consensus.

The Citizens' Climate Council is working on the role the State Capital Stuttgart should play in climate protection and what measures should be taken in the future for climate protection. The Municipal Council gave the Citizens' Council the following questions: "What role does the City of Stuttgart play in climate protection and with which measures can Stuttgart contribute to achieving the 1.5 degree of the Paris Agreement?" This question was further specified by the Municipal Council on 1 December 2022, so that the Citizens' Climate Council can focus on the following two questions:

1. What steps should Stuttgart take to achieve a climate-neutral heat supply?
2. What steps should Stuttgart take to achieve climate-neutral mobility? What are the effects of mobility on road space?

The Citizens' Climate Council will meet six times between March and June 2023. The members will work out answers to these two questions and give joint recommendations. To ensure the Citizens' Council can carry out its debates independent from the city administration and politics, it is organised by a non-aligned coordination unit.

In the first two sessions, the participants are provided with an overview of the issues climate change and climate protection, as well as the targets and the working method of the Citizens' Council. In the third and fourth session, the members work out and evaluate the set of measures. These are checked with regard to their social acceptability. In the last two sessions, the Citizens' Climate Council consolidates the consensus finding and formulates the result of the discussions. Finally, the recommendations resolved by the Citizens' Council are submitted to the Municipal Council of the City of Stuttgart, which has committed to publicly substantiate which of the submitted recommendations should be implemented and which not.

### Experience / Results:

At the time of preparing this VLR, the work of the Citizens' Climate Council has not been concluded, so no results are available yet.

A positive experience was the high feedback for participation in the Citizens' Climate Council. Some 900 Stuttgart residents were willing to participate – an above-average response.

### Division / Office / Public Undertaking:

Climate Protection, Mobility and Housing Policy Unit,  
Staff Unit Climate Protection

### Further reading / Links:

[www.stuttgart.de/buergerrat-klima](http://www.stuttgart.de/buergerrat-klima)



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://www.stuttgart.de/lebenswertes-stuttgart)



17 PARTNERSHIPS  
FOR THE GOALS



SDG 17

## Partnerships for the Goals

“Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development”

In general, SDG 17 refers to strengthening resources for implementing the 2030 Agenda and to building up partnerships for sustainable development at all levels. Relevant targets for municipalities also include the establishment and expansion of partnerships, as well as the mobilisation of assets from different sources, not only locally but also in countries of the Global South.



## Overview of the relevant targets

The following targets of SDG 17 are relevant to German municipalities and are already covered in the VLR by indicators:



**17.6** Knowledge exchange and strengthening the North-South and South-South cooperation for access to science, technology and innovation



**17.16** Expansion of global partnership for sustainable development

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



**17.3** Mobilisation of financial funds for developing countries



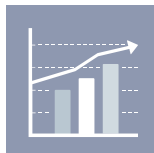
**17.14** Enhance political coherence for sustainable development



**17.17** Promote effective partnerships



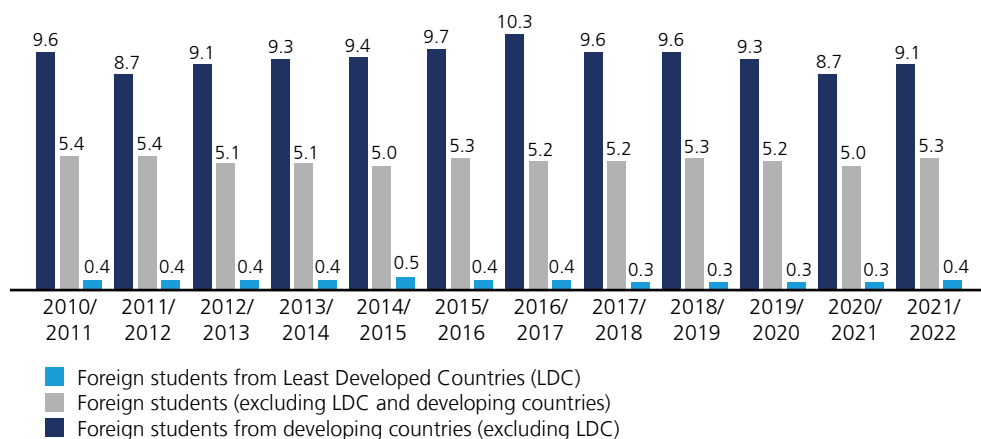
**17.18** Increase availability of reliable data



**17.19** Develop measurements of progress on sustainable development

## Indicator 17-1: Students from the Global South

**Figure 118:** Proportion of students from the Global South at Stuttgart colleges and universities (in per cent)



Source: State Statistical Office Baden-Württemberg, Student Statistics

“Knowledge exchange and strengthening the North-South and South-South cooperation for access to science, technology and innovation”  
(Target 17.6)

In the period under review, the proportion of students from developing countries<sup>114</sup> among all students at colleges and universities is subject to fluctuation. Following the winter semester 2010/2011, the figure falls from 9.6 to 8.7 per cent and then rises to a maximum of 10.3 per cent by the winter semester 2016/2017. Since then, it has slightly fallen and in the winter semester 2020/2021, reaching a low of 8.7 per cent due to travel restrictions during the COVID-19 pandemic. In the following winter semester, it rises again to 9.1 per cent.

In total, with some 60 per cent, the proportion of students from developing countries among all foreign students is the highest. The proportion of students from the least developed countries (LDC) is the lowest. Related to all students, the proportion of students from LDCs is relatively constant between 0.3 and 0.5 per cent in the period under review, related to all foreign students at some three per cent. In the period under review, the proportion of foreign students (excluding LDC and developing countries) among all students is also relatively constant at some five per cent, related to all foreign students at almost 40 per cent.

### Classification / Definition

Based on a resolution of the State Government Baden-Württemberg, since the winter semester 2017/2018, international students from non-EU states have to pay tuition fees of 1,500 euro. The data does not reveal to what extent this is reflected in the numbers of foreign students, since at that time there also were changes as to the classification “developing country” or “LDC”.

The indicator describes the proportion of foreign students among the total number of all 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)<sup>115</sup>
- 2) Proportion of students from developing countries (excluding LDCs pursuant to OECD)
- 3) Proportion of foreign students (excluding developing countries and LDCs, incl. remaining Asia, not specified, stateless and unclarified).

The classification as a developing country or LDC is made by the Development Assistance Committee (DAC) of the OECD. The list of the respective year always applies. Since the classification can change in the course of time, the time series can sometimes not be compared. There was for instance a change from 2017 to 2018.<sup>116</sup>

### Calculation

Students from the Global South:

$$\frac{\text{Number of students from developing countries (excluding LDCs) or number of students from LDCs or number of foreign students (excluding LDCs and developing countries)}}{\text{Total number of students at Stuttgart colleges and universities}} \times 100$$



## Indicator 17-2: Twin towns in the Global South

“Expansion of global partnership on sustainable development”

(Target 17.16)



Peace, international understanding and solidarity are the driving forces for the international activity of the State Capital Stuttgart.

Since 1948, Stuttgart has been cultivating and working on its relations to cities and partners around the world. This has resulted in ten active twin town partnerships on four continents<sup>117</sup>, three of which are in the Global South, as well as in diverse networks to strengthen partnerships.<sup>118</sup>

With its European and international commitment, the State Capital wants to actively assume and enable global responsibility for sustainable action and solidarity.

Generally speaking, from 2008 to 2022, the expenditure for the three twin towns in the Global South was around 20 per cent of the twin town budget of the Department for International Relations.

### Classification / Definition

The indicator “Twin towns in the Global South” comprises the expenditure in the local municipality or for projects carried out in the twin towns. They vary in size and content and are realised by the City itself or civic funding agencies.

The expenditures are for programmes in and with the twin towns Menzel Bourguiba (Tunisia), Cairo (Egypt) and Mumbai (India).

These include funding for exchange programmes, educational work, twin-town anniversaries, networking / activation events and grants for exchange and participation projects of third parties (e.g. civic organisations).

This expenditure does not include services of other departments for the project work with and in the countries of the Global South or in international networks, third-party funds, or programmes to increase fair trade.

The indicator reflects the average means used for the cooperation with and in the twin towns in the Global South in relation to the average of funds available for twin town work of the Department for International Relations from 2008 to 2022.

### Calculation

Twin towns in the Global South:

Funds for cooperation with twin towns in the Global South

/

Free project means budget of the  
Department for International Relations

\* 100





## Indicator 17-3: Projects and counselling services

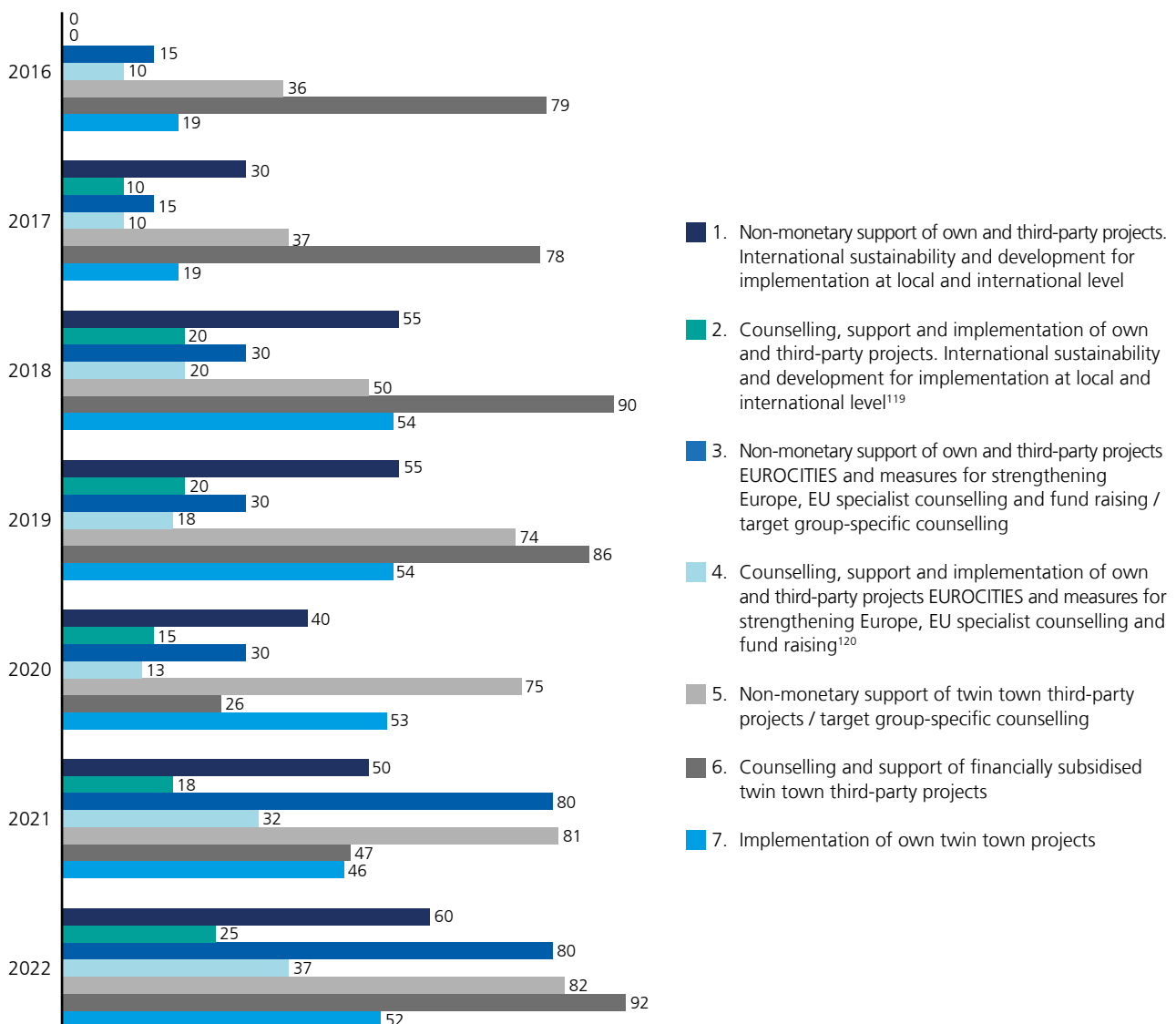
Since 2016, the interdepartmental and civic coordinating, counselling, implementing and (financially) supporting activities of the Department for International Relations as a central service provider and shaper have been increasing. Since 2016, the tasks, as well as the labour and budget have respectively increased by almost a third.

In addition to the State Capital's own resources, the Department for International Relations has raised third-party funding with a volume of some 580,000 euro over the past fourteen years, which has opened up additional leeways for implementing development projects in Stuttgart and international partnerships.

Since 2021, the implementation of projects, in particular by third-party projects, has been increasing and is again at the level before the COVID-19 pandemic or even beyond. With the pandemic year 2020, there was a drop in third-party projects based mainly on personal meetings and travel, for example in the school and youth sector.

“Expansion of global partnership on sustainable development”  
(Target 17.16)

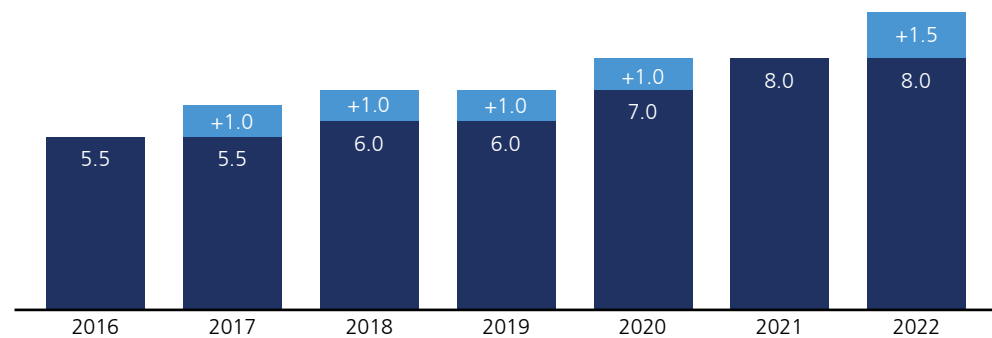
Figure 119: Projects and counselling services (in number)



Source: State Capital Stuttgart



Figure 120: Number of posts according to list of posts<sup>121</sup>



Source: State Capital Stuttgart

The close fair and twin-town cooperation, European networking and international sustainability are the principles of the municipal work of the Department for International Relations. In doing so, the State Capital Stuttgart (LHS) actively addresses existing and current challenges, such as the climate crisis, the COVID-19 pandemic and war. In general, LHS is strengthening and expanding its international commitment.

To achieve global climate goals, in particular in industrialised countries, more and more municipalities have been assuming responsibility to make an active contribution. Climate protection and adaptation to climate impacts are systematically integrated into municipal partnership work, also with a new part-time position.

In 2018, the Stuttgart Municipal Council decided on the active anchoring of the 2030 Agenda of the United Nations with the Sustainable Development Goals (SDGs) and integrated it into the 2020/21 two-year budget as a permanent task. Monitoring the anchoring is assigned to the Department for International Relations in the Administrative Coordination, Communication and International Relations Division as a cross-sectional task. Implementation refers to all specialist units. At an international level, LHS also stands up for anchoring the 2030 Agenda via municipal learning dialogues. Current examples include:

- Town twinning meeting 2022 as to climate protection/sustainability, human rights, equal opportunities, participation of young people and social cohesion with the participation of the respective specialist units
- 2022 Learning dialogue as to SDG monitoring with Windhoek, Namibia (project of the Urban Development Institute of the University of Stuttgart, funded by the State of Baden-Württemberg in the context of its Africa Initiative, with the participation of the Urban Planning and Housing Office and the Department for International Relations)
- Learning dialogue with the twin town Strasbourg 2022 on the SDG budget and VLR
- Urban Diplomacy Exchange (since 2022, programme of the Service Agency Communities in One World (SKEW) in cooperation with the Federal Foreign Office and the association of German cities and towns) with the twin towns St. Louis, Cardiff and St. Helens
- Town twinning meeting 2023 on “New Perspectives in Cultural Activities”, culture and sustainability in the run-up to the Urban Future Conference 2023 in Stuttgart (with events assisted by experts from Cairo (urban development) and Mumbai (social affairs, social cohesion) as well as a field trip, sustainable walk through the city)

With the Council of Europe’s Badge of Honour granted to Stuttgart in 2021, tribute is paid to the city’s work in spreading the European idea and its outstanding commitment to strengthening a united Europe.

### Classification / Definition

The “Projects and counselling services” indicator includes advisory and support services in the core area of the Department for International Relations in accordance with the indicators in the budget. It concerns own projects – varying in scope and duration – in the fields, town twinning, Europe (networks and funding programmes) and sustainable development at a global level, and projects of civic partners (e.g. schools, associations, artists).

As of 2019, the areas 1. to 4. on the bar chart (cf. Figure 119) have been recorded in the budget with key figures; the figures for previous years are based on subsequent counts.

### Correlation with other SDGs

Municipal sustainability is embedded at a global level. Partnerships beyond borders and across continents, and with the most diverse stakeholders at a local level, make allowance for this global embedding. SDG 17 plays a role for all SDGs as a cross-cutting topic.

The local social situation (cf. SDGs 1, 2, 3, 4, 5, 10, 16) or the local environmental situation (cf. SDGs 6, 7, 13, 14, 15) are also affected by the global context and vice versa. The local economic production and the consumer patterns are part of the global economy (cf. SDGs 8, 9, 11, 12, 13, 14, 15), for which municipalities assume responsibility.

Due to the influx of refugees, the local situation is directly affected by global developments. With the integration of people from other parts of the world, municipalities are faced with questions of economic change and social cohesion in a global dimension.

Municipalities actively shape the necessary transformation processes to meet global challenges through partnerships with business, the civic society and academia, and they encourage citizens to together implement global development goals.

### Calculation

The indicator shows the number of advisory and support services carried out in the core area of the Department for International Relations for the budget years from 2016 to 2020.

Cooperation at a regional and international level are for mutual learning and for strengthening the role of municipalities in the strategic anchoring of the 2030 Agenda.

The 17 SDGs with their correlations and target conflicts refer to all areas of action of the municipalities and can only be achieved via strong partnerships at all levels.

The following indicators area directly relevant to SDG 17 “Partnerships for the Goals”:

- SDG 1:** “At-risk-of-poverty rate”
- SDG 4:** “Educational programmes with ecological sustainability reference”
- SDG 8:** “Gross domestic product”
- SDG 9:** “Research and development in industry and business”
- SDG 10:** “Relative poverty rate of benefit recipients without German citizenship”
- SDG 12:** “Sustainable procurement”
- SDG 12:** “Fair trade schools”



## Practical example 37: Municipal climate partnership with Menzel Bourguiba, Tunisia

### Context:

To achieve global climate goals, more and more municipalities, in particular in industrialised countries, have assumed responsibility to make an active contribution. Since the 1990s, Stuttgart has repeatedly implemented and supported international climate protection projects through various offices, for instance the remediation of a landfill in the Tunisian twin town Menzel Bourguiba. Since 1995, Stuttgart has been a member in the “Climate Alliance of European Communities” and aims at being climate-neutral by 2035.

Since 2022, the State Capital and their Tunisian twin town are among the 12 city pairs in the ninth phase of the projects “Municipal climate partnerships” of the Service Agency Communities in One World (SKEW) that is funded by the Federal Government. Climate protection and adaptation to climate impacts are a burning issue of the twin towns, since both cities are affected by different impacts of climate change. Main topics for Menzel Bourguiba and Stuttgart are: waste management, water and wastewater management, as well as environmental education.

In terms of SDG 17 “Partnerships for the Goals”, climate partnerships fit well into the measures of the State Capital to anchor the international sustainability goals.

### Description / Realisation:

In the “Municipal Climate Partnerships” project, two cities cooperate on a regular and structured basis in the areas climate protection and adaptation to climate impacts. In the context of the two-year project phase, they develop a concrete action programme with targets, measures and assigned resources for climate protection and adaptation to climate impacts, which are to be implemented independently following the project phase and integrated systematically into the municipal partnership work.

After the official kick-off meeting by SKEW in November 2022, a three-person Tunisian delegation led by Mayor Selim Hragua visited the State Capital for an in-depth exchange

among experts on climate protection. In particular, the on-site visits of the delegation to the ENBW incineration plant, the Münster recycling plant and the Mühlhausen sewage treatment plant provided an impressive and important impetus for further points of reference for developing a programme of activities.

In February 2023, the Stuttgart delegation of experts paid a return visit. The on-site visit of the Tunisian twin town was used for an initial check. In particular, the topics green waste, building a rainwater retention basin and a photovoltaic system on the roof of the transfer centre turned out to be important for increased cooperation.

### Experience / Results:

The relations to the city administration of Menzel Bourguiba and various associations characterised by mutual trust and respect have been steadily consolidated in recent years. In the open town twinning partnership, which has been in existence since 1971, both parties are interested in intensifying cooperation. Climate protection and adaptation to climate impacts are very important for both cities, since both cities are affected by climate change in different ways. Despite a tense political situation in Tunisia, the city administration continues to develop the action programme with the aforesaid priorities corresponding to the local demand of the Tunisian twinning partner.

### Division / Office / Public Undertaking:

Department for International Relations, Environmental Protection Office, Stuttgart Waste Management (AWS), Parks, Cemeteries and Forestry Office, Staff unit Climate Protection.

### Further reading / Links:

GRDRs 1044/2021 [Municipal Council document]



Further practical examples at: [www.stuttgart.de/lebenswertes-stuttgart](http://www.stuttgart.de/lebenswertes-stuttgart)



## Overall process and perspectives

The following chapters describe the methodical approach for drawing up the VLR and provide an outlook on further development. In addition, the entire process of anchoring the sustainability goals in Stuttgart is discussed, interim results presented and learning experience described.

## Methodical approach and further development of the VLR

In cooperation with the Bertelsmann Foundation and the German Institute of Urban Affairs, Stuttgart – as a nationwide pilot city – drew up its first Voluntary Local Review (VLR, “Stuttgart – a Livable City”) in 2019. Upon resolution of the Municipal Council, this is to be updated regularly every two years. In 2021, the second VLR was drawn up and in 2023, the State Capital Stuttgart (LHS) now presents the third VLR. It is an advancement of the reporting system. The presented indicator catalogue is again more comprehensive, the indicators created by LHS were more elaborated and new indicator proposals from the third edition of the Wegweiser Kommune [Community Guide] and the joint statistics portal of the Federal and State Statistical Offices<sup>122</sup> were taken into account.

The indicators selected and presented as well as practical examples enable a cross-sectoral view of the implementation of the 2030 Agenda in Stuttgart at city level as a whole, and how the city has developed in recent years with regard to the 17 sustainable development goals. The cross-sectoral VLR is an addition to the detailed individual reports of the specialist units (e.g. social monitoring, education monitoring, climate protection monitoring).

The basis for further development is the recommendations from the 2019 pilot review, the 2021 VLR and current demands. The selection and analysis of indicators are a complex process, requiring expert knowledge and an interdisciplinary approach. All specialist units of the Stuttgart city administration contributed intensively and with major commitment to this third VLR “Stuttgart – A Livable City – The global 2030 Agenda at a local level”.

### Development process

A first step in preparing this third VLR was the analysis as to which sustainability dimensions, SDGs and related targets have not yet been covered sufficiently by indicators. The result indicates that most indicators (some 66 per cent) can be assigned to the social dimension, some 22 per cent to the economic dimension<sup>123</sup> and the least indicators (some 13 per cent) to the ecological dimension. This is partially due to the SDGs themselves, since the number of SDGs to be attributed to the social dimension is twice as high as the number of the other two dimensions. Nevertheless, the ecological and economic dimension have been underrepresented so far. In addition, 77 of the 125 targets identified by the Community Guide as relevant for German municipalities have not yet been covered in the 2021 VLR. In the federal project, only a few indicator proposals are available, in turn, not all of these proposals can be covered by data from nationwide sources. With further developing indicator proposals for targets that have not been covered so far, LHS is once again making a methodical contribution to the nationwide project.<sup>124</sup> Therefore, the aim of the third VLR was to close these gaps as much as possible.

At the end of 2022, cross-sectoral workshops and surveys took place under the coordination of the Department for International Relations and the Statistics Office. Here, the existing indicators and further indicator proposals from the specialist units were discussed, partially adapted, supplemented and finally selected. In this context, in the third Stuttgart VLR additional areas of municipal actions



(not included in the pilot VLR and the second VLR) were assigned to the SDGs and underscored with indicators. The focus was on indicators, which close the mentioned gaps and thus reflect new targets.

In a second step, the specialist units provided the necessary quantitative data for illustrating the indicators in the first half of 2023, as well as the qualitative data in the form of selected practical examples or additional information in the text to the Statistics Office.

In a third step, the indicators, which had been prepared by the Statistics Office and provided with basic information were reviewed by the specialist units and any possible reasons for the changes observed in the period under review identified. If the data available for certain developments also allowed reference to the COVID-19 pandemic or the Ukraine conflict, this was pointed out accordingly.

With this procedure, not only was it possible to combine detailed knowledge from all specialist units with knowledge as to cross-sectoral correlations, but it was also possible to use additional data accesses within the municipal administration.

### **Data basis, contribution and limitation**

The indicator catalogue provided by the nationwide project “SDG Indicators for Municipalities” was also the starting point for the third VLR of the State Capital Stuttgart (<https://sdg-portal.de>).

As a supplement to the indicators adopted from the “SDG Indicators for Municipalities”, the State Capital Stuttgart developed further indicators to cover and measure further targets. A total of 27 new indicators were included in the 2023 VLR for the first time, 17 of which from the city's own conceptualisation and 10 from the “SDG Indicators for Municipalities”.

The criteria for selecting the SDG Indicators for Stuttgart, which were determined in the cross-sectoral workshops, were:

- a) the valid recording of the SDGs and targets,
- b) the relevance for the State Capital Stuttgart and
- c) the availability of up-to-date data for the reporting period (usually 2010 to 2021 or 2022).

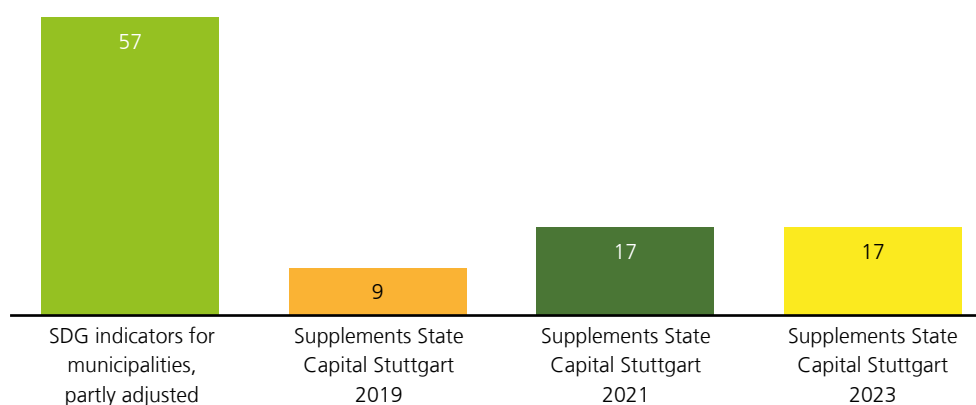
For practical reasons, the number of indicators should remain manageable. Therefore, preference was given to indicators covering several SDGs or targets. This means that an indicator can be relevant to several SDGs and targets. This is explained in the chapters “Correlation with other SDGs” and presented in the overview of indicators in Appendix II.

Due to the further development of indicators, the number has increased from 77 in the pilot VLR in 2019 to a total of 103 indicators in the present VLR, with a proportion of 57 per cent of the indicators from the nationwide project “SDG Indicators for Municipalities”. Since 2019, 43 per cent of the indicators have been sequentially supplemented by the State Capital Stuttgart. In contrast to previous VLRs, indicators still presenting more detailed information are no longer counted separately. Therefore, the total number seems to be lower compared to previous VLRs. The indicator “Childcare” for instance, is presented according to age groups, but is only calculated as one indicator. The supplementing indicators of the State Capital Stuttgart are partly from further sources, such as the statistics portal or are based on proposals of the Statistical Office of the State Baden-Württemberg.

The present 2023 VLR makes the reference to targets clearer. A total of 42 new targets are covered by indicators, some of them are to be assigned to several targets. Indicators were partly assigned to other, more suitable SDGs and targets. This is noted at the respective indicator in paragraph



**Figure 121:** Sources of the indicators (in per cent)



Source: own illustration

“Classification / Definition”. Reference of the indicator to the target was not unique for a few indicators. In these cases, the explanation to understand the targets was also described in the paragraph “Classification / Definition”. In most cases, the assignment of indicators to targets is based on the nationwide “Community Guide” project, they were further itemised in a general discussion for LHS and their classification agreed upon.

As in the second 2021 VLR, a uniform start of the time reference has been chosen (with a few justified exceptions). The data series start in 2010, directly following the 2009 economic crisis. Thus, they cover a period of eleven to twelve years. The availability of the majority of indicators as of 2010 will allow that year to be used as the starting point for the VLR.

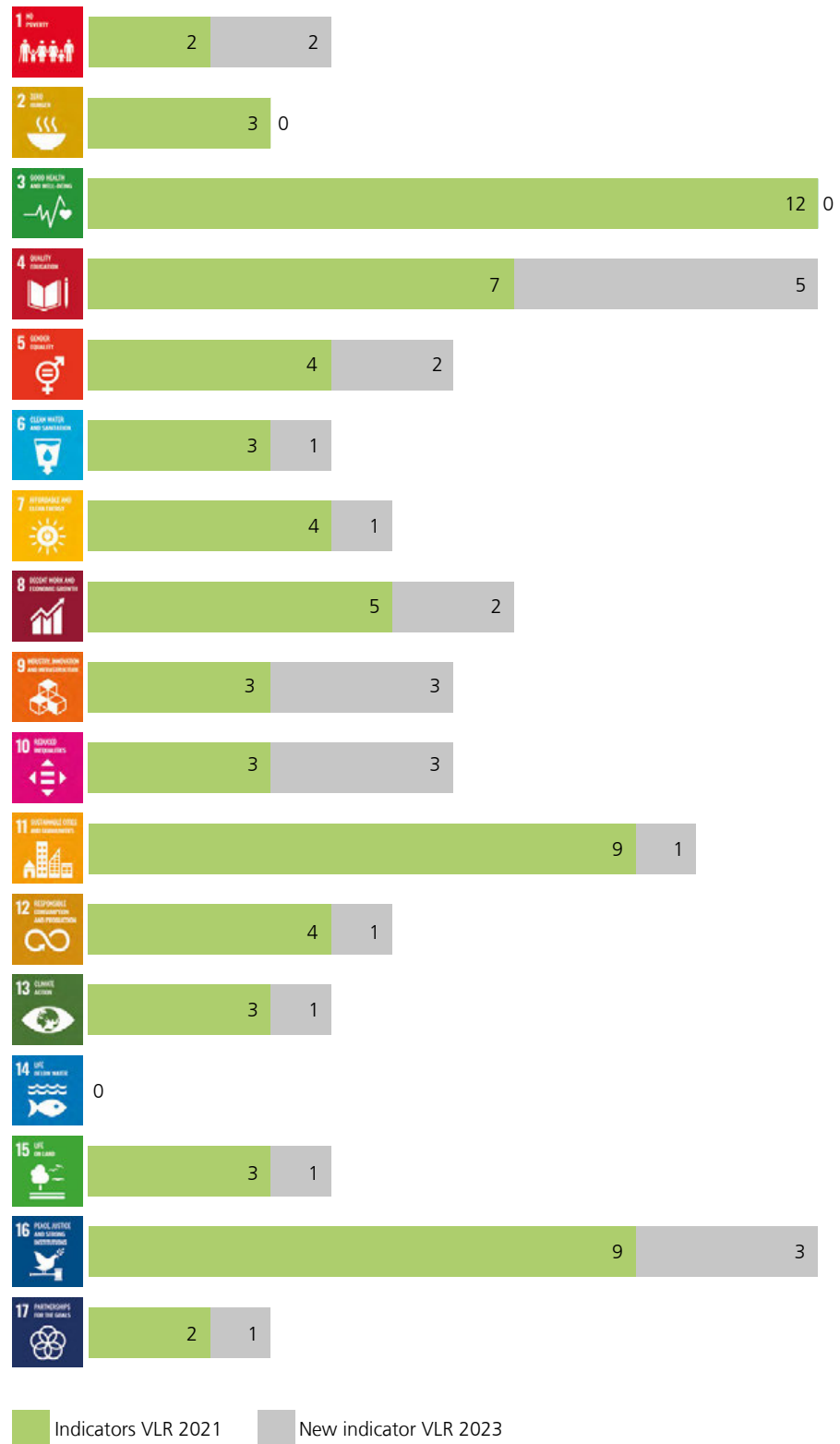
For methodical reasons – with a few exceptions – only data from the State Capital or the statistical offices of the Federal Government and the Federal States, which were prepared by the Statistics Office of the State Capital Stuttgart, was used. If the number of residents is used as reference, this is based on the municipal population published by the Statistics Office in Stuttgart from the population register. This figure differs from the official number of residents ascertained by the State Statistical Office on the basis of the 1987 and 2011 Census and updated on an annual basis. Due to this difference, in individual cases there may be slightly different figures compared to other nationwide publications.

During the in-depth examination of the indicators while preparing the review, it became clear at one point that the existing SDG indicators had to be developed, adapted or supplemented to have a better evaluation of the actual goal. In such cases, the time series in the 2023 VLR differ from those in the 2021 VLR. Negligible deviations may also occur if other data sources were used compared to the previous VLR, for instance by the preference of municipal data and data from direct official sources (in particular the Statistical Offices of the Federal Government and the Federal States, the Federal Employment Agency). However, these deviations are extremely small. A few indicators were cancelled for reasons of data availability or because they were no longer classified as relevant by the individual specialist units.

Although the indicators were advanced and supplemented in the context of the third VLR, their distribution across the SDGs (cf. Figure 122) still shows inequalities. Most of all, this can be explained for the respective SDGs by the lack of availability of adequate indicators with a sound data status quo. 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 can be closed with SDG 1 (“No Poverty”), SDG 5 (“Gender Equality”), SDG 9 (“Industry, Innovation and Infrastructure”) or SDG 10 (“Reduced Inequalities”). Indicators of the environmental dimensions, such as SDG 13 (“Climate Action”), SDG 15 (“Life on Land”)



**Figure 122:** Overview of the indicators in the 2023 VLR according to SDG (in number of indicators)



Source: own illustration





and SDG 14 (“Life below Water”), as well as SDG 2 (“Zero Hunger”), SDG 6 (“Clean Water and Sanitation”) and SDG 17 (“Partnership for the Goals”) are still underrepresented. However, it must be taken into account that this applies only for direct measuring of the contribution of an indicator to an SDG. These topics are indirectly covered by reference to other SDGs and also further indicators. In addition, thematic gaps can be found in the areas Culture and LGBTTIQ, which are not found in individual SDGs, but the consideration of these issues are relevant in terms of sustainable development.

Many sustainable development goals depend on and influence one another, some are in target conflict with one another. Not all developments – provided there are significant differences – can be described and explained with the indicators. This applies not only to the content, but also in terms of space. Significant developments and framework conditions relevant to sustainability at other levels (EU, federal government, state) also affect changes in Stuttgart and vice versa. It was not the purpose of this VLR to elaborate systematically the specific municipal contribution of influencing certain developments. This would require a comprehensive analysis of the various influences at a municipal level for the different sustainability dimensions. The focus is more on gaining knowledge with regard to the situation in the State Capital, rather than the comparison with other municipalities.

Such an inter-municipal comparison is enabled by the SDG portal of the federal project: [www.sdg-portal.de](http://www.sdg-portal.de). However, it must be taken into account that the results of the indicators from the federal project cannot be compared one-to-one with the indicators from the VLR of the State Capital Stuttgart, although many indicators come from the federal project. This can be explained by different data sources. Whereas the city mostly uses its own data for the VLR, the SDG portal is normally based on other public data sources, such as the Statistical Offices of the Federal Government and the Federal States.

In addition to the presentation of the quantitative indicator values, selected goals, strategies and measures for the effective shaping of sustainability at a local level are described by means of qualitative data as practical examples as in the previous VLRs. For the third VLR, new practical examples were selected, although the examples from the first and second VLR have by no means lost their relevance. All practical examples can also be found on the website. They will be continuously updated: [www.stuttgart.de/lebenswertes-stuttgart](http://www.stuttgart.de/lebenswertes-stuttgart)

## Advancement

For future updating of the indicators, the VLR will be methodically advanced. A stronger focus of the indicators is planned on SDGs and targets underrepresented so far, as well as thematic gaps.

In addition, it is planned to reflect indicators at a micro level depending on the availability of data. In this context, the university project “Participative SDG monitoring at a local level” of the Urban Development Institute of the University of Stuttgart in cooperation with LHS considers the question of whether and how the previous practice of municipal SDG monitoring can be expanded to further micro levels (at district and neighbourhood levels). Based on first findings of this exploratory teaching project, the following seven suggestions on the methodical advancement of the SDG monitoring can be formulated:

- Inclusion of further spatial levels in the SDG monitoring process
- Adaptation of the citywide indicator system at district and neighbourhood level
- Inclusion of further indicator types in local SDG monitoring
- Integration of qualitative information acquisition at a local level
- Closer involvement of participative elements in the local SDG monitoring process
- Integration of existing instruments of urban and district development into local SDG monitoring processes
- Consolidation of SDGs into topics in local SDG monitoring

(Cf. further explanations in the following chapter)<sup>125</sup>



With a view to the future, the State Capital Stuttgart is working on a closer linking of SDG indicators and budget figures to use these for sustainable financial monitoring (cf. explanations in the following chapter).

Finally, it is planned to advance the reporting systems also in media terms and provide interactive online access to the results of the VLR.

This present VLR consolidates the data and calculation basis for the future and regular updates of the VLR.

The indicators selected for the third VLR of the State Capital Stuttgart are listed in Appendix II.

Additional indicator proposals by the State Capital are listed in Appendix III as more far-reaching methodical contribution to future VLRs and for other municipalities.

All practical examples, the 2019 pilot VLR and the second 2021 VLR can be found on the State Capital Stuttgart website under: [www.stuttgart.de/lebenswertes-stuttgart](http://www.stuttgart.de/lebenswertes-stuttgart)

## Anchoring the international sustainability goals in Stuttgart

The developments presented in the previous chapters and earlier “Stuttgart – A Livable City” VLRs illustrate the remarkable range and scope of Stuttgart’s stakeholders and measures for implementing economic, social and ecological sustainability goals based on quantitative and qualitative data.

The following elaborations illustrate an overview of the current status of the steering process to anchor the international sustainability goals in Stuttgart since 2017. In this context, the VLR plays an important role. This is not an all-inclusive list of all activities, but examples, which promote the structural and strategic anchoring and underline the initial learning experience and success in this ongoing process in Stuttgart. This offers good prospects for the advancement of this process and the State Capital Stuttgart intends to contribute to the learning dialogue to anchor the 2030 Agenda, which will take place between the municipalities at a nationwide and international level.

### Starting point and relevance

The global 2030 Agenda that was adopted by the UN in 2015 with its transparent goals provides municipalities with an orientation framework to develop their own targets and be part of a worldwide initiative. Big cities around the world are facing similar challenges. The cities will decide whether and to what extent the globally increasing economic transformation tasks, climate changes and social distortions can be solved. The sustainable development goals of the UN have become a synonym at all levels of how cities and regions address such challenges. They assume global responsibility at a local level to actively shape the necessary transformation.<sup>126 127 128</sup>

At both international and national level, more and more municipalities are using the 2030 Agenda as an instrument for their strategic urban development planning and also to meet current challenges, such as the impacts of the COVID-19 pandemic or the attack on the Ukraine. Municipalities are taking different ways, adapted to the respective prerequisites and demands.

Municipalities have set out internationally to develop guiding principles and strategies and link long-term strategic goals with operative targets, key figures and budget planning on the basis of the 2030 Agenda (cf. Malmö (Sweden), Barcelona (Spain), Bonn, Freiburg (Germany)).



At the mid-term of the 2030 Agenda and from the UN's and Federal Government's viewpoint, 2023 is a crucial year for setting a further course and increasing efforts. The crises around the world have set back the community of nations on its path to more sustainability.<sup>129</sup> An interim balance of the German Institute for Urban Affairs commissioned by the Bertelsmann Foundation on the implementation of sustainable development goals in the municipalities indicates that transformation to more sustainability needs an all-embracing process.<sup>130</sup>

In 2018, the Municipal Council in Stuttgart made the decision to actively implement the 2030 Agenda and since the two-year budget 2020/21 it has made it a permanent task.

The Municipal Council and budget plan resolutions to anchor the international sustainability goals were passed with a large majority and provide the political backing for further measures with which the State Capital Stuttgart wants to strengthen its international sustainability goals locally:

- Municipal Council document GRDRs 206/2018 – Signing of the model resolution of the Association of German Cities and Towns to implement the 2030 Agenda at a local level
- Municipal Council document GRDRs 1246/2019 – Resolution in the two-year budget 2020/21 to update the VLR on the basis of the UN sustainability indicators and to establish a permanent coordinating position for International Sustainability and Development

In addition, the large number of resolutions as to the range of sustainability topics in the two-year budgets 2020/21 and 2022/23 send a clear signal to promote sustainable urban development in the State Capital Stuttgart.

The anchoring of the 2030 Agenda as a cross-sectoral, strategic orientation framework is coordinated by the Department for International Relations in the Administrative Coordination, Communication and International Relations Division. The cross-sectoral task is implemented in cooperation with all specialist units.

With the 2019 VLR "Stuttgart – A Livable City", which was drawn up with the Bertelsmann Foundation and the German Institute for Urban Affairs as a nationwide pilot project, which has been updated regularly with the resolution of the Municipal Council (VLR, cf. 2021, 2023), the State Capital has a cross-sectorally developed indicator system, and a foundation has been laid to measure and orientate administrative action to the guiding principle of sustainable development.

The aim is to anchor the 2030 Agenda of the United Nations in the long term in accordance with the aforesaid resolutions of the Municipal Council as a cross-sectoral orientation framework for sustainable urban development through binding structures and measures within the city administration and to promote implementation through line assignments. This is to support the State Capital in processing – division-wide and coordinated – the variety of tasks in the areas of economic, social and ecological sustainability.

### **Stakeholders, structures and instruments**

Since the first quarter of 2022, a project assignment has been implemented under the coordination of the Administrative Coordination, Communication and International Relations Division to promote the anchoring of the 2030 Agenda of the UN in the State Capital Stuttgart, which is supported by all divisions. A binding, interdepartmental project steering group facilitates technical coordination and communication, ensures the development of procedures that are agreed upon within the administration, works out demands for decisions and ensures the implementation of the resolutions of the Municipal Council and the top level of administration with regard to the 2030 Agenda in the State Capital.



The tasks of the project steering group are:

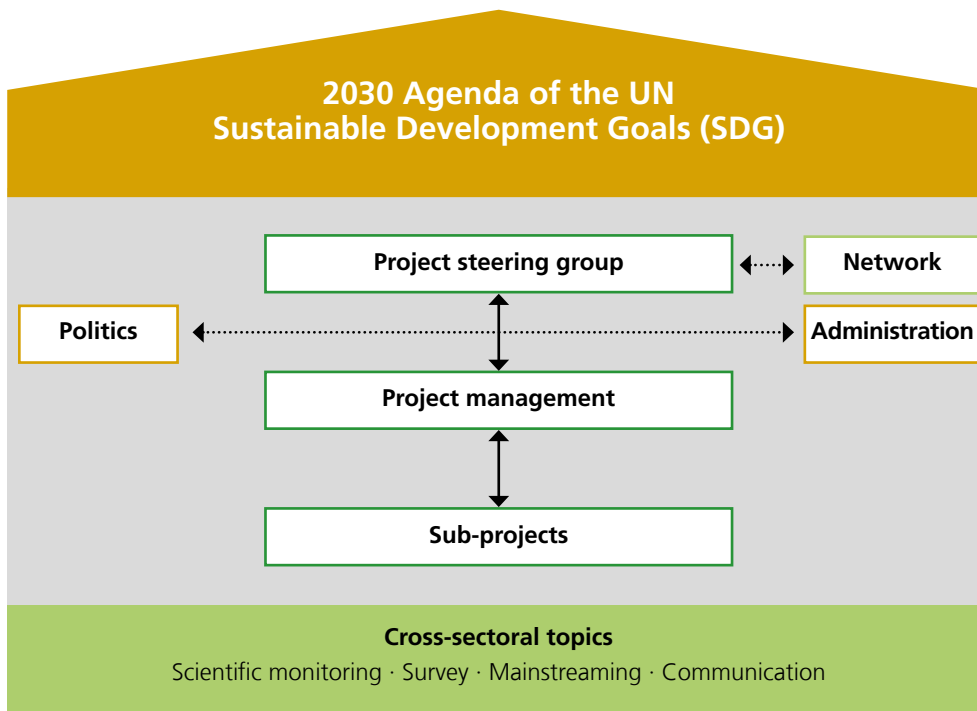
- Joint cross-sectoral interface for exchange, knowledge management and mainstreaming of international sustainability goals and linking them to measures of the specialist units
- Development of binding structures for cross-sectoral cooperation
- Identification and use of common strategic local objectives on sustainability and connecting these to international sustainability goals
- Strengthening the cross-sectoral coherent networking and cooperation: ensuring regular exchange and transparency, identification of correlations and target conflicts, development of recommendations, creation of synergies when implementing the measures, preparation of decision-making bases
- Promotion and support of theme-oriented cooperation under the umbrella of the 2030 Agenda
- Use of monitoring instruments for regular analysis and more targeted implementation of sustainability measures, as well as resource allocation by administration and politics
- Support of public relations of the State Capital Stuttgart as a sustainable city, as well as the public appearance and presentation of the individual specialist units and areas of activity
- Participation and cooperation with the urban society in implementing the UN sustainable development goals
- Strengthening networking and cooperation with external (international) partners at various levels

The project steering group develops specific proposals how the results of the VLR “Stuttgart – A Livable City” could be used even more as the basis for expert consultations in the respective expert committees according to topics (cf. request of the Administrative Committee on 1 December 2021). In this context, existing examples of reporting are oriented towards the international sustainability goals from the specialist units and additional demands and room for manoeuvre taken into account.

In addition to the project steering group as a driving body, a network of all staff units, heads of office and public undertakings is being established in the administration. This is to be a dialogue platform (cf. kick-off event in the Town Hall on 27 April 2022). The dialogue platform provides information on the developments and measures of the 2030 Agenda in the State Capital and at state, federal and international level. Furthermore, information and ideas from the specialist units are introduced, the integration of orientation of the State Capital Stuttgart in the 2030 Agenda in line assignments conveyed, and knowledge and measures communicated to the administration and urban society.

Sub-projects and pilot projects are developed with regard to individual topics. The cross-sectoral anchoring and expansion of the implementation of the 2030 Agenda is further promoted via the cross-sectoral topics “Scientific monitoring, survey, mainstreaming and communication”.

Figure 123: Monitoring and anchoring the 2030 UN Agenda in the State Capital Stuttgart



Source: own illustration

Within the Stuttgart city administration, a variety of stakeholders in all sections are committed to sustainability politics. All specialist units are responsible for cross-sectoral measures to anchor the 2030 Agenda. They promote the (cross-sectoral) anchoring with the support of the project steering group and project management, but also on their own initiative via the line function. In this context, the support of the Municipal Council with its provision of additional resources is decisive.

Hereinafter, examples of various areas are presented to illustrate the range of approaches in the State Capital towards the 2030 Agenda at various levels and with a different scope and depth. They refer to individual line assignments or entire concepts to various extents. The presentation is exemplary and not exhaustive. The focus is on the strategic, practical and methodical advancement in anchoring the 2030 Agenda.

### Monitoring

Regular recording of developments on the basis of data is a prerequisite for effective and strategically operative measures. The citywide VLR "Stuttgart – A Livable City" makes the current status of sustainability goals transparent, comprehensible and tangible; not only does it facilitate monitoring and reporting with regard to the examination of progress, but also to planning and evidence-based action. Thus, the VLR is an important information base for budget plan discussions. In addition, it is increasingly used in the course of the year by the specialist units for interim reporting in expert committees and other contexts (cf. e.g. the 2023 Stuttgart Poverty Conference of the Strategic Social Planning Department, 2022 annual report of the Youth Welfare Office). This also includes the successively increasing link of budget and municipal council documents with sustainability goals (cf. e.g. "Natürlich Nachhaltig Stuttgart" (GRDRs 434/2023) from the area Youth and Education). With these measures, Stuttgart is also preparing for existing and future (legislative) reporting requirements (cf. e.g. public undertakings and participation management against the background of the EU directives for sustainability reporting of enterprises).



In line with the demands, further aspects are addressed, e.g. the transfer and adaption of the SDG monitoring to district and neighbourhood level (cf. pilot project "Participative SDG monitoring at a local level" with the Urban Planning and Housing Office and the Urban Development Institute of the University of Stuttgart). New indicators are being developed which focus more on qualitative aspects (e.g. the quality of green areas, not only the size) and with appropriate formats involve citizens in data collection and evaluation. Here, existing and new instruments are combined and lead to added value for implementing line assignments in the State Capital and an incentive for nationwide programmes (e.g. perspective integration of sustainability goals in the instrument of "preparatory examination" of the "social city" programme of urban renewal; cf. the information in the previous method chapter). "Stuttgart – A Livable City" is successively advanced and more and more linked to the reports of the specialist units at different levels and also the budget planning.<sup>129</sup>

#### *Budget planning*

Budget planning is an essential monitoring instrument for orientation towards sustainability goals. The administration was commissioned by the Municipal Council to develop a fiscal management system. The 17 sustainable development goals of the 2030 Agenda of the United Nations were determined as a basis for an initial underlying target system. In order to link the budget plan to the SDGs, the City Treasury implemented a pilot project in the context of the process coordinated by the Department for International Relations to anchor the 2030 Agenda in the State Capital cross-sectorally, in cooperation with the Social Affairs and Integration Division (Strategic Social Planning, Public Health Office, Job Centre, Social Welfare Office). In the course of the pilot project, correlations of budgets, financial key figures, sustainability goals and indicators for presentation in the budget were elaborated. Due to the inclusion of SDGs and indicators in the sub-budgets of the office, it becomes apparent which product contributes to the respective sustainable development goal. In perspective, the approach offers a basis for future impact-oriented management and is a component for further sustainable urban development (cf. Municipal Council documents: decision of principle GRDRs 1034/2020 and externally supported pilot project GRDRs 325/2023).

#### *Participation*

Anchoring and implementing the 2030 Agenda is successful citywide and at district level in cooperation with the most diverse stakeholders from business, academia and civil society. This applies to both practical and methodical measures.

The example of urban renewal not only provided an insight into breaking down SDG indicators to a district level, the pilot project also revealed how relevant knowledge about the SDGs can be used in the district, how information on the importance of the 2030 Agenda can be provided and how citizens can be encouraged to implement the sustainable development goals.

Good examples for 2030 Agenda alliances and initiatives aim to spread information on the international sustainability goals among the urban society throughout the city and at district level and encourage their implementation. With creative formats, a broad spectrum of supporting organisations from civil society, business, academia and administration reaches a wide range of target groups (cf. e.g. mEinStuttgart – mEine Welt, 70599Lebenswert).<sup>131 132</sup>

#### *International learning dialogue*

At an international level, Stuttgart directly engages in exchange and cooperation in achieving the international sustainability goals – also via town twinning and third-party projects and programmes.

In addition to specialist topics such as climate protection, the experience of the State Capital Stuttgart in the strategic anchoring of the 2030 Agenda is of specific interest for the international learning dialogue: the development and use of the VLR "Stuttgart – A Livable City" as a monitoring instrument and the perspective orientation of budget planning towards the SDGs, as well as co-creation with citizens at a district level.<sup>133</sup>



With its experience and recommendation at administration level in association with other municipalities, the State Capital Stuttgart also actively participates in various committees in multi-level governance to strengthen the leading role of municipalities in processes to anchor the international sustainability goals.<sup>134</sup>

### Interim results

Stuttgart combines tangible pilot projects with strategy and structural development “from the bottom up”, from within the administration, and the necessary political backing. This leads to a stronger interaction and successive expansion of the scope and intensity of the anchoring of the 2030 Agenda throughout the administration and urban society.

The VLR “Stuttgart – A Livable City” is welcomed by politics and administration as a monitoring and evaluation tool for sustainable urban development. In Germany, Stuttgart is the first municipality with a third VLR. It is continuously updating this tool and advancing its use. By adapting the SDG indicators at a district level, Stuttgart is again doing pioneer work nationwide. The interdisciplinary process of developing the VLRs leads to an additional added value for the cross-sectoral cooperation in the administration and knowledge management to a range of sustainability topics and their correlations or target conflicts. The close cooperation of the Department for International Relations, Statistics Office and City Treasury strengthens the successful work for a strategic anchoring, coordination and evaluation of the implementation of the international sustainability goals as a cross-sectoral task.

Due to the networking of the project steering group and impetus by the coordinator, additional links to further ongoing and planned measures or future potentials of cooperation within the administration have developed with members of the urban society and international partners (i. a. the Climate Action Programme, the Urban Future Conference, the Poverty Conference, the Network Education for Sustainable Development, the Urban Development Concept 35+). Examples from the specialist units, such as Central Purchasing, Youth Welfare Office, Strategic Social Planning and Urban Renewal illustrate the added value for these specialist units by integrating the UN sustainable development goals in line assignments.

In addition to the extended implementation of the 2030 Agenda, the creative and comprehensive activities of citywide 2030 Agenda initiatives within the urban society also contribute to overcoming the “silo mentality” in civil society, business and administration to the benefit of the joint sustainability goals. In particular during the pandemic, examples for joint activities to implement the 2030 Agenda strengthened social cohesion in the city districts.

One result of the innovative performance of the process of anchoring the international sustainability goals is that the State Capital Stuttgart is being recognised at national and international level as a pioneer in this field. This can be seen in requests for Stuttgart to introduce its experience in anchoring and implementing the international sustainability goals in research projects at conferences and in local networks at a national and international level for exchange and policy formulation.

In addition, the State Capital Stuttgart has also received awards in recognition of its special commitment to International Sustainability Goals:

- In 2019, a special award at the 2020 EU Fair and Ethical Trade Award in the category “Monitoring for Impact”<sup>135</sup>
- In 2021, the German Sustainability Award 2022 in the category “Big Cities”<sup>136</sup>
- In 2023, the UNESCO “National Award Education for Sustainable Development (BNE)” for the citywide education for sustainable education (BNE) network



The value added and the potential of anchoring the 2030 Agenda in and by Stuttgart can be summarised as follows:

- 2030 Agenda as the interdisciplinary guideline and orientation framework
- Identification and use of joint strategic local sustainability targets and links to global goals
- Strengthening the cross-sectoral network and cooperation (exchange, transparency, identification of correlations and target conflicts, recommendations, synergies in the implementation of measures)
- Monitoring tool for targeted steering of sustainability measures and resource allocation by the administration and politics
- Increased public perception of the State Capital Stuttgart as a livable and sustainable city, as well as the appreciation of the individual specialist units and areas of activity
- Cooperation with the most diverse stakeholders of the urban society for the benefit of the common international sustainability goals
- Local impact to do justice to global responsibility

### **Learning experience**

The task of strategically anchoring international sustainability goals needs creative approaches, a culture of constructive criticism, willingness for a change in perspective, strong allies, a cooperative organisation culture, perseverance and, most of all, committed people. Here, the factors decisive for the special Stuttgart process are determined and these can, as a learning experience and incentive, also support other municipalities on their way to anchoring the 2030 Agenda.

#### *Strategy and practice*

The Stuttgart approach to implement strategy development and practical project measures hand in hand has proved its worth. In particular the 1<sup>st</sup> VLR in 2019 helped make the 2030 Agenda of the United Nations tangible, which for many stakeholders originally seemed to be fairly abstract. Pilot projects lead to the transition of processed and adapted results into line assignments.

For Stuttgart, it is proving expedient to take up initiatives from a wide range of specialist units and, with the support of the project steering group, transfer them into applicable standards and scale them up as recommendations. For example, various forms of reporting with relevance to the SDGs (Municipal Council documents, budget bills, annual reporting, poverty conference etc.) are taken up by the project steering group to develop recommendations, which, adapted to the respective demands, are of benefit for the specialist units.

#### *Structure and creative space*

There is no predefined pattern for anchoring international sustainability goals at municipal level. The project assignment, which was signed in 2022 by all divisions, creates the respective implementation structures, and at the same time provides cross-sectoral space for creativity to test new directions and measures to learn from them. The interdisciplinary networking promotes dynamic action and additional synergies for cross-sectoral measures.





### *Cooperation and steering*

From the beginning, the aim has been to involve the entire range of the administration “from the bottom up” by identifying added values for the respective specialist units and to achieve the orientation of measures towards the international sustainability goals “by conviction” and through cooperation. The project steering group at management level, which was set up in 2022 by a mandate signed by all divisions, is acknowledged cross-sectorally as a group for anchoring the 2030 Agenda of the United Nations throughout the administration. The members of the project steering group have an important pivotal function. They communicate information, demands, impulses and recommendations to and from the specialist units.

Embedding the coordinating position in the Department for International Relations in the Administrative Coordination, Communication and International Affairs Division has proved to be of advantage. Within the administration, it has a linking, inspiring, advisory and service-oriented function in the Mayor’s sphere of competence and thus facilitating cross-sectoral cooperation.

### *Feedback and resources*

The wide-ranging, complex area of responsibilities at several levels and with the most diverse partners requires both resources and time. The integration of the 2030 Agenda implementation in line assignments is a lengthy administrative process; regular political feedback is required for decisions on resourcing and further strategic anchoring.

Resolutions passed with a large majority in the Municipal Council, and the provision of additional resources (cf. International Sustainability Coordination in the Department for International Relations, Support and Updating the VLR in the Statistics Office) provide the required political backing and the necessary cross-sectoral expertise – in addition to the resources provided by the specialist units.

### *Partners and cooperation*

Localising the international sustainability goals within the urban society succeeds with a wide alliance of the various social stakeholders. Here, strong partners, public participation and a comprehensive communication concept are important. Overcoming “silo mentality” within and between organisations is an ongoing undertaking. In this context, international sustainability goals with their comprehensive and compatible approach are a good orientation framework for cooperation.

Cooperation with municipalities at national and international level leads to additional awareness internally and externally, as well as at different political levels, for the crucial role that municipalities play in achieving the international sustainability goals.

The comprehensive approach of the State Capital Stuttgart of anchoring the international sustainability goals is very complex and ambitious. It requires from all stakeholders a high level of competence, motivation, initiative, ambiguity tolerance and the willingness to cross-sectoral cooperation for the benefit of the common goals.

## **Prospect**

Since 2017, politics and administration in Stuttgart have been developing instruments and laying the foundations for orientation towards the 2030 Agenda of the United Nations for effective and efficient monitoring of forthcoming urban transformation processes.

The international sustainability goals cannot be achieved by the administration alone. The State Capital has the possibility to actively engage in mobilising and networking various stakeholders from politics, administration, business, civil society and academia. This can lead to additional impetuses by a wide range of involved stakeholders from the urban society to jointly promote projects and topics of sustainable transformation.



Anchoring the 2030 Agenda of the UN at a local level is a dynamic, not a linear process. It affects strategic, operative and methodical dimensions. There is no “blue print”. The existing and future instruments and measures require continuous evaluation and advancement, adapted to the demands of the State Capital and changing framework conditions in a complex world. Stuttgart, with its experience, is prepared for a future, stronger regulatory framework for sustainability at municipal level.

The connection of budget planning, indicators and practical measures based on the international sustainability goals offers new opportunities towards impact-oriented sustainability monitoring. The global 2030 Agenda with its transparent, compatible goals provides Stuttgart with an orientation framework to advance its own targets in cooperation with politics, administration and civil society. This does not only lay the foundations for a targeted way with strategic scope for sustainable transformation in and by Stuttgart, but Stuttgart is also part of a global initiative – even beyond the year 2030.



## Municipal Council documents (“GRDRs”) with reference to international sustainability

(A selection, cf. further GRDRs 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 the State Capital Stuttgart.)

*GRDRs 821/2015*  
Internationalisation strategy  
(including Europe)

*GRDRs 987/2017*  
South/South-East Europe

*GRDRs 1058/2018; GRDRs 690/2019;*  
*GRDRs 396/2019; GRDRs 522/2021*  
Strengthening Europe; EU funding strategy;  
Increasing the participation of LHS in EU  
projects as to urban development and  
sustainability

*GRDRs 206/2018; GRDRs 202/2018*  
Drawing the sample resolution of Association  
of German Cities and Towns to implement  
the 2030 Agenda at a local level

*GRDRs 755/2019; GRDRs 531/2021;*  
*GRDRs 146/2019;*  
Town twinning, Urban Diplomacy

*GRDRs 1074/2019; GRDRs 899/2021*  
“Stuttgart – A Livable City. VLR on the basis  
of indicators to illustrate the Sustainable  
Development Goals (SDGs)” – holistic,  
cross-sectoral indicator system; monitoring  
instrument to measure and orientate  
administrative action towards the guiding  
principle of sustainable development;  
interlinking with budget planning (cf. process  
of developing an overall fiscal 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

*GRDRs 1246/2019*  
Resolution in the two-year budget 2020/21  
to permanently establish a coordination unit  
for international sustainability and development

*GRDRs 394/2019*  
The Flag of Honour of the Council of Europe  
→ Tribute to the entire town twinning,  
European, international and global work of  
LHS (2nd level of the Europe Award of the  
Council of Europe)

*GRDRs 1034/2020; GRDRs 304/2021;*  
*GRDRs 804/2021*  
Overall fiscal control system, oriented to the  
goals of the 2030 Agenda of the United Nations;  
allocation of analytical resources according to  
SDGs and allocation of product areas

*GRDRs 554/2021*  
Resolution in the two-year budget 2021/22  
to provide funds for international sustainabili-  
ty and development on a regular basis and to  
update “Stuttgart – A Livable City” on a  
regular basis. VLR on the basis of indicators to  
illustrate the Sustainable Development Goals  
(SDGs)

*GRDRs 329/2021*  
Badge of Honour of the Council of Europe  
→ Tribute to the entire town twinning,  
European, international and global work of  
LHS (3rd level of the Europe Award of the  
Council of Europe)

*2022: Project assignment*  
“Control and anchor the 2030 Agenda of the  
UN in LHS (25.03.2022) with project steering  
group of representatives of all divisions at  
management level. Goal: anchor the 2030  
Agenda of the UN permanently in accordance  
with resolution of the Municipal Council as  
cross-sectoral orientation framework for  
sustainable urban development through  
mandatory structures and measures within  
the city administration.

*GRDRs 325/2023* – Resolution on further  
strategy: overall financial control system and  
comprehensive integration of international  
sustainability goals.



## Literature with reference to the Stuttgart 2030 Agenda of the UN Anchoring and implementation in publications (a selection)

2023

### **KGSt, Bertelsmann-Stiftung (ed.):**

KGSt-Bericht. Kommunales Nachhaltigkeitsmanagement wirksam gestalten (in progress).

### **SI | Städtebau-Institut Universität Stuttgart – Department of International Urbanism (2023):**

PARTICIPATORY SDG-MONITORING –  
Documentation of a transdisciplinary seminar to  
localize SDG-monitoring at neighbourhood level.  
[https://international-urbanism.de/  
media-library/](https://international-urbanism.de/media-library/) (available as of September 2023).

### **Servicestelle Kommunen in der Einen Welt (SKEW):**

Nachhaltigkeit messen: Zum Stand des  
Nachhaltigkeitsmonitorings, 05.2023,  
[https://skew.engagement-global.de/dialog-global/  
dialog-global-nr-66.html?file=files/2\\_Mediathek/  
Mediathek\\_Microsites/SKEW/Publikationen/  
3\\_Dialog\\_Global/Dialog\\_Global\\_66\\_bf.pdf&cid=](https://skew.engagement-global.de/dialog-global/dialog-global-nr-66.html?file=files/2_Mediathek/Mediathek_Microsites/SKEW/Publikationen/3_Dialog_Global/Dialog_Global_66_bf.pdf&cid=)

2022

### **Andréasson Derner, Tove/Greta Altrov Berg:**

Voluntary local review: A bridge between global  
goals and a local reality, Global Utmaning, Swedish  
Institute, 05.2022.

### **Ley, Astrid / Bettina Bunk / Sigrid Busch / Audrey Dobbins / Ludger Eltrop / Ulrich Fahl / Jannik Vetter-Gindele / Gaby Hansen / Phillip Luehl / Gert van der Merwe / Friederike Thonke:**

GoGlocal! in Windhoek and Stuttgart! The  
Neighbourhood Scale for Collective Action:  
Building transformative knowledge on SDG  
implementation and monitoring, in: International  
Urbanism, 2021.

2021

**United Nations. Voluntary Local Reviews |  
Department of Economic and Social Affairs:**  
n. d., <https://sdgs.un.org/topics/voluntary-local-reviews>  
-> Stuttgart: <https://unhabitat.org/node/160415>

### **Nationaler Fortschrittsbericht zur Umsetzung der New Urban Agenda:**

in: BBSR, 2021, [https://www.bbsr.bund.de/BBSR/  
DE/veroeffentlichungen/bbsr-online/2021/  
bbsr-online-02-2021.html](https://www.bbsr.bund.de/BBSR/DE/veroeffentlichungen/bbsr-online/2021/bbsr-online-02-2021.html)

### **Die Bundesregierung:**

Bericht über die Umsetzung der Agenda 2030 für  
nachhaltige Entwicklung: Freiwilliger Staatenbericht  
Deutschlands zum HLPF 2021,

[https://www.bmz.de/resource/blob/86824/  
staatenbericht-deutschlands-zum-hlpf-2021.pdf](https://www.bmz.de/resource/blob/86824/staatenbericht-deutschlands-zum-hlpf-2021.pdf)

**Siragusa, Alice/Paola Proietti:** European SDG  
Voluntary Local Reviews: A Comparative Analysis of  
Local Indicators and Data, 01.01.2021.

**Nachhaltig handeln: Arbeitskleidung –  
Den fairen Faden aufnehmen:** 2021,  
<https://pudi.lubw.de/detailseite/-/publication/10378>

### **Städtetag Baden-Württemberg, Stiftung Entwicklungs-Zusammenarbeit Baden- Württemberg (SEZ) (ed.):**

Handbuch zu Kommunaler Entwicklungspolitik, n. d.,  
[https://www.staedtetag-bw.de/index.php?object=  
tx,3335.3&ModID=6&FID=3335.5724.1](https://www.staedtetag-bw.de/index.php?object=tx,3335.3&ModID=6&FID=3335.5724.1)

### **Landeshauptstadt Stuttgart:**

Stuttgart – A Livable City – The Global 2030 Agenda  
at a local level, 2021, (2<sup>nd</sup> Voluntary Local Review)  
[https://www.stuttgart.de/medien/ibs/  
2021-vlr-stuttgart-a-livable-city-copyrighted.pdf](https://www.stuttgart.de/medien/ibs/2021-vlr-stuttgart-a-livable-city-copyrighted.pdf)

2020

### **EUROCITIES:**

Paving the way for sustainable cities: EUROCITIES  
report on the Implementation of Sustainable  
Development Goals at local level, n. d.,  
[https://eurocities.eu/latest/paving-the-way-for-  
sustainable-cities/](https://eurocities.eu/latest/paving-the-way-for-sustainable-cities/)

### **Fairtrade in Stuttgart:**

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<https://www.stuttgart.de/wirtschaft/fairtrade/>

### **Globale Agenda 2030 auf lokaler Ebene,**

Interview, in: Umweltbriefe, 11, 2020, p. 11

2019

### **Landeshauptstadt Stuttgart:**

Stuttgart – A Livable City – The Global 2030  
Agenda at a local level, 2019 (1<sup>st</sup> Voluntary Local  
Review), [https://www.stuttgart.de/medien/  
ibs/20191212\\_SDG-Local-Review\\_Stuttgart\\_  
Executive-Summary.pdf](https://www.stuttgart.de/medien/ibs/20191212_SDG-Local-Review_Stuttgart_Executive-Summary.pdf)

2017

### **Evermann, Annelie / Uwe Kleinert (ed.) / Anne Neumann:**

Global verantwortliche Beschaffung für Pioniere.  
Handreichung. In: Werkstatt Ökonomie, 01.01.2017,  
[https://www.woek.de/themen-projekte/nachhaltige-  
beschaffung/publikationen/detail/global-verantwortliche-  
beschaffung-fuer-pioniere-handreichung/](https://www.woek.de/themen-projekte/nachhaltige-beschaffung/publikationen/detail/global-verantwortliche-beschaffung-fuer-pioniere-handreichung/)



Notes and references

- <sup>1</sup> Cf. Bertelsmann Stiftung et al., 2022.
- <sup>2</sup> Note: The general formulation of targets originates from the SDG Federal Project Bertelsmann, Association of Towns and Cities, cf. Reports 1 and 2.
- <sup>3</sup> Note: The targets used in the VLR are translated freely from the English version and refer to the official target media cards of the United Nations. <https://globalgoalscms.co.uk/wp-content/uploads/2021/10/global-goals-media-cards.zip> (last access 21.04.2023)
- <sup>4</sup> Cf. Heinsohn, 2020.
- <sup>5</sup> Cf. Bader et al., 2018.
- <sup>6</sup> Cf. Stuttgarter Familiendaten, edition 2018, 2018.
- <sup>7</sup> Cf. Achatz et al., 2013.
- <sup>8</sup> Cf. Hübgen, 2019.
- <sup>9</sup> Cf. Hradil, 2012.
- <sup>10</sup> Cf. Hintergrund aktuell – Armut, 2006.
- <sup>11</sup> Cf. Heinsohn, 2022.
- <sup>12</sup> Cf. Brand, 2022.
- <sup>13</sup> Cf. Wohnungslosigkeit [Homelessness], 2022.
- <sup>14</sup> Cf. Söldner, 2022.
- <sup>15</sup> Cf. Landeshauptstadt Stuttgart – Referat Soziales, Jugend und Gesundheit, Gesundheitsamt, 2015.
- <sup>16</sup> Cf. International Science Council, 2019.
- <sup>17</sup> Cf. Bauer/Schmitz-Veltin, 2021.
- <sup>18</sup> Cf. Wilke, 2019.
- <sup>19</sup> Cf. Wilke, 2021.  
Note: According to findings of the 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 maximum use of the yield potential, the soil type and the climatic conditions.” (Sächsisches Landesamt für Umwelt, Landwirtschaft und Geologie, 2018: Restnitrat im Boden. URL: <https://www.landwirtschaft.sachsen.de/restnitrat-im-boden-39857.html> (last access 25.11.2021))
- <sup>20</sup> Cf. Schwäbische Tafel Stuttgart e.V., n. d.
- <sup>21</sup> Cf. Landeshauptstadt Stuttgart – Amt für Sport und Bewegung, 2018.
- <sup>22</sup> Cf. Engelbrecht/Heinsohn, 2021.
- <sup>23</sup> Cf. Bewegt aufwachsen [Grow up actively] n. d.
- <sup>24</sup> Cf. Hausmann et al., 2008.  
Note: There are no comprehensive analyses of the causes and triggers of suicide mortality among men or in a gender comparison, but there are many individual studies. Influencing factors are in particular social and emotional isolation. Furthermore, traditional gender models play a role: many men are under-diagnosed with depression; there is a lack of acceptance of mental illness and comprehensive forms of assistance. While women tend to seek help in difficult situations, men are more likely to consider conflicts as a personal failure and are inclined to equate professional failures with social failures more quickly. A tendency of trying to cope with depression through alcohol was observed. This leads to an increased suicide risk. In summary, it should be emphasised that it is not the conflict situations that lead to suicide, but the inability to deal with these situations.
- <sup>25</sup> Cf. Radeloff et al., 2022.
- <sup>26</sup> Cf. Landeshauptstadt Stuttgart – Sozialamt, 2021.
- <sup>27</sup> Cf. Frisoli/Mäding, 2021.
- <sup>28</sup> Cf. 2021 Citizen Survey, 2023.
- <sup>29</sup> Cf. Schütt, 2023.
- <sup>30</sup> Cf. Gunderlach, 2017.
- <sup>31</sup> Cf. Empfehlungen Schwimmen in der Schule [Recommendations for school swimming], 2017.
- <sup>32</sup> Cf. Walker, 2016.
- <sup>33</sup> Cf. Methodische Hinweise zu den Daten des Mikrozensus [Methodical information on data of the micro census], 2023.
- <sup>34</sup> Cf. Dispan, 2013.
- <sup>35</sup> Cf. Landeshauptstadt Stuttgart – Schulverwaltungsamt, 2013.
- <sup>36</sup> Cf. Hufnagel, 2019.
- <sup>37</sup> Cf. Landeshauptstadt Stuttgart – Referat für Jugend und Bildung, 2018.



- <sup>38</sup> Note: The State Education Authority writes in this regard: "Inclusion (Latin for "being included") means that all people participate in social life in a self-determined way. For schools and teaching, this means: pupils with disabilities no longer have to integrate and adapt to the school environment, but this is designed and equipped so that everyone can live and learn on equal terms – no matter how different they are. The ideal of inclusion is that the distinction "disabled / not disabled" is no longer relevant, cf. Inklusion, n. d.
- <sup>39</sup> Cf. Inklusion, n. d.
- <sup>40</sup> Note: School Act for Baden-Württemberg (schg) – Section 83 Fulfilment of the entitlement to special needs education, parental choice in primary and secondary education I.
- <sup>41</sup> Cf. Landeshauptstadt Stuttgart – Schulverwaltungsamt, 2022.
- <sup>42</sup> Cf. Bibliotheken als starke Vermittler für Bildung und Kultur in Städten und Gemeinden, 2016.
- <sup>43</sup> Note: Governance is understood as a system for regulating and coordinating a state, municipality, administration or other organisational units. This goes beyond the term of government, since negotiations, decisions and implementations of several stakeholders from the world of politics, business, organisations and civil society are coordinated here. More information: Deutsches Institut für Urbanistik, 2018: Was ist eigentlich? Governance. URL: <https://difu.de/publikationen/difu-berichte-32018/was-ist-eigentlich-governance.html> (last access 27.08.2019).
- <sup>44</sup> Cf. Regelaltersrente [Ordinary pension benefits], n. d.
- <sup>45</sup> Cf. Fischer et.al, 2021.
- <sup>46</sup> Cf. Verdienstabstand zwischen Frauen und Männern [Pay gap between women and men], n. d.
- <sup>47</sup> Cf. Blätgen/Ledermüller, 2020.
- <sup>48</sup> Cf. Öffentliche WCs kostenfrei nutzbar [Public toilets are free], 2022.
- <sup>49</sup> Cf. Für Behindertentoiletten gibt es den „Euroschlüssel“ [“Euro key” for toilets for the disabled], 2018.
- <sup>50</sup> Cf. Trinkwasserverbrauch in Baden-Württemberg steigt wieder [Consumption of drinking water in Baden-Württemberg is increasing], 2023.
- <sup>51</sup> Cf. Landeshauptstadt Stuttgart – Gesundheitsamt, 2001.
- <sup>52</sup> Cf. Landeshauptstadt Stuttgart – Amt für Umweltschutz, 2010.
- <sup>53</sup> Cf. Klimaanpassungsinblau [Climate adaptation in blue], n. d.
- <sup>54</sup> Cf. Energiekonzept [Energy concept], 2016.
- <sup>55</sup> Cf. Stuttgarter Solaroffensive [Stuttgart’s solar campaign], n. d.
- <sup>56</sup> Cf. Wilke, 2023.
- <sup>57</sup> Cf. Energierichtlinie der Landeshauptstadt Stuttgart [Energy directive of the State Capital Stuttgart], 2020.
- <sup>58</sup> Cf. Münzenmaier, 2018.
- <sup>59</sup> Cf. Wirtschaftliche Auswirkungen – Statistiken mit Bezug zu COVID-19 [Scientific impacts – statistics with reference to COVID-19], n. d.
- <sup>60</sup> Cf. Münzenmaier, 2022.
- <sup>61</sup> Cf. Söldner, 2020.
- <sup>62</sup> Cf. Mehr Arbeitslose wegen Einbeziehung von Ukraine-Flüchtlingen [More unemployed people as refugees from the Ukraine are taken into account], 2022.
- <sup>63</sup> Cf. Obermaier et al, 2023.
- <sup>64</sup> Cf. Bürgergeld ersetzt ALG II [Bürgergeld replaces ALG II], 2023.
- <sup>65</sup> Cf. Minijob, n. d.
- <sup>66</sup> Cf. Geringfügige Beschäftigung [Marginal employment], n. d.
- <sup>67</sup> Note: MINT refers to mathematics, informatics, science and technology.
- <sup>68</sup> Cf. Biermann, 2021.
- <sup>69</sup> 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. (Cf. Erklärung Wirtschaftsabschnitte: Klassifikation der Wirtschaftszweige (Edition 2008 (WZ 2008))
- <sup>70</sup> Cf. John, 2008.
- <sup>71</sup> Note: At this point, the previous combined survey of school and vocational education was divided into separate characteristics. This led to various conversion effects during the transition period, including a signifi-



- cantly higher proportion of unknown qualifications and it might have lowered the rate of academic qualifications. This is not a specific Stuttgart phenomenon; these effects had a nationwide impact in the respective period.
- <sup>72</sup> Cf. Methodische Erläuterungen zum Innovationsindex [Methodical explanations to the innovation index], 2021.
- <sup>73</sup> Cf. Innovationsindex für die Stadt-/Landkreise und Regionen Baden-Württembergs [Innovation index for the city districts/counties and regions of Baden-Württemberg], 2022.
- <sup>74</sup> Cf. Einwiller, 2022.
- <sup>75</sup> Cf. Forschung und Entwicklung [Research and development], n. d.
- <sup>76</sup> Cf. Breitbandatlas Karte [Broadband Atlas map], n. d.
- <sup>77</sup> 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 is available that differentiates according to citizenship.
- <sup>78</sup> Note: In West Germany, the income threshold is 7,100 euro
- <sup>79</sup> Cf. Entgelte der Vollzeitbeschäftigten in Hessen gestiegen [Income of fully employed people in Hesse increased], 2022.
- <sup>80</sup> Cf. Deutz, 2021.
- <sup>81</sup> Cf. Landeshauptstadt Stuttgart, 2023.
- <sup>82</sup> Cf. Beauftragter der Bundesregierung für die Belange von Menschen mit Behinderungen [Federal Government Commissioner for Matters relating to People with Disabilities], 2021.
- <sup>83</sup> Cf. Söldner, 2023.
- <sup>84</sup> Cf. Held et al., 2021.
- <sup>85</sup> Cf. Gieck, 2019; cf. Schwarz, 2012.
- <sup>86</sup> Cf. Niedergesäss, 2022.
- <sup>87</sup> Cf. Forschung im Fokus – Elektroautos [Focus on research – electric cars], 2013.
- <sup>88</sup> Cf. Schütt, 2020.
- <sup>89</sup> Cf. Regio Rad Stuttgart, n. d.
- <sup>90</sup> Cf. E-bike rental “Stuttgarter Rössle”, n. d.
- <sup>91</sup> Cf. Verkehrs- und Tarifverbund Stuttgart GmbH, 2022.
- <sup>92</sup> Cf. Bürgerhaushalt 2023 [2023 participatory budgeting], 2023
- <sup>93</sup> Cf. Held et al., 2023.
- <sup>94</sup> Cf. Fairtrade-Schools [Fair trade schools], n. d.
- <sup>95</sup> Cf. Wilke, 2023a.
- <sup>96</sup> Cf. Riedel/Vollmer, 2021.
- <sup>97</sup> Cf. Transforming our world, n. d.
- <sup>98</sup> Cf. Waldzustandsbericht [Forest Condition Report], 2022.
- <sup>99</sup> Cf. Deutz, 2022.
- <sup>100</sup> Cf. Blaues Gut - Wir machen Gewässer, n. d.
- <sup>101</sup> Cf. Blaues Gut – wir machen Gewässer besser, 2020.
- <sup>102</sup> Cf. Westrich, 2000.
- <sup>103</sup> Cf. Detzel, 1998.
- <sup>104</sup> Note: The information is contained in the “Artenschutzkonzept” [Species Protection Concept] of the State Capital Stuttgart, 2018.
- <sup>105</sup> Cf. Meunier, 2019.
- <sup>106</sup> Cf. Das UBA, 2023.
- <sup>107</sup> Cf. Meunier, 2021.
- <sup>108</sup> Cf. Einmahl, n. d.
- <sup>109</sup> Cf. Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR) in Bundesamt für Bauwesen und Raumordnung (BBR), 2021.
- <sup>110</sup> Cf. Bürgerhaushalt [Participatory budgeting], 2021.
- <sup>111</sup> Cf. Vorschläge und Umsetzung 2011 bis 2021, Bürgerhaushalt Stuttgart [Proposals and implementation from 2011 to 2021, Participatory budgeting Stuttgart], n. d.
- <sup>112</sup> Cf. Bürgerhaushalt Stuttgart [Participatory budgeting Stuttgart], 2019.
- <sup>113</sup> Cf. Online Access Act (OZG), 2019.
- <sup>114</sup> Note: Term “Developing countries” as DAC term, but actually used for statistics, otherwise “Global South”
- <sup>115</sup> Cf. DAC List of ODA Recipients, n. d.



- <sup>116</sup> Cf. Goal 17 – Partnerships for the Goals, n. d.
- <sup>117</sup> Note: Town twinning of the State Capital Stuttgart:  
1) St. Helens, Great Britain, since 1948;  
2) Cardiff, Great Britain, since 1955;  
3) St. Louis, USA, since 1960;  
4) Strasbourg, France, since 1962;  
5) Mumbai, India, since 1968;  
6) Menzel Bourguiba, Tunisia, since 1971;  
7) Cairo, Egypt, since 1979;  
8) Lodz, Poland, since 1988;  
9) Brno, Czech Republic, since 1989;  
10) Samara, Russia, since 1992.
- <sup>118</sup> Note: EUROCITIES, Energy Cities, EU Cities for Fair and Ethical Trade, Connective Cities, POLIS, EFUS, Convention of the Mayors for Climate and Energy (as a coalition of municipal networks, also member of the Climate Alliance (climate protection) and of Mayors Adapt (climate change adaptation)), Mayors for Peace and the Council of European Municipalities and Regions (RGRE).
- <sup>119</sup> Note: New indicator for Europe-related activities as of 2022. Measures in the EU specialist advisory service and funding acquisition are also counted. In 2020, the position of the EU specialist advisor (for EU funding acquisition and EU process management) was created.
- <sup>120</sup> Note: Since 2021 “International Sustainability and Development”, cf. resolution on the 2020/21 two-year budget, Municipal Council document GRD 1246/2019; previously “Global Development Goals (SDG)”.
- <sup>121</sup> Note: From 2017 to 2020 plus third-party funded project position “Global Development Goals”
- <sup>122</sup> Cf. Statistikportal [Statistics portal], n. d.
- <sup>123</sup> Note: The classification of SDGs in three sustainability dimensions was made according to Rockström and Sukhdev (2016).
- <sup>124</sup> Note: In contrast to the Wegweiser für Kommunen [Community Guide], the targets are not split into subgoals. In addition, three targets are supplemented that are additionally relevant for Stuttgart.
- <sup>125</sup> Cf. Department of International Urbanism, Institute of Urban Planning and Design, University of Stuttgart, (2023).
- <sup>126</sup> Cf. EU holistic approach to sustainable development, n. d.
- <sup>127</sup> Cf. Die Bundesregierung [The Federal Government], 2020.
- <sup>128</sup> Cf. Nachhaltigkeitsstrategie Baden-Württemberg [Sustainability strategy of Baden-Württemberg], n. d.
- <sup>129</sup> Cf. Halbzeitbilanz der Agenda 2030 [Mid-term review of the 2030 Agenda], n. d.
- <sup>130</sup> Cf. Witte, 2022.
- <sup>131</sup> Cf. SDGs in Stuttgart – mein Stuttgart meine Welt [my Stuttgart my world], n. d.
- <sup>132</sup> Cf. 70599 Lebenswert, n. d.
- <sup>133</sup> Note: Examples of the (international) exchange and transfer of the experience of the State Capital Stuttgart in anchoring the 2030 Agenda include research projects, panel events and lectures, as well as workshops with international partners at EU and UN level: for instance at the German Sustainability Day (2019, 2021), as a model municipality in the project “Indicators of municipal development cooperation” (SKEW, German Association of Cities and Towns, Bertelsmann Foundation and other organising units), in the advancement of the Leipzig Charter as part of the German EU Council Presidency in 2021, in the National Progress Report on the New Urban Agenda, the 2021 State Report of the Federal Government to the UN on the implementation of the 2030 Agenda (Voluntary National Review) or together with partners Utrecht, Malmö, Gent and Bonn at the UN Global Festival of Action in Bonn and the ICLEI World Conference (Local Governments for Sustainability) in Montréal.
- <sup>134</sup> Note: In the Council for Development Cooperation of the State of Baden-Württemberg, in the Working Group Municipal Development Cooperation of the Association of Cities and Towns of Baden-Württemberg, in the Working Group International Municipal Cooperation and Global Sustainability of the German Association of Cities and Towns, and in the EUROCITIES SDG Task Force. The recommendations of the association of European municipalities on the anchoring of the 2030 Agenda are also relevant for the SDG report of the European Union, which will be presented to the UN for the first time in 2023 under the Swedish Council Presidency.
- <sup>135</sup> Cf. Bremen, Neumarkt and Stuttgart are awarded for being cities for fair and ethical trade, 2020.
- <sup>136</sup> Cf. Stuttgart gewinnt den Deutschen Nachhaltigkeitspreis 2022 [Stuttgart wins the German Sustainability Award in 2022], 2023.





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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

### Goal 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture

- 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



- 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

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- 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

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- 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

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- 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

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- 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
- 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 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
- 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: Transformation unserer Welt: die Agenda 2030 für nachhaltige Entwicklung; Resolution der Generalversammlung, verabschiedet am 25. September 2015 (<https://sdgs.un.org/2030agenda>; last access 28.09.2021).







## Appendix II – Selected SDG indicators for the State Capital Stuttgart

The following overview contains the 102 indicators selected for the present 3<sup>rd</sup> Stuttgart VLR. They are allocated to the respective SDGs or their targets. Appropriate cross-references are inserted for indicators covering several SDGs.

SDG 1: No Poverty (End poverty in all its forms everywhere)		
Indicator	Calculation	Source of the Indicator
<b>SDG 1.1:</b> By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$ 1.25 US dollar a day		
Twin towns in the Global South	See SDG 17	
<b>SDG 1.2:</b> 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		
At-risk-of-poverty rate	(Number of households with an income < 60 % of the median equivalised income in Stuttgart) / (Total number of private households) * 100	Statistics portal (modified State Capital Stuttgart 2023)
Children with overweight (at school enrolment examination)	See SDG 2	
Gross domestic product	See SDG 8	
<b>SDG 1.3:</b> Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and vulnerable		
Recipients of minimum social benefits	(Number of benefit recipients pursuant to SGB II and SGB XII + Number of standard benefits pursuant to the Asylum Seekers Benefit Act) / (Number of residents) * 100	Key indicator, SDG indicators for municipalities (modified State Capital Stuttgart 2021)



Indicator	Calculation	Source of the Indicator
Poverty	<i>Child poverty:</i> (Number of benefit recipients pursuant to SGB II / SGB XII under 15 years + Number of persons under 15 years in a community of dependence with benefit recipients pursuant to SGB II / SGB XII) / (Number of residents under the age of 15) * 100	Key indicator, SDG indicators for municipalities
	<i>Poverty among adolescents / young adults:</i> (Number of benefit recipients pursuant to SGB II / SGB XII between 15 and 17 + Number of persons between 15 and 17 in a community of dependence with benefit recipients pursuant to SGB II/SGB XII) / (Number of residents between 15 and 17) * 100	Key indicator, SDG indicators for municipalities
	<i>Poverty among the elderly:</i> (Number of benefit recipients pursuant to SGB XII 65 years and older) / (Number of residents 65 years and older) * 100	Key indicator, SDG indicators for municipalities
	<i>Poverty among single parents:</i> (Number of single parents with benefits pursuant to SGB II) / (Number of single parents) * 100	Supplement State Capital Stuttgart 2019
Childcare	See SDG 4	
School leavers by school-leaving qualifications	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 people without German citizenship receiving benefits	See SDG 10	
Accommodation service for social housing	See SDG 11	



Indicator	Calculation	Source of the Indicator
<p><b>SDG 1.4:</b> 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</p>		
Homelessness	(Number of homeless residents in housing) / (total residents) * 100	Supplemental indicator proposal, SDG indicators for municipalities 2020
<p><b>SDG 1.5:</b> 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</p>		
Index "Municipal Climate Adaptation"	See SDG 13	
<p><b>SDG 1.b:</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</p>		
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)**

Indicator	Calculation	Source of the Indicator
<p><b>SDG 2.1:</b> 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</p>		
Homelessness	See SDG 1	
Poverty – Child poverty, poverty among adolescents / young adults, poverty among the elderly, poverty among single parents	See SDG 1	
	See SDG 1	
	See SDG 1	
	See SDG 1	



Indicator	Calculation	Source of the Indicator
<p><b>SDG 2.2:</b> 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</p>		
Children with overweight (at school enrolment examination)	$(\text{Number of children at school enrolment with overweight}) / (\text{Number of all examined children of a school year}) * 100$	Key indicator, SDG indicators for municipalities
Promotion of physical activity in nursery schools	See SDG 3	
Educational programmes with ecological sustainability relevance	See SDG 4	
<p><b>SDG 2.4:</b> 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</p>		
Organic farming (operating farms and areas)	$(\text{Area under organic farming}) / (\text{Area under farming in total}) * 100$ $(\text{Number of organically operating farms}) / (\text{Number of agricultural farms in total}) * 100$	Key indicator, SDG indicators for municipalities (modified) State Capital Stuttgart 2021)
Nitrogen surplus	$(\text{Nitrogen surplus in kilogrammes}) / (\text{Area under agricultural use in hectares}) * 100$	Key indicator, SDG indicators for municipalities
Quality of running water	See SDG 6	
Sustainable procurement	See SDG 12	
Greenhouse gas emissions	See SDG 13	
Soil index	See SDG 15	
Biodiversity	See SDG 15	
<p><b>SDG 2.a:</b> 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</p>		
Sustainable procurement	See SDG 12	
Fair trade schools	See SDG 12	



**SDG 3: Good health and well-being: Ensure healthy lives and promote well-being for all at all ages**

Indicator	Calculation	Source of the Indicator
<b>SDG 3.4:</b> 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)	$(\text{Number of children of an age group with a conspicuous screening of gross motor skills}) / (\text{Total number of children of an enrolment year who are examined}) * 100$	Supplement State Capital Stuttgart 2021
Organisation level in sports	$(\text{Number of persons organised in sport clubs per life phase}) / (\text{Total number of residents per life phase}) * 100$	Supplement State Capital Stuttgart 2021
Urban physical activity spaces	$(\text{Sports areas accessible to all in square metres}) / (\text{Total number of residents}) * 100$	Supplement State Capital Stuttgart 2021
Promotion of physical 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	$(\text{Number of suicides of men}) / (\text{Number of residents}) * 100,000$ $(\text{Number of suicides of women}) / (\text{Number of residents}) * 100,000$	Supplemental indicator proposal, SDG indicators for municipalities
Homelessness	See SDG 1	
Children with overweight (at school enrolment examination)	See SDG 2	
Relative poverty among women	See SDG 5	
Unemployment	See SDG 8	
Long-term unemployment	See SDG 8	
Low-barrier housing	See SDG 10	
Recreational areas	See SDG 11	
Forest area	See SDG 13	
Trees in public spaces	See SDG 13	
Biodiversity	See SDG 15	
Mobile working	See SDG 16	



Indicator	Calculation	Source of the Indicator
<b>SDG 3.6:</b> 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) / (Number of residents) * 1,000	Key indicator, SDG indicators for municipalities
Transport means for getting to work (incl. walking)	See SDG 11	
Car density	See SDG 11	
Bicycle traffic	See SDG 11	
<b>SDG 3.8:</b> 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		
Premature mortality	(Number of fatalities among persons under 65) / (Number of residents) * 1,000	Key indicator, SDG indicators for municipalities
Medical care	(Number of general practitioners, doctors without a specialisation) / (Number of residents) * 100,000	Key indicator, SDG indicators for municipalities
Primary care close to home – distance to the nearest general practitioner 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) * 1,000	Supplemental indicator proposal, SDG indicators for municipalities
Gross domestic product	See SDG 8	
<b>SDG 3.9:</b> By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination		
Air quality	Annual medium nitrogen dioxide pollution: permitted 40 µg NO <sub>2</sub> / m <sup>3</sup>	Key indicator, SDG indicators for municipalities (modified State Capital Stuttgart 2019)
	Number of days per year with a particulate matter average of PM10 > 50µg / m <sup>3</sup> : permitted 35 days	Key indicator, SDG indicator for municipalities (modified)
Noise pollution	Day / evening / night noise index over 24 hours: (Number of residents with road traffic noise exposure above 65 dB(A) over 24 hours) / (Number of residents) * 100	Supplement State Capital Stuttgart 2019
	Night-time noise index: (Number of residents with night-time road traffic noise pollution above 55 dB(A)) / (Number of residents) * 100	Supplement State Capital Stuttgart 2019
Transport means for getting to work (incl. walking)	See SDG 11	



Indicator	Calculation	Source of the Indicator
Car density	See SDG 11	
Bicycle traffic	See SDG 11	
Greenhouse gas emissions	See SDG 13	
Wastewater treatment	See SDG 6	

**SDG 4: Quality education (ensure inclusive and equitable quality education and promote lifelong learning opportunities for all)**

Indicator	Calculation	Source of the Indicator
<b>SDG 4.1:</b> 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	$(\text{Number of transitions to the respective type of school}) / (\text{Number of primary school children in final year}) * 100$	Supplement State Capital Stuttgart 2021
<b>SDG 4.2:</b> 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	<i>Care ratio for under 3-year-olds:</i> $(\text{Number of children under 3 in daycare centres}) / (\text{Number of children under 3}) * 100$	Key indicator, SDG indicators for municipalities
	<i>Provision rate for under 3-year-olds:</i> $(\text{Number of places for children under 3}) / (\text{Number of children under 3}) * 100$	Supplement State Capital Stuttgart 2021
	<i>Care ratio for 3 to under 6 years old children:</i> $(\text{Number of 3 to under 6 years old children in daycare centres}) / (\text{Number of 3 to 6 years old children}) * 100$	Key indicator, SDG indicators for municipalities
	<i>Care ratio for 3 to under 6 years old children:</i> $(\text{Number of places for 3 to 6 years old children} / \text{Number of 3 to 6 years old children}) * 100$	Supplement State Capital Stuttgart 2021
Children with speech impediments (at school enrolment examination)	$(\text{Number of children with a conspicuous language screening according to HASE}) / (\text{Number of all children examined in an enrolment year}) * 100$	Supplement State Capital Stuttgart 2021
Children with overweight (at school enrolment examination)	See SDG 2	



Indicator	Calculation	Source of the Indicator
Gross motor skills among children	See SDG 3	
Promotion of physical activity in nursery schools	See SDG 3	
<b>SDG 4.3:</b> 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	(Number of school leavers by school-leaving qualifications) / (Number of school leavers in total) * 100  (according to gender)	Supplement State Capital Stuttgart 2021
Students	Number of students per winter semester  (Number of male and female students) / (Total number of students) * 100	Supplement State Capital Stuttgart 2023
Access to vocational education and training after secondary school	See SDG 8	
<b>SDG 4.4:</b> 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		
Students	See SDG 4	
Vocational qualifications	(Persons with an academic degree or with an apprenticeship/vocational training, technical college degree) / (Number of employed persons) * 1,000	Supplement State Capital Stuttgart 2023
<b>SDG 4.5:</b> 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		
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 inclusively educated pupils per type of school) / (Number of all pupils with special education needs per type of school) * 100	Supplement State Capital Stuttgart 2023
Digitalisation at municipal schools	(Number of digital terminals at municipal schools) / (Number of all pupils at municipal schools) * 100	Supplement State Capital Stuttgart 2023
<b>SDG 4.7:</b> 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		





Indicator	Calculation	Source of the Indicator
Educational programmes with ecological sustainability relevance	$(\text{Number of schools which participate in at least one eco-school programme, hold environmental certificates or are involved in ESD projects}) / (\text{Total number of schools}) * 100$	Supplemental indicator proposal, SDG indicators for municipalities (modified State Capital Stuttgart 2021)
Media collection of the Stuttgart City Library	$(\text{Media}) / (\text{Number of residents})$	Supplement State Capital Stuttgart 2023
Culture budget	$(\text{Culture budget in euro}) / (\text{Number of residents})$	Supplement State Capital Stuttgart 2021
Transport means for getting to work (incl. walking)	See SDG 11	
Biodiversity	See SDG 15	
Participation of adolescents	See SDG 16	
Participatory budgeting	See SDG 16	
Registered users at "Stuttgart – my city"	See SDG 16	

**SDG 5: Gender equality (achieve gender equality and empower all women and girls)**

Indicator	Calculation	Source of the Indicator
<b>SDG 5.1:</b> End all forms of discrimination against all women and girls everywhere		
Relation of employment rates	<p><i>Relation of women's employment rates compared to men:</i></p> $\frac{((\text{Number of women ssc at the place of residence}) / (\text{Total number of women}) * 100) / ((\text{Number of men ssc at the place of residence}) / (\text{Total number of men}) * 100) * 100}$	Key indicator, SDG indicators for municipalities
	<p><i>Employment rates of women and men in part-time employment:</i></p> $(\text{Number of women ssc at the place of residence in part-time employment}) / (\text{Total number of women ssc at the place of residence}) * 100$ $(\text{Number of men ssc at the place of residence in part-time employment}) / (\text{Total number of men ssc at the place of residence}) * 100$	Supplement State Capital Stuttgart 2021



Indicator	Calculation	Source of the Indicator
Pay gap between women and men	$(\text{Median income of women ssc in full-time employment}) / (\text{Median income of men ssc in full-time employment}) * 100$	SDG indicators for municipalities 2022, modified State Capital Stuttgart 2023
Relative poverty among women	$((\text{Number of female benefit recipients pursuant to SGB II and SGB XII}) / (\text{Total number of women 15 years and older})) / ((\text{Number of male benefit recipients pursuant to SGB II and SGB XII}) / (\text{Total number of men 15 years and older}))$	Supplement State Capital Stuttgart 2019
Poverty among single parents	See SDG 1	
Children with overweight (at school enrolment examination)	See SDG 2	
Start-ups	See SDG 9	
Digital municipality	See SDG 16	
Mobile Working	See SDG 16	
<b>SDG 5.2:</b> 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	
<b>SDG 5.4:</b> 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		
Childcare	See SDG 4	
Proportion of fathers benefitting from parental allowance	$(\text{Number of fathers receiving parental benefits (quarterly average)}) / (\text{Total number of persons receiving parental benefits (quarterly average)}) * 100$	SDG indicators for municipalities 2022, modified State Capital Stuttgart 2023
<b>SDG 5.5:</b> 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	$(\text{Number of women with a seat in the Municipal Council}) / (\text{Seats in the Municipal Council in total}) * 100$	Key indicator, SDG indicators for municipalities
Women in management positions	$(\text{Number of women in management positions}) / (\text{Number of employees in management positions}) * 100$	Supplement State Capital Stuttgart 2021



Indicator	Calculation	Source of the Indicator
<b>SDG 5.b:</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)**

Indicator	Calculation	Source of the Indicator
<b>SDG 6.1:</b> By 2030, achieve universal and equitable access to safe and affordable drinking water for all		
Consumption of drinking water	See SDG 6	
Wastewater treatment	See SDG 6	
<b>SDG 6.2:</b> 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	$\frac{\text{(Number of barrier-free public sanitary facilities)}}{\text{(Number of public sanitary facilities in total)}} * 100$ $\frac{\text{(Number of low-barrier public sanitary facilities)}}{\text{(Number of public sanitary facilities in total)}} * 100$	Supplement State Capital Stuttgart 2023
Low-barrier housing	See SDG 10	
<b>SDG 6.3:</b> By 2030, improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally		
Wastewater treatment	$\frac{\text{(Wastewater volume treated by denitrification and the elimination of phosphorus)}}{\text{(Wastewater volume in total)}} * 100$	Key indicator, SDG indicators for municipalities
Organic farming	See SDG 2	
<b>SDG 6.4:</b> 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	$\frac{\text{(Annual consumption of drinking water (private households and small business))}}{\text{(Number of residents) * (days per year)}}$	Key indicator, SDG indicators for municipalities



Indicator	Calculation	Source of the Indicator
<b>SDG 6.6:</b> By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes		
Consumption of drinking water	See SDG 6	
Renaturation of running water	See SDG 15	
Quality of running water	(Watercourses with at least quality class II in km) / (Total watercourses in km) * 100	Key indicator, SDG indicators for municipalities

**SDG 7: Affordable and clean energy (ensure access to affordable, reliable, sustainable and modern energy for all)**

Indicator	Calculation	Source of the Indicator
<b>SDG 7.2:</b> By 2030, increase substantially the proportion of renewable energy in the global energy mix		
Proportion of renewable energy in final energy consumption	(Energy supply by renewable energy) / (Gross final energy consumption (climatically adjusted)) * 100	Key indicator, SDG indicators for municipalities (modified)
Power from photovoltaics	(Installed photovoltaic power) / (Number of residents)	Supplement State Capital Stuttgart 2021
Production of renewable energy in the city area	Annual heat and power generation from renewable energy in the city area (GWh/a)	Supplement State Capital Stuttgart 2019
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
	(Consumption of final energy by traffic (climatically adjusted)) / (Number of residents)	Supplement State Capital Stuttgart 2019
	(Consumption of final energy by private households (climatically adjusted)) / (Number of residents)	Supplement State Capital Stuttgart 2019
	Consumption of final energy by the city as a whole (climatically adjusted)	Supplement State Capital Stuttgart 2019
Air quality	See SDG 3	
Quality of running water	See SDG 6	
Residential buildings with renewable heating energy	See SDG 11	



Indicator	Calculation	Source of the Indicator
<b>SDG 7.3:</b> By 2030, double the global rate of improvement in energy efficiency		
Energy productivity	(Gross domestic product) / (Final energy consumption by the city as a whole)	Supplemental indicator proposal, SDG indicators for municipalities
Passenger cars with electric drive	See <i>SDG 11</i>	
<b>SDG 7.a:</b> By 2030, promote investment in energy infrastructure and clean energy technology		
Charging station infrastructure	(Number of public and private normal and quick charging points as of 3.7 kW) / (Number of cars) * 100	Supplemental indicator proposal, SDG indicators for municipalities 2022
	(Number of public and private normal and quick charging points as of 3.7 kW) / (Number of cars with electric drive (incl. plug-in hybrids)) * 100	Supplemental indicator proposal, SDG indicators for municipalities 2022
Passenger cars with electric drive	See <i>SDG 11</i>	

**SDG 8: Decent work and economic growth (promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)**

Indicator	Calculation	Source of the Indicator
<b>SDG 8.1:</b> 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		
Gross domestic product	(Gross domestic product) / (Number of residents)	Key indicator, SDG indicators for municipalities
<b>SDG 8.2:</b> Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors		
Energy productivity	See <i>SDG 7</i>	
Energy consumption	See <i>SDG 7</i>	
Highly qualified people	See <i>SDG 9</i>	
Start-ups	See <i>SDG 9</i>	
Digital municipality	See <i>SDG 16</i>	
<b>SDG 8.4:</b> 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		



Indicator	Calculation	Source of the Indicator
EMAS-certified sites	See SDG 12	
Waste volume	See SDG 12	
Consumption of drinking water	See SDG 6	
Sustainable procurement	Sustainable procurement procedures: see SDG 12	
	"Sustainable Procurement" index: see SDG 12	
Greenhouse gas emissions	See SDG 13	
<p><b>SDG 8.5:</b> 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</p>		
Unemployment	<i>Unemployment in total:</i> (Registered unemployed people) / ((The entire civilian labour force) + (Registered unemployed people)) * 100	Supplemental indicator proposal, SDG indicators for municipalities
	<i>Unemployment among adolescents and young adults:</i> (Registered unemployed people under 25) / ((The entire civilian labour force under 25) + (Registered unemployed people under 25)) * 100	Supplemental indicator proposal, SDG indicators for municipalities
Long-term unemployment	(Registered unemployed people with a duration of unemployment > 1 year) / ((The entire civilian labour force) + (Registered unemployed people)) * 100	Key indicator, SDG indicators for municipalities
Employment rate	(Number of employees subject to social security contributions between 15 and 64 years at the place of residence) / (Number of residents between 15 and 64 years) * 100	Key indicator, SDG indicators for municipalities
"People increasing earnings"	(Number of benefit II recipients in employment) / (Total number of recipients of unemployment benefits II who are able to work) * 100	Key indicator, SDG indicators for municipalities
Marginal employment	(Number of exclusively marginally employed employees) / (Ssc + exclusively marginally employed employees) * 100	Supplement State Capital Stuttgart 2023
School leavers by school-leaving qualifications	See SDG 4	
Relation of employment rates	See SDG 5	
Trade tax rate	See SDG 16	



Indicator	Calculation	Source of the Indicator
<b>SDG 8.6:</b> By 2020, substantially reduce the proportion of youth not in employment, education or training		
Poverty – poverty among adolescents/young adults	See SDG 1	
School leavers by school-leaving qualifications	See SDG 4	
Access to vocational education and training after secondary school	(Number of pupils according to qualification) / (Number of pupils in the respective vocational programme) * 100	Supplement State Capital Stuttgart 2023
Students	See SDG 4	
Vocational qualification	See SDG 4	
Unemployment among adolescents and young adults	See SDG 8	

**SDG 9: Industry, innovation and infrastructure (build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation)**

Indicator	Calculation	Source of the Indicator
<b>SDG 9.1:</b> 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	
Primary medical care – distance to the nearest GP practice	See SDG 3	
Charging station infrastructure	See SDG 7	
Accommodation service for social housing	See SDG 11	
<b>SDG 9.2:</b> Promote inclusive and sustainable industrialization, and by 2030 raise significantly industry's share of employment and GDP in line with national circumstances, and double its share in least developed countries		
Charging station infrastructure	See SDG 7	



Indicator	Calculation	Source of the Indicator
Final energy consumption by industry, commerce, trade and services	See SDG 7	
Production of renewable energy in the city area	See SDG 7	
Power from photovoltaics	See SDG 7	
Sustainable procurement	See SDG 12	
Greenhouse gas emissions	See SDG 13	
Soil index	See SDG 15	
Biodiversity	See SDG 15	
<p><b>SDG 9.4:</b> 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</p>		
Organic farming	See SDG 2	
Energy productivity	See SDG 7	
Transport means for getting to work (incl. walking)	See SDG 11	
Bicycle traffic	See SDG 11	
Passenger cars with electric drive	See SDG 11	
EMAS-certified sites	See SDG 12	
Digital municipality	See SDG 16	
<p><b>SDG 9.5:</b> 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</p>		
Start-ups	<p><i>Start-ups in total:</i>            (Number of new establishment of commercial enterprises) / (Number of residents) * 1,000</p>	Key indicator, SDG indicators for municipalities
	<p><i>Start-ups by women:</i>            (Number of new establishment of commercial enterprises by women) / (Number of new establishment of commercial enterprises in total) * 100</p>	Supplemental indicator proposal, SDG indicators for municipalities





Indicator	Calculation	Source of the Indicator
Start-up volume	$(\text{Number of start-ups with economic substance}) / (\text{Number of residents}) * 1,000$	Supplement State Capital Stuttgart 2023
Highly qualified people	$(\text{Number of employees with an academic degree subject to social security contributions at the place of work}) / (\text{Total number of employees subject to social security contributions at the place of work}) * 100$	Key indicator, 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 the State Statistical Office Baden-Württemberg.	State Statistical Office Baden-Württemberg, Supplement State Capital Stuttgart 2023
R&D resources in the economy	$(\text{R\&D employees in the business sector Stuttgart}) / (\text{Number of employees subject to social security contributions}) * 100$	State Statistical Office Baden-Württemberg, Supplement State Capital Stuttgart 2023
	Internal R&D expenditure in the business sector in billion euro	State Statistical Office Baden-Württemberg, Supplement State Capital Stuttgart 2023
<b>SDG 9.c:</b> 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	$(\text{Number of households with broadband coverage } (\geq 50 \text{ Mbit/s})) / (\text{Number of all households in total}) * 100$	SDG indicators for municipalities
	$(\text{Number of households with fibre optical coverage FFTB/H } \geq 1000 \text{ Mbit/s}) / (\text{Number of all households}) * 100$	Supplement State Capital Stuttgart 2023
Mobile working	See SDG 16	

**SDG 10: Reduced inequalities (reduce inequality within and among countries)**

Indicator	Calculation	Source of the Indicator
<b>SDG 10.2:</b> 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		
Recipients of minimum social security benefits	See SDG 1	
Poverty – poverty among children, adolescents/ young adults, the elderly, single parents	See SDG 1	
	See SDG 1	
	See SDG 1	
	See SDG 1	



Indicator	Calculation	Source of the Indicator
Relative poverty rate among persons without German citizenship	$\frac{((\text{Number of benefit recipients pursuant to SGB II and SGB XII without German citizenship}) / (\text{Total number of persons without German citizenship}))}{((\text{Number of benefit recipients pursuant to SGB II and SGB XII with German citizenship}) / (\text{Total German citizens}))}$	Key indicator, SDG indicators for municipalities (modified State Capital Stuttgart 2021)
Relative employment rate of people without German citizenship	$\frac{((\text{Number of people without German citizenship subject to social security contributions at the place of residence between 15 and 64 year}) / (\text{Total number of people without German citizenship between 15 and 64 years}))}{((\text{Total number of employees subject to social security contributions at the place of residence between 15 and 64 years}) / (\text{Total number of residents between 15 and 64 years}))} * 100$	Supplemental indicator proposal, SDG indicators for municipalities
Relation of the median salary according to citizenship	$\frac{(\text{Median salary of full-time employees subject to social security contributions without German citizenship})}{(\text{Median salary of full-time German employees subject to social security contributions})} * 100$	Supplement State Capital Stuttgart 2023
School-leavers by school-leaving qualification	See SDG 4	
Relation of employment rates	See SDG 5	
Meeting points for citizens	$\frac{(\text{Number of meeting points for the elderly, district community centres, district and family centres})}{(\text{Number of residents}) * 100,000}$	Supplemental indicator proposal, SDG indicators for municipalities (SDG 16; modified State Capital Stuttgart 2021)
Children with overweight	See SDG 2	
Low-barrier housing	$\frac{(\text{Number of low-barrier apartments in Stuttgart})}{(\text{Total number of private households})} * 100$	Supplement State Capital Stuttgart 2023
<b>SDG 10.3:</b> Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory policies and practices and promoting appropriate policies and action in this regard		
Poverty among single parents	See SDG 1	
Vocational qualification	See SDG 4	
Inclusively educated pupils	See SDG 4	
School leavers by school-leaving qualifications	See SDG 4	
Access to vocational education and training after secondary school	See SDG 8	



Indicator	Calculation	Source of the Indicator
Students	See SDG 4	
Relation of employment rates	See SDG 5	
Relative poverty rate among women	See SDG 5	
Pay gap between women and men	See SDG 5	
Premature mortality	See SDG 3	
<b>SDG 10.4:</b> Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality		
Income distribution	Number of households with an equivalent income of less than 60 per cent (low), between 60 and 150 per cent (middle), more than 150 per cent (high) / (Total number of households) * 100	Supplemental indicator proposal, SDG indicators for municipalities 2020, modified State Capital Stuttgart 2023
<b>SDG 10.7:</b> Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies		
Relative employment rate of people without German citizenship	See SDG 10	
Relative poverty rate of people without German citizenship	See SDG 10	
Relation of the median salary according to citizenship	See SDG 10	
Waiting times for social housing (Non-EU citizens)	See SDG 11	

**SDG 11: Sustainable cities and communities (make cities and human settlements inclusive, safe, resilient and sustainable)**

Indicator	Calculation	Source of the Indicator
<b>SDG 11.1:</b> By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums		
Rents on offer	Asking market rents (net cold) per sqm for initial and re-letting	Key indicator, SDG indicators for municipalities



Indicator	Calculation	Source of the Indicator
Accommodation service for social housing	<i>Accommodation service for social housing:</i> (Number of households placed) / (Total number of households registered in the municipal planning file) * 100	Supplement State Capital Stuttgart 2019
	<i>Waiting list:</i> Average time for an apartment – itemised by household size and citizenship	Supplement State Capital Stuttgart 2019
Medical care	See SDG 3	
Primary care close to home – distance to the nearest GP practice	See SDG 3	
Places in nursing homes	See SDG 3	
Low-barrier housing	See SDG 10	
Homelessness	See SDG 1	

**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 road users, who go to work or training place on foot, by bicycle, e-bike or public transport) / (Total number of road users on the way to work or training place) * 100	Key indicator, SDG indicators for municipalities (modified State Capital Stuttgart 2021)
Car density	(Number of private cars) / (Number of residents above 18) * 1,000	SDG indicators for municipalities 2020
Bicycle traffic	(Number of cyclists counted) / (Number of residents) * 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
Accessibility of public transport	(Number of barrier-free bus stops) / (Total number of bus stops) * 100	Supplemental indicator proposal, SDG indicators for municipalities (modified State Capital Stuttgart 2021)
Charging station infrastructure	See SDG 7	



Indicator	Calculation	Source of the Indicator
<b>SDG 11.3:</b> By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries		
Land use	Area used for settlements and transport in hectares – area used for settlements and transport in hectares in the previous year	Key indicator, SDG indicators for municipalities
Urban physical activity spaces	See SDG 3	
Media collection of the Stuttgart City Library	See SDG 4	
Culture budget	See SDG 4	
Soil index	See SDG 15	
Nature conservation areas	See SDG 15	
Biodiversity	See SDG 15	
Cash surplus/deficit for long-term fulfilment of tasks	See SDG 16	
Digital municipality	See SDG 16	
Registered users on “Stuttgart – my city”	See SDG 16	
Mobile working	See SDG 16	
<b>SDG 11.5:</b> 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	
<b>SDG 11.6:</b> 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		
Air quality	See SDG 3	
Noise pollution	See SDG 3	
Waste volume	See SDG 12	
Greenhouse gas emissions	See SDG 13	



Indicator	Calculation	Source of the Indicator
<b>SDG 11.7:</b> 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 leisure space) / (Number of residents)	Key indicator, SDG indicators for municipalities
Crimes	See SDG 16	
Barrier-free or low-barrier sanitary facilities	See SDG 6	
Accessibility of public transport	See SDG 11	
Trees in public spaces	See SDG 13	
Recreational areas	See SDG 11	
<b>SDG 11.b:</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		
Energy productivity	See SDG 7	
Completed residential buildings with renewable heating energy	(Number of completed residential buildings with renewable primary heating energy) / (Total number of completed residential buildings) * 100	SDG indicators for municipalities 2020
“Municipal climate adaptation” index	See SDG 13	

**SDG 12: Responsible consumption and production (Ensure sustainable consumption and production patterns)**

Indicator	Calculation	Source of the Indicator
<b>SDG 12.1:</b> 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
<b>SDG 12.2:</b> By 2030, achieve the sustainable management and efficient use of natural resources		
Consumption of drinking water	See SDG 6	
Nitrogen surplus	See SDG 2	



Indicator	Calculation	Source of the Indicator
Air quality	See SDG 3	
Noise pollution	See SDG 3	
Wastewater treatment	See SDG 6	
Energy productivity	See SDG 7	
Power from photovoltaics	See SDG 7	
Production of renewable energy in the city area	See SDG 7	
Completed residential buildings with renewable energy	See SDG 11	
Greenhouse gas emissions	See SDG 13	
Biodiversity	See SDG 15	
<p><b>SDG 12.3:</b> 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</p>		
Waste volume: proportion of recyclable material	See SDG 12	
Organic farming	See SDG 2	
<p><b>SDG 12.4:</b> 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</p>		
Nitrogen surplus	See SDG 2	
Air quality	See SDG 3	
Wastewater treatment	See SDG 6	
Quality of running water	See SDG 6	
Sustainable procurement	See SDG 12	
Greenhouse gas emissions	See SDG 13	
Biodiversity	See SDG 15	
Soil index	See SDG 15	



Indicator	Calculation	Source of the Indicator
<b>SDG 12.5:</b> By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse		
Amount of waste	<i>Total:</i> (Total amount of waste in kg) / (Number of residents)	Key indicator, SDG indicators for municipalities
	<i>Proportion of recyclable material:</i> (Amount of recyclable material, green and organic waste in kg) / (Total amount of waste in kg) * 100	Supplement State Capital Stuttgart 2019
<b>SDG 12.6:</b> Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle		
EMAS-certified sites	Number of EMAS-certified sites	Key indicator, SDG indicators for municipalities
<b>SDG 12.7:</b> Promote public procurement practices that are sustainable, in accordance with national policies and priorities		
Sustainable procurement	(Number of sustainable procurement procedures) / (Number of all procurement procedures) * 100	SDG indicators for municipalities 2020
	(Number of measures for sustainable procurement implemented in the municipality (answers with yes)) / (Total number of the measures to be examined) * 100	SDG indicators for municipalities 2020
<b>SDG 12.8:</b> By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature		
Educational programmes with ecological sustainability relevance	See SDG 4	

**SDG 13: Climate action (Take urgent action to combat climate change and its impacts)**

Indicator	Calculation	Source of the Indicator
<b>SDG 13.1:</b> Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries		
Trees in public spaces	(Number of trees in public spaces) / (Total public space in hectares)	Supplement State Capital Stuttgart 2019
Land use	See SDG 11	
Recreational areas	See SDG 11	





Indicator	Calculation	Source of the Indicator
“Municipal climate adaptation” index	$(\text{Number of criteria implemented in the municipality (answers with yes)}) / (\text{Total number of criteria to be examined (questions: 10)}) * 100$	Supplemental indicator proposal, SDG indicators for municipalities 2020
Forest area	$(\text{Forest area}) / (\text{Total area}) * 100$	Supplemental indicator proposal, SDG indicators for municipalities
<b>SDG 13.2:</b> Integrate climate change measures into national policies, strategies and planning		
Greenhouse gas emissions	$(\text{CO}_2 \text{ equivalents of the emission by trade, commerce, services and industry}) / (\text{Employees in trade, commerce, services and industry subject to social security contributions})$	Key indicator, SDG indicators for municipalities (modified State Capital Stuttgart 2019)
	$(\text{CO}_2 \text{ equivalents of the emission by traffic}) / (\text{Number of residents})$	Key indicator, SDG indicators for municipalities (modified State Capital Stuttgart 2019)
	$(\text{CO}_2 \text{ equivalents of the emission by private households}) / (\text{Number of residents})$	Key indicator, SDG indicators for municipalities (modified State Capital Stuttgart 2019)
	<i>Entire city:</i> $\text{CO}_2 \text{ equivalents of the emission of all sectors}$	Key indicator, SDG indicators for municipalities (modified State Capital Stuttgart 2019)
Organic farming	<i>See SDG 2</i>	
Proportion of renewable energy in final energy consumption	<i>See SDG 7</i>	
Energy productivity	<i>See SDG 7</i>	
Energy consumption	<i>See SDG 7</i>	
Completed residential buildings with renewable energy	<i>See SDG 11</i>	
Bicycle traffic	<i>See SDG 11</i>	
Passenger cars with electric drive	<i>See SDG 11</i>	
Soil index	<i>See SDG 15</i>	
Biodiversity	<i>See SDG 15</i>	



Indicator	Calculation	Source of the Indicator
<b>SDG 13.3:</b> Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning		
Educational programmes with ecological sustainability relevance	See SDG 4	

**SDG 14: Life below water (Conserve and sustainably use the oceans, seas and marine resources for sustainable development)**

Indicator	Calculation	Source of the Indicator
<b>SDG 14.1:</b> By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution		
Quality of running water	See SDG 6	
Wastewater treatment	See SDG 6	
Greenhouse gas emissions – industry, commerce, trade and services	See SDG 13	
Greenhouse gas emissions – traffic	See SDG 13	
Greenhouse gas emissions – private households	See SDG 13	
Renaturation programmes running waters	See SDG 15	
<b>SDG 14.c:</b> Enhance the conservation and sustainable use of oceans and their resources		
Quality of running water	See SDG 6	
Sustainable procurement: proportion of sustainable procurement procedures	See SDG 12	
Sustainable procurement: Sustainable Procurement index	See SDG 12	
Biodiversity	See SDG 15	



**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)**

Indicator	Calculation	Source of the Indicator
<b>SDG 15.1:</b> 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	$\frac{\text{(Length of renaturalised watercourses)}}{\text{(Length of originally technically shored and drained watercourses)}} * 100$	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	
<b>SDG 15.2:</b> 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	
<b>SDG 15.3:</b> 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	$\text{(Floor space)} * \text{(Quality level)}$	Supplement State Capital Stuttgart 2019
Organic farming	See SDG 2	
Nitrogen surplus	See SDG 2	



Indicator	Calculation	Source of the Indicator
<b>SDG 15.5:</b> 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 according to endangerment status according to the Red List Baden-Württemberg	Key indicator, SDG indicators for municipalities (modified State Capital Stuttgart 2019)
	Biodiversity B: Locust species according to endangerment status according to the Red List Baden-Württemberg	
	Biodiversity C: Amphibian species according to endangerment status according to the Red List Baden-Württemberg	
Conservation areas	(Total protected areas in Stuttgart) / (Total area Stuttgart)	Supplemental indicator proposal, SDG indicators for municipalities 2018
Noise pollution	See SDG 3	
Educational programmes with ecological sustainability reference	See SDG 4	
Recreational areas	See SDG 11	
<b>SDG 15.8:</b> 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		
Invasive Species	See SDG 15	
<b>SDG 15.9:</b> 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	
<b>SDG 15.a:</b> Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems		
Nature conservation areas	See SDG 15	
Biodiversity	See SDG 15	
<b>SDG 15.b:</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		
Trees in public spaces	See SDG 13	
Forest areas	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)**

Indicator	Calculation	Source of the Indicator
<b>SDG 16.1:</b> Significantly reduce all forms of violence and related death rates everywhere		
Premature mortality	See <i>SDG 3</i>	
<b>SDG 16.4:</b> By 2030, combat all forms of organised crime		
Crimes	$(\text{Number of crimes reported to the police}) / (\text{Number of residents}) * 1,000$	Key indicator, SDG indicators for municipalities
<b>SDG 16.5:</b> Substantially reduce corruption and bribery in all their forms		
“Prevention of corruption” index	$(\text{Number of criteria implemented in the municipality (answers with yes)}) / (\text{Total number of criteria to be examined (11)}) * 100$	SDG indicators for municipalities 2022
<b>SDG 16.6:</b> Develop effective, accountable and transparent institutions at all levels		
Mobile working	$(\text{Mobile terminal devices with VPN at the State Capital Stuttgart}) / (\text{Number of employees with an email address}) * 100$	Supplement State Capital Stuttgart 2021
Total municipal debt	$(\text{Debt of the municipality in all partial budgets}) / (\text{Number of residents})$	Key indicator, SDG indicators for municipalities
Trade tax rate	$(\text{Trade tax revenue minus trade tax levy}) / (\text{ordinary income}) * 100$	Supplement State Capital Stuttgart 2021
Cash surplus / deficit for long-term fulfilment of tasks	Balance of incoming and outgoing payments from current administrative activities	Supplement State Capital Stuttgart 2021
Digital municipality	$(\text{Number of criteria used in the municipality (answers with yes)}) / (\text{Total number of criteria to be examined (16)}) * 100$	SDG indicators for municipalities 2020, indicator catalogue New Urban Agenda (NUA)
Gross domestic product	See <i>SDG 8</i>	
<b>SDG 16.7:</b> Ensure responsive, inclusive, participatory and representative decision-making at all levels		
Participation of adolescents	Districts with youth councils: $(\text{Number of districts with a youth council}) / (\text{Total number of districts}) * 100$	Key indicator, SDG indicators for municipalities (modified)
	Participation in youth council elections: $(\text{Number of voters in the youth council election}) / (\text{Total number of eligible voters in the youth council election}) * 100$	Key indicator, SDG indicators for municipalities (modified)



Indicator	Calculation	Source of the Indicator
Registered users at "Stuttgart – my city"	$(\text{Number of registered users at } \text{www.stuttgart-meine-stadt.de}) / (\text{Number of residents older than 16}) * 100$	Supplement State Capital Stuttgart 2021
Participatory budget	$(\text{Number of participants in Stuttgart's participatory budgeting}) / (\text{Number of residents}) * 100$	Supplement State Capital Stuttgart 2021
	$(\text{Number of positive and negative ratings}) / (\text{Number of participants})$	
Satisfaction with the work of the city administration	$(\text{Number of satisfied and very satisfied citizens}) / (\text{Total number of citizens}) * 100$	Supplement State Capital Stuttgart 2023
Degree of organisation in sports	See SDG 3	
Women in Stuttgart's Municipal Council	See SDG 5	
Women in management positions	See SDG 5	
Meeting points for citizens	See SDG 10	
<b>SDG 16.10:</b> Ensure public access to information		
Online administrative services	Number of administrative services offered online	Supplement State Capital Stuttgart 2023
Digital municipality	See SDG 16	
<b>SDG 16.b:</b> Promote and enforce non-discriminatory laws and policies for sustainable development		
Barrier-free or low-barrier sanitary facilities	See SDG 6	
Relative employment rate of people without German citizenship	See SDG 10	
Relative poverty rate of recipients of benefits without German citizenship	See SDG 10	
Relation of median income according to citizenship	See SDG 10	
Accommodation service of social housing	See SDG 11	



Indicator	Calculation	Source of the Indicator
Low-barrier housing	See SDG 10	
Accessibility of public transport	See SDG 11	

**SDG 17: Partnerships for the goals (Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development)**

Indicator	Calculation	Source of the Indicator
<b>SDG 17.6:</b> 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 (without LDCs) or number of students from LDCs or number of foreign students (without LDCs and without developing countries)) / (Total number of students at Stuttgart universities and colleges) * 100	Statistics portal, Supplement State Capital Stuttgart 2023
Research and development in the economy	See SDG 9	
<b>SDG 17.16:</b> 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		
Twin towns in the Global South	(Funds for cooperation with twin towns in the Global South) / (Free project means 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 of recipients of benefits without German citizenship	See SDG 10	
Sustainable procurement: sustainable procurement programmes	See SDG 12	



Indicator	Calculation	Source of the Indicator
Sustainable procurement: "Sustainable Procurement" Index	See <i>SDG 12</i>	
<p><b>SDG 17.17:</b> Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships</p>		
Educational programmes with ecological sustainability reference	See <i>SDG 4</i>	
Fair trade schools	See <i>SDG 12</i>	
Twin towns in the Global South	See <i>SDG 17</i>	
Projects and counselling services	See <i>SDG 17</i>	
<p><b>SDG 17.19:</b> By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product</p>		
Gross domestic product	See <i>SDG 8</i>	





## Appendix III – Catalogue of additional indicator proposals

In the context of updating the 2021 VLR, additional indicators were proposed and discussed by the participants that were not included in the present VLR. They are listed below according to SDGs and, in addition to the proposals from the 2019 VLR, are intended to provide further suggestions for reflecting the SDGs for further VLRs of the State Capital, as well as the further development of the SDG indicators for municipalities as a whole.

<b>SDG</b>	<b>Target</b>	<b>Discussed indicator</b>
<b>SDG 1: End poverty in all its forms everywhere</b>	<b>1.3</b>	Deprivation index
<b>SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture</b>	<b>2.2</b>	Deprivation index
<b>SDG 3: Ensure healthy lives and promote well-being for all at all ages</b>	<b>3.4</b>	Swimming proficiency
	<b>3.4</b>	Intercultural integration of older migrants
	<b>3.6</b>	Safe cycling
	<b>3.8</b>	Deprivation index
	<b>3.a</b>	Proportion of smokers
<b>SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</b>	<b>4.3</b>	Early School Leavers
	<b>4.7</b>	Children in young people's homes
	<b>4.2</b>	Children with parenting support
	<b>4.3</b>	Adult education
	<b>4.7</b>	Training in children's rights
	<b>4.a</b>	Number of accessible school buildings in the total number of school buildings (accessible school buildings, including learning environment)
	<b>4.a</b>	Number of fully-networked municipal school buildings related to the total number of all municipal school buildings



SDG	Target	Discussed indicator
	4.a	Number of school buildings with voice alarm systems in relation to the total number of municipal school buildings (safe school buildings)
<b>SDG 5: Achieve gender equality and empower all women and girls</b>	5.1	Proportion of women in workplace health promotion (BGF) programmes
<b>SDG 6: Ensure availability and sustainable management of water and sanitation for all</b>	6.3	Nitrate in groundwater
	6.3	Phosphorus in groundwater
<b>SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all</b>	7.1	Energy costs
	7.a	Expense for municipal development of renewable energy
<b>SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</b>	8.2	Ability to work
	8.5	Adult education
	8.5	Wage levels
<b>SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</b>	9.1	Start-ups - immigrant economy
	9.5	Patent volume
	9.5	Scientific staff
<b>SDG 10: Reduce inequality within and among countries</b>	10.2	Deprivation index
	10.2	Adult education
	10.2	Projects with migrant organisations
	10.2	People with a migration background in the city, municipal or county council
	10.2	Immigrant economy
	10.2	Children in young people's homes



<b>SDG</b>	<b>Target</b>	<b>Discussed indicator</b>
<b>SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable</b>	<b>11.b</b>	Quota of energy refurbishment of buildings
	<b>11.b</b>	Heating renovation programme (number of heating systems funded in the context of the programme)
	<b>11.2</b>	Digital public transport services
	<b>11.2</b>	Carsharing passenger cars
	<b>11.2</b>	Company charging points
	<b>11.2</b>	Total length of footpath network (Length of dedicated footpath network)
	<b>11.2</b>	Main pedestrian routes (number and length)
	<b>11.6</b>	Ventilation and greening of neighbourhoods
	<b>11.7</b>	Playgrounds and physical activity spaces for children, adolescents and families (by number of residents in the age groups / number of families)
	<b>11.7</b>	Recreation and meeting facilities for children, adolescents and families (by number of residents in the age groups / number of families)
<b>SDG 12: Ensure sustainable consumption and production patterns</b>	<b>12.5</b>	Recycling quota
	<b>12.6</b>	Location with accounting by welfare economics
	<b>12.6</b>	Companies reporting on their sustainability performance
<b>SDG 13: Climate action (Take urgent action to combat climate change and its impacts)</b>	<b>13.1</b>	Public green spaces
	<b>13.1</b>	Retention areas
	<b>13.1</b>	Permeable areas
	<b>13.1</b>	Green roofs
	<b>13.2</b>	Companies with greenhouse gas balancing



<b>SDG</b>	<b>Target</b>	<b>Discussed indicator</b>
	<b>13.3</b>	Workplace health promotion programmes (BGF): sustainable orientation index
	<b>13.3</b>	Staff in municipal climate protection
<b>SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development</b>	<b>14.1</b>	Export of plastic waste
	<b>14.1</b>	Nutrient contamination in watercourses
	<b>14.c.1</b>	MSC-certified fish in the canteen or proportion of endangered edible fish species
<b>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</b>	<b>15.1</b>	Degree of soil sealing
	<b>15.1</b>	Use of pesticides
	<b>15.2</b>	Forest condition
	<b>15.5</b>	Biodiversity of birds
	<b>15.5</b>	Landscape quality
	<b>15.5</b>	Primary/secondary vegetation
	<b>15.8</b>	Invasive species
<b>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</b>	<b>16.7</b>	Children in young people's homes
	<b>16.7</b>	Indicator People with a migration background in the city, municipal or county council
	<b>16.7</b>	Intercultural awareness in the city administration – staff recruitment, Stuttgart by profession and multilinguism
	<b>16.7</b>	Council of religions
<b>SDG 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development</b>	<b>17.16</b>	Council of religions – Projects with migrant organisations



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