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The 21 topics in the sustainability monitoring positioned in the three dimensions of economy, ecology and society.
"Sustainability" is Zurich’s primary objective in terms of urban policy, and the city council has sketched a path to the future in its “Zurich Strategies 2035”. The city has set itself far-reaching targets in important areas as far as sustainable development is concerned. To achieve these aims, Zurich intends to continue unflinchingly down the path it has chosen, and this includes regularly analysing what has already been achieved.

How can this be measured however? How can one possibly gauge sustainable or non-sustainable development? Clearly one single indicator is not enough, and it is also evident that it is not just a question of the environment. The City of Zurich has thus defined 21 indicators which it considers important with a view to sustainable development and which are to be pursued over time. Where possible, these indicators illustrate the development achieved over the past 20 years. Comparisons with other cities in Switzerland and, where possible also European cities, enable Zurich to see where it is positioned. All data is explained in full on the website. The website also shows which projects and activities the city administration is using to work towards sustainable development for all the different areas involved.

Sustainability monitoring enables decision-makers in politics and administration as well as interested members of the public to take stock of where we are. It is clear however that monitoring of this kind can never show the whole “truth”. Instead, it reduces the reality to a limited number of aspects. This compressed overall view however shows where the city currently finds itself on its path towards sustainable development.

Sustainability monitoring in the City of Zurich is published in electronic form only on the Internet: www.stadt-zuerich.ch/nachhaltigkeitsmonitoring.

Information about this summary
This summary contains the diagrams for the 21 indicators and comparisons between cities as well as a core message for each. It is a very brief overview, without the exact definitions and source references for the indicators or detailed interpretations of the diagrams. All such in-depth information can only be found on the website, which in particular also includes numerous examples which illustrate what the City of Zurich is doing towards sustainable development.
Population development

http://www.nachhaltigkeitsmonitoring.ch/bevoelkerungsentwicklung

Population

Resident population (based on economic place of residence)

The average residential population for 2014 was 401,700. On 22 January 2014, the 400,000 barrier was exceeded. This is the highest population for Zurich since 1973.

Many of the indicators used hereafter refer to the number of inhabitants of the City of Zurich. Population development is therefore important for the interpretation of the subsequent diagrams.

The peak of population came in July 1962, when 445,314 people lived in Zurich before the suburbanization process began. We are nowhere near these levels at the moment, but the city nevertheless is booming, and in the last 10 years, the population has grown by over 30,000. According to the latest scenarios set out by the City of Zurich’s Statistics department it is possible that the peak may well be reached again in the not-too-distant future. The scenarios are assuming that, primarily due to the significant amounts of construction, there will be between 428,000 – 449,600 people living in Zurich by 2025.

Since the mid-1990s, the city has once again become an attractive place to live for many people, thanks amongst other things to the city’s investment and enhancement measures in the various districts as well as active residential construction since the end of the 1990s. The face of the city has changed significantly in the space of a decade. As was the case before, families with children are moving out into surrounding areas, but nevertheless more births than deaths have once again been recorded since 2004 and the number of children has significantly increased in recent years.
Economic performance
1 A place to do business

http://www.nachhaltigkeitsmonitoring.ch/wirtschaftsstandort

Sustainability indicator

**Value creation**: Real achieved value creation in the City of Zurich at year 2000 prices in CHF per capita

![Graph showing value creation over years](image)

Source: City of Zurich Statistic Office (Für die Jahre 2013 und 2014 stehen erst provisorische Daten zur Verfügung.)

Despite the global financial crisis (2008) which directly affected Zurich’s banking industry, Zurich’s GDP only fell moderately and has indeed since risen again in the past three years.

Comparison of cities

People employed in sectors with high levels of productivity in **2008** as a % of total employees

![Bar chart showing productivity](image)

Source: Cercle Indicateurs (Business census 2008, Federal Statistical Office)

In comparison with other Swiss cities, Zurich has a large proportion of employees with high levels of productivity – in particular thanks to its financial centre.
2  A place to work

http://www.nachhaltigkeitsmonitoring.ch/arbeitsstandort

Sustainability indicator

**Jobs:** Number of people employed in the City of Zurich with a contractually-agreed occupation of > 6 hrs/week

The number of jobs has risen significantly since 2005 by more than 57,000. In 2014, there were 383,700 people working in the City of Zurich.

Comparison of cities

**Actively employed people per 100 inhabitants in 2013**

For every 100 inhabitants in the City of Zurich, there are 118 employees. Only in the city of Berne, which is home to a large proportion of the federal government, is the number of people employed (significantly) higher than the residential population.
3 Unemployment

Unemployment rate: Number of registered unemployed among working population as a %

Source: City of Zurich Statistic Office (Basis of survey since 2010: data from the 2010 public census)

Unemployment in the City of Zurich in 2014 stood at 3.8%. Despite a growth in employment as a whole, unemployment did not go down.

Comparison of cities

Unemployment rate (ILO) in 2012 as a %


The disparity between the cities is considerable and regional differences can also be observed within Switzerland. The German-speaking part of the country is less affected than other areas.
4 Financial strength

http://www.nachhaltigkeitsmonitoring.ch/finanzkraft

Sustainability indicator

Taxation: Real taxation revenue in Zurich at year 2000 prices in CHF per inhabitant

The 2008 financial and economic crisis had a real effect on the taxation revenue of the City of Zurich. Since 2009, taxation revenue has been at around CHF 4,400 per capita.

Comparison of cities

Direct federal tax of companies and individuals in 2012 in CHF per inhabitant

A 2012 comparison of legal entities shows the City of Zurich coming out well below Basle, Geneva and Lausanne. In terms of individuals, the City has a similar quota to Basle.
5 Public financing

www.nachhaltigkeitsmonitoring.ch/oeffentlicher-finanzhaushalt

Sustainability indicator

Household indebtedness in the city: Net debt ratio: Net debts as a percentage of value creation

The net debt ratio went down again in 2014 and stood at 6.2% at the end of the year. After peaking in 1995, debt was significantly reduced up until 2007, before rising again after 2008 due to the global financial crisis.

Comparison of cities

IDHEAP figure: Current yield as a % of on-going expenses (moving average 2010 – 2012)

In terms of cost coverage, the City of Zurich shows a value of slightly above 100% for the period under report, which is within the ideal parameters.
6 Material wealth

http://www.nachhaltigkeitsmonitoring.ch/materieller-wohland

Sustainability indicator

**Inhabitants' income**: Taxable income per single-rate taxpayer in CHF

![Graph of Inhabitants' income]

Source: City of Zurich Statistic Office (Provisional values for 2013 and 2014. Revisions are also to be expected for 2011 and 2012).

The median taxable income for single-rate tax-paying individuals in the City of Zurich increased by approximately 13% between 1999 and 2011, and stood at c. CHF 38,000 in 2011. The most recent data, for 2012, 2013 and 2014, have not yet been analysed.

Comparison of cities

**2015 purchasing power**: Net hourly wage divided by overall commodities basket inc. rent (Zurich = 100)

![Graph of Comparison of cities]

Source: Prices and wages. A comparison of purchasing power around the world in 2015, UBS (only Zurich and Geneva are represented from Switzerland in the UBS global comparison of purchasing power. No data available either for Stuttgart or Manchester).

According to the "Prices and wages" study, domestic purchasing power is at its highest in Zurich, even though it is one of the most expensive cities in the world.
7 Living

http://www.nachhaltigkeitsmonitoring.ch/wohnen

**Sustainability indicator**

**Living space**: Net living space in square metres per inhabitant

![Graph showing living space consumption over time]

Source: City of Zurich Statistic Office (net surface area calculated from 2002, previous years based on gross floor area. Fundamental change in the method of calculation from 2013, resulting in somewhat lower values (new line).

There has been a slight increase in living space consumption over the course of the past 20 years, though the biggest jump came in the preceding decades. In 2014, the average individual residential area reduced slightly from 39.2 m² to 39.0 m² (based on the new method of calculation).

**Comparison of cities**

Net living space in m² per inhabitant

Source: Statistics of the Swiss Cities’ Association and Urban Audit Eurostat database

Compared with other large Swiss cities, Zurich is in the middle of the table. Internationally speaking, most cities have higher levels of floor space occupation, with only Amsterdam, Barcelona and Warsaw lower.
Ecological responsibility
8 Climate protection

http://www.nachhaltigkeitsmonitoring.ch/klimaschutz

Sustainability indicator

Greenhouse gas emissions: Tonnes of CO₂ equivalent per person per year

![Greenhouse gas emissions chart]

Source: City of Zurich Office for Environmental and Health Protection (data as of September 2015, without climate correction)

Greenhouse gas emissions fell significantly between 1990 and 2014 (from around 6.2 tonnes to 4.7 tonnes per person per year). Since 2007 however, the downward trend has noticeably tailed off.

Comparison of cities

CO₂ emissions based on final energy audit in tonnes of CO₂ equivalent per person, 2008

![Comparison of cities chart]

Source: City of Zurich Office for Environmental and Health Protection (data for St Gallen for 2010)

The low levels of greenhouse gas emissions from traffic in Zurich can be attributed to the high proportion of public transport used. More details can be found in the comparison of cities report:
9 Energy

http://www.nachhaltigkeitsmonitoring.ch/energie

Sustainability indicator

Primary energy consumption and renewable energy: Average continuous primary energy output in Watts per inhabitant

![Graph showing primary energy consumption and renewable energy from 1995 to 2050.

Source: City of Zurich Office for Environmental and Health Protection (data as of September 2015, without climate correction)

The primary energy requirement of the City of Zurich has fallen from around 5,200 watts per person in 1990 to around 4,200 watts (average of the past five years. Over the same period of time, the proportion of renewable energy was increased from 11% to 19%.

Comparison of cities

Average continuous primary energy output in Watts per person, 2008

![Graph showing comparison of primary energy output in various cities.

Source: City of Zurich Office for Environmental and Health Protection (data for St Gallen for 2010)

The above cities are structurally very different, which severely limits the validity of any comparisons. More details can be found in the comparison of cities report: http://www.stadt-zuerich.ch/energie.
10 Mobility

http://www.nachhaltigkeitsmonitoring.ch/mobilitaet

Sustainability indicator

**Proportion of environmentally-friendly mobility:** Proportion of environmentally-friendly means of transport as a % of total kilometres per person travelled daily by Zurich residents

Source: City of Zurich Civil Engineering Office

In 2010, Zurich’s population covered around 60% of its transport needs by train, tram, trolleybus, bus and bicycle or on foot.

Comparison of cities

Persons going to work on foot, by bicycle or by public transport as a %

Source: Urban Audit Eurostat database

Zurich has a highly efficient public transport system. The proportion of distance covered on foot or by bicycle is however minimal.
11 Material flows

http://www.nachhaltigkeitsmonitoring.ch/stoffflueesse

Sustainability indicator

**Municipal waste:** Municipal waste in kg per inhabitant per year

![Municipal Waste Graph](image)

Source: Zurich Waste Disposal & Recycling (ERZ)

The amount of municipal waste per capita has slowly but steadily been reduced in the City of Zurich over recent years. The recycling quota is over 40%.

**Comparison of cities**

Amount of waste in kg per inhabitant in **2011**

![Comparison of Cities Graph](image)

Source: Cercle Indicateurs, Swiss Federal Statistical Office

Zurich compares very favourably, but it should be noted that the comparison is only partially valid since there is no uniform federal ruling on calculating what, how much and where waste is generated.
12 Air quality

http://www.nachhaltigkeitsmonitoring.ch/luftqualitaet

Sustainability indicator

Nitrogen dioxide pollution: Average annual amount in Zurich in µg/m³

The air quality in the City of Zurich has continually been improving since the 1980s. Nitrogen dioxide pollution nevertheless remains above the threshold value of the air protection rule.

Comparison of cities

Nitrogen dioxide pollution (average annual amount in µg/m³)

The comparison with other European cities shows that the situation in Zurich is healthy. The indicator also clearly illustrates the positive overall development in the city's air quality.
13 Noise

http://www.nachhaltigkeitsmonitoring.ch/laerm

Sustainability indicator

**Noise pollution caused by traffic:** Proportion of population suffering from excessive noise pollution (%)

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| Source: City of Zurich Civil Engineering Office, and Office for Environmental and Health Protection, noise protection (using an electronic noise register which takes into account the actual noise pollution of individual buildings, the residential population that is affected is calculated in a more differentiated way from 2010. The proportion of the population affected by excessive noise is smaller primarily due to this reason).

According to model calculations, at the end of 2010, around 138,000 people in the City of Zurich were living in streets with excessive traffic noise. This represents 35% of the residential population.

Comparison of cities

A comparison of cities cannot be made in this case, as there are various different international legislations, threshold values and construction regulations. The same federal provisions are applicable throughout the country, but the various cities are not comparable due to differences in traffic management systems and housing structures.
14 Nature and countryside

http://www.nachhaltigkeitsmonitoring.ch/natur-und-landschaft

Sustainability indicator

**Sealed areas:** m² per inhabitant / proportion (%) of the area of the city

![Graph showing sealed areas over time](image)

**Source:** City of Zurich Office of Parks and Open Spaces (from 2002: GIS-based statistics; until 2001: Federal land-use statistics)

Around 37% of the surface area of the City of Zurich is sealed (this calculation does not include bodies of water). The sealed area per capita has gone down significantly due to the large increase in population.

Comparison of cities

**Built-up area per person in m² (data from land-use statistics)**

![Bar chart comparing built-up areas](image)

**Source:** Federal Land-use statistics 1979/85, 1992/97, 2004/09: Development of land use in municipalities in 10 categories *Lucerne based on current boundaries (i.e. after merger with Littau).

Geneva is by far and away the Swiss city with the greatest density, followed by Basle, Lausanne and Zurich. When populations rise, as in Zurich or Geneva, then the urban density also increases.
Social solidarity
15 Quality of life

http://www.nachhaltigkeitsmonitoring.ch/lebensqualitaet

Sustainability indicator

Population satisfaction levels: with the City of Zurich’s facilities and what it has to offer

In 2015, about 91% of the population were satisfied with what is on offer and with the public facilities in Zurich. This figure has dropped somewhat compared with the 2005 and 2007 levels due to the significantly lower levels of satisfaction with the housing situation.

Comparison of cities

Satisfaction with place of residence (red: Perception surveys in Swiss towns; green: Perception survey on quality of life in the EU)

Around 97% of those surveyed declared themselves either happy or very happy to be living in Zurich. There is little difference compared with other Swiss cities, while satisfaction levels in other European cities surveyed were also high.
16 Social security

http://www.nachhaltigkeitsmonitoring.ch/soziale-sicherung

Sustainability indicator

**Persons requiring support**: receiving social benefits or extended AHV/IV (old-age/disability) benefits as a % of population

In 2014, around 33,700 people in the City of Zurich were receiving state support (either social benefits or extended AHV/IV benefits). This represents 8.7% of the population.

Comparison of cities

**Welfare recipients 2014**: Number of those receiving benefits (cumulated) as a % of the population

The social benefits quota in Zurich is relatively small compared with other major Swiss cities and is lower that the quotas of Basle for example or Berne.
17 Safety

http://www.nachhaltigkeitsmonitoring.ch/sicherheit

Sustainability indicator

Violent crimes: Registered cases of homicide, bodily harm, assault, endangering life and attacks/affray (§ 111-136 Swiss penal code) per year per 100,000 inhabitants

![Graph showing violent crimes trend from 1995 to 2014](image)

Source: Police criminal statistics (PKS); data provided by Krista up until 2008, by PKS from 2009 (The jump can be attributed to the new method of statistical data-gathering).

Violent crimes have been on a downward scale since 2008, after rising steadily for a number of years. The jump in the figures between 2008 and 2009 is down to methodology and can be attributed to a change in definition (PKS data used since 2009).

Comparison of cities

Offences to the penal code (per 1,000 inhabitants) in 2014

![Bar chart comparing cities](image)

Source: Police crime statistics (PKS) – annual report 2014 (*the crime statistics departments did not provide any statistics for the cities of St Gallen and Lucerne)*

Compared with other large Swiss cities, Zurich is in the middle when it comes to safety, despite the fact that it functions very much as a metropolitan centre for the surrounding area.
18 Equal opportunities

http://www.nachhaltigkeitsmonitoring.ch/chancengleichheit-zwischen-frau-und-mann

Sustainability indicator

Wage gap between men and women in %: Wage gap in the private sector in the canton and the City of Zurich

NB: The data for the City of Zurich are not comparable due to breaks in the methodology over the years.

The difference in wages makes it clear that in the world of work, men and women are still not on an equal footing. The wage differential between men and women in the private sector was at 23% for the canton of Zurich in 2012, and 24% for the City of Zurich.

Comparison of cities

Number of women in parliament in % in 2014

Source: Urban Audit Eurostat database and BADAC database of Swiss cantons and cities

At 49%, Geneva has by far and away the highest proportion of female representation of the cities under comparison, putting it close to achieving the 50% mark. The Zurich municipal council has 34% female representation.
19 Work/family balance

http://www.nachhaltigkeitsmonitoring.ch/vereinbarkeit-von-familie-und-beruf

Sustainability indicator

Child care: Number of children of pre-school or school age receiving out-of-school-hours care, in %

![Graph showing the trend of supplementary child care from 1995 to 2014.](image)

Source: Report by the City of Zurich social department on child care; report by the school and sports department on supplementary child care in primary schools.

The range of supplementary child care continues to increase. In 2014, there were an extra 515 places in child-minding centres and another 661 places in school-run care.

Comparison of cities

There is no comparison between cities, since in terms of child care it proved to be difficult to make meaningful comparisons between cities using an individual indicator. The child-care systems and the subsidies vary a great deal, and a comparison of cities using one individual indicator is therefore insufficient when it comes to showing how the cities perform in this particular area.
Integrating people from abroad

http://www.nachhaltigkeitsmonitoring.ch/integration-der-auslaendischen-bevoelkerung

Sustainability indicator

Employment and education opportunities for foreign youngsters: % without an opportunity for further training / % attending high school in the City of Zurich

Source: Education Department of the Canton of Zurich, educational planning, educational statistics

The ratio of those without an option clearly shows that the lack of apprenticeship places during years where the economy is struggling has a particular effect on youngsters from abroad. The economic outlook has improved, placement figures are better at the moment.

Comparison of cities

A comparison of cities would not be worthwhile in this case, as the integration of the foreign population involves a variety of structural and individual aspects and can only be represented in a very limited way by indicators. A comparison of cities would also create the problem that different legal, cultural and historical factors have to be taken into account in the various cities, and the results would be almost impossible to interpret.
21 Solidarity across the regions

http://www.nachhaltigkeitsmonitoring.ch/ueberregionale-solidaritaet

Sustainability indicator

Foreign aid: The City of Zurich’s contributions to development and humanitarian aid abroad (in CHF per inhabitant per year)

![Graph showing foreign aid contributions from 1996 to 2014.]

Source: City accounts, Finance Department

In 2014, the municipal council approved contributions to a value of CHF 2.01 million for development aid abroad. In addition, CHF 100,000 of immediate humanitarian aid was donated for emergency winter help for Syrian refugees in Lebanon.

Comparison of cities

Number of relief actions in Switzerland and abroad in 2013 compared with total active expenditure per thousand

![Bar chart comparing relief actions and expenditure per thousand for various cities.]

Source: “Solidarity across the regions” by Les Cercle Indicateurs, Federal Finance Administration FFA, financial policy department, financial equalisation, financial statistics

The city of Geneva made by far and away the highest contributions to aid programmes at home and abroad. The City of Zurich does however compare favourably with its peers.
Conclusion – where does the City of Zurich currently stand?

Over the past decade, the City of Zurich has undergone dynamic development in terms of construction, on 22 January 2014, the number of residents exceeded the 400,000 mark. Since 2005, the population has increased by over 35,000 with close to 60,000 new jobs being created. The City is clearly an attractive place to live and work, and according to estimates, this growth will continue in the coming years. The climate in the public sector has struggled due to the 2008 financial and economic crisis, but this has not stopped important investment in infrastructure, ecological improvements and in measures to help strengthen the fabric of society.

Though the situation is comparatively comfortable, and though the City of Zurich is demonstrating an exemplary approach in many aspects, we should not forget that the local population’s way of life is far from being sustainable (or indeed being that of a 2000-Watt Society). The population has a very high level of affluence, and thus consumes much more in the way of resources per capita than it ought to in global terms.

There are certain difficult questions in terms of delimitation and repercussions – for example on which spatial scale should measurements be taken? – which cannot be answered by this monitoring due to their complexity and also to a lack of data. Nevertheless, one thing is certain: “sustainability” as a social challenge is being discussed and addressed by Zurich.