



21

Sustainable Development, regional
and international Disparities

737-1500

Sustainable Development – A Brief Guide 2015

17 key indicators to measure progress



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Swiss Confederation

Neuchâtel, 2015

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Meeting the needs of the present means guaranteeing the quality of life of present generations in the multiple dimensions this concept implies (material living conditions, health, environmental quality, etc.).

The satisfaction of current needs, however, should not be achieved at the expense of the quality of life of generations to come. Nor should it harm other people living today, in Switzerland or elsewhere. Here, sustainable development aims to promote an equitable distribution of resources at the regional and global levels.

This brochure shows where Switzerland finds itself on the way to sustainable development. It is structured around four questions of fundamental importance for sustainable development, to which it provides some answers in a brief and easily understandable format. These answers are based on seventeen key indicators taken from the MONET system of indicators.

See page 22 for further details on the **definition of sustainable development** as well as the **context** in which this concept was developed.

Each **key indicator** represents a group of indicators. Key indicators make it easier for us to highlight major trends and the salient features of a given phenomenon.

MONET is a system of indicators designed to measure progress towards sustainable development. Intended for both the general public and policymakers, MONET provides some 75 regularly updated indicators. The system is based on a series of principles which define the qualitative objectives of sustainable development in the form of concrete requirements.

More information about MONET: www.monet.admin.ch.

On the road to sustainable development?

Is Switzerland moving toward a sustainable society? The answers to the four questions below allow us to estimate whether we are on the right path:

Meeting needs – how well do we live?

Being healthy, feeling safe and having enough income to live are all needs that, when met, contribute to the well-being of the population. Enabling all individuals to live in dignity and enjoy a good quality of life is a central goal of sustainable development.

Fairness – how well are resources distributed?

The concept of sustainable development is based on a demand for fairness. In this context, all individuals should have fair access to important resources such as education, income, health and clean air. Inequality and poverty must be tackled at the national and international level.

Preservation of resources – what are we leaving behind for our children?




Sustainable development also means meeting the needs of the present without compromising the ability of future generations to meet their own needs. The quality of life of future generations depends, in large part, on the state of environmental, economic and social resources we leave them in Switzerland and worldwide.

Decoupling – how efficiently are we using our natural resources?




















































From a sustainable development perspective, it is necessary that we seek to satisfy our needs within the limits of what the environment can withstand. Promoting economic and social development without damaging the environment means adopting more rational and efficient modes of production and consumption.

Are we on the right track?

The assessment of each indicator is represented by one of the symbols below. They result from a comparison of the targeted trend (white arrow against a blue background) and the observed trend (black arrow against white background).

-  positive (towards sustainability)
-  negative (moving away from sustainability)
-  unchanged

The trends are analysed from 1992 (year of the Earth Summit organised by the United Nations) to the latest available value. For more recent series, the analysis goes back to the year of available data. The start of the analysed period is marked with a ▲ in the graphics if it does not coincide with the beginning of the period shown.

Meeting needs – how well do we live?	Trend Targeted/observed		Assess- ment	Page
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The unemployment rate based on ILO definition is rising				8
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Health



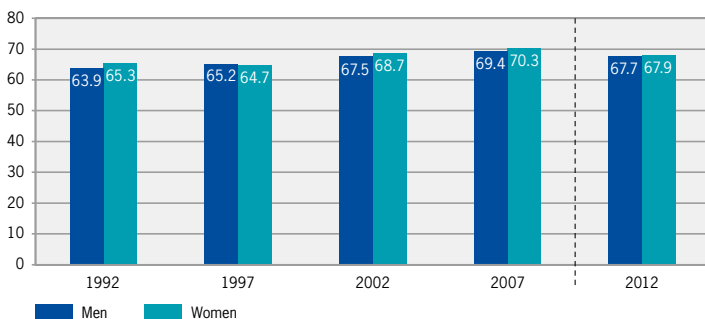
People's health is improving

Health must be maintained and promoted

People who feel healthy are often more contented than those who are ill or disabled. At the same time, they are also more productive. The benefits of living a long and healthy life are mainly felt by people themselves. However, the goal of a healthy lifestyle is also worth pursuing in the interests of the economy and society as a whole.

Life expectancy in good health

Life expectancy at birth in years



2012: Break in the time series due to a revision of the questionnaire

Source: FSO – Swiss Health Survey (SHS)

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- Between 1992 and 2007, the life expectancy of women in good health has increased by 5 years and of men by 5.5 years.
- In 2012, it was 67.9 years for women and 67.7 years for men. These data cannot be compared to previous years.
- In 2012, life expectancy in general was 84.7 years for women and 80.5 years for men.

Income



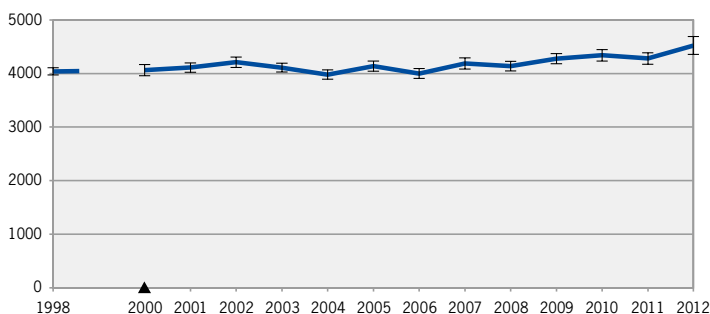
Income is increasing

Every individual should earn enough to secure vital necessities and have discretionary disposable income

Basic material needs, such as food, clothing and housing can only be met if sufficient funds are available. This money generally comes from income. The same holds true for certain intangible necessities such as education and health.

Equivalised disposable income

Average monthly equivalised disposable income at prices of 2012, in Swiss francs



Source: FSO – Household Budget Survey (HBS)

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- Between 1998 and 2006, no significant increase in the average monthly equivalised disposable income was recorded. Since 2006, an upward trend can be observed.
- In 2012, the richest 20% of the population had an income 4.5 times higher than the poorest 20%.

Physical safety



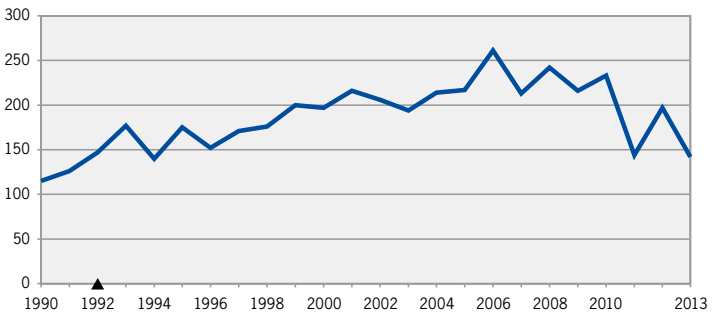
Convictions for serious violent offences are on the rise

Physical safety is a vital necessity

The number of convictions for completed serious violent offences (including violence to life or bodily integrity) is an indicator of the degree to which this need is satisfied.

Violent offences

Convictions for completed serious violent offences (homicide, grievous bodily harm, rape, violent robbery and hostage-taking)



Source: FSO – Conviction Statistics (COS)

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- The number of convictions for completed serious violent offences increased from 115 cases in 1990 to 142 in 2013.
- In 2013, 43.7% of the 142 convictions for serious violent offences were convictions for rape, 35.9% for grievous bodily harm, 16.9% for homicide, 2.8% for violent robbery and 0.7% for hostage-taking.
- The development is linked to changes in penal law (e.g. domestic violence has been prosecuted ex officio since 2004) and to the growing awareness of the problem of violence, which has increased individuals' tendency to report these acts and to subject the perpetrators to criminal prosecution.
- However, it is probable that numerous cases of domestic violence and rape are not always reported.

Unemployment



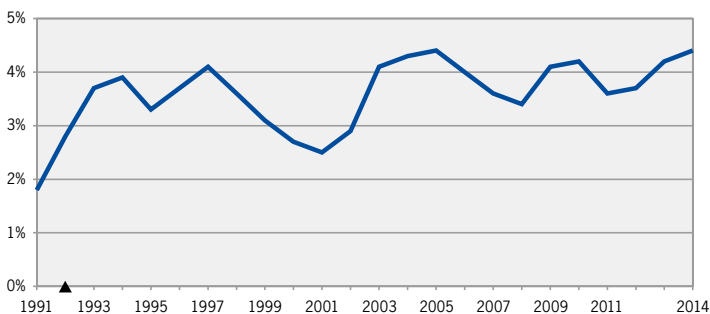
The unemployment rate based on ILO¹ definition is rising

Everyone should be able to secure their vital necessities through fulfilling employment

In developed countries, unemployment is one of the main causes of poverty and social exclusion. Unemployment statistics (ILO based) cover all unemployed jobseekers and are therefore more comprehensive than the statistics on the registered unemployed which are often quoted and which only take into account the jobseekers registered with the regional job placement offices.

Unemployment rate based on ILO definition

Percentage of unemployed based on ILO definition in relation to total working population



Source: FSO – Swiss Labour Force Survey (SLFS)

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- From 1991 to 2014, the unemployment rate based on ILO definition increased overall with significant fluctuations; in 2014, the rate was 4.4%.
- The unemployment rate based on ILO definition is heavily influenced by the economic situation.
- In 2014, more than 208,000 persons were without work.
- The unemployment rate based on ILO definition is, on average, almost twice as high among young working people aged 15 to 24 (7.7% in 2014) as that for the entire population of working age (aged 15–64).

¹ ILO: International Labour Office

Poverty



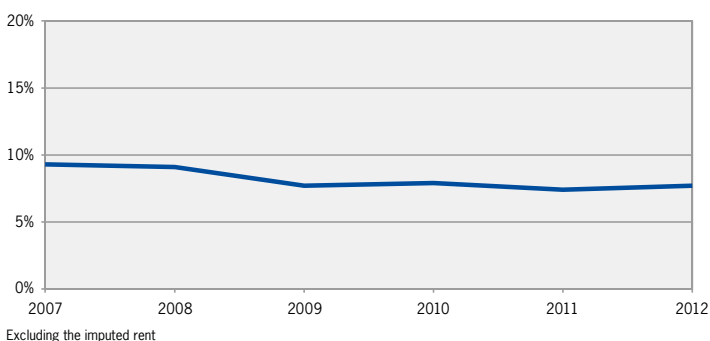
The poverty rate decreases

A humane life is free of poverty

A life that is free of poverty demands that vital necessities (i. e. food, clothing, shelter and basic healthcare) are secured. Furthermore, needs that extend beyond these basic essentials, such as personal contacts and involvement in working life, should be considered.

Poverty rate

Share of the permanent resident population living under the poverty line



Source: FSO – Statistics on Income and Living Conditions (SILC)

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- From 2007 to 2012, the share of people affected by poverty declined from 9.3% to 7.7%.
- In 2012, more than 590,000 people in Switzerland lived below the poverty line. That year, the poverty line stood at an average of CHF 2200 per month for a single person household and at CHF 4050 per month for a household with two adults and two children aged under 14 years.
- The population groups that are most affected by poverty are single-parent families (16.5% lived below the poverty line in 2012), persons without employment (15.7%) and those without post-compulsory education (13.9%).

Official Development Assistance



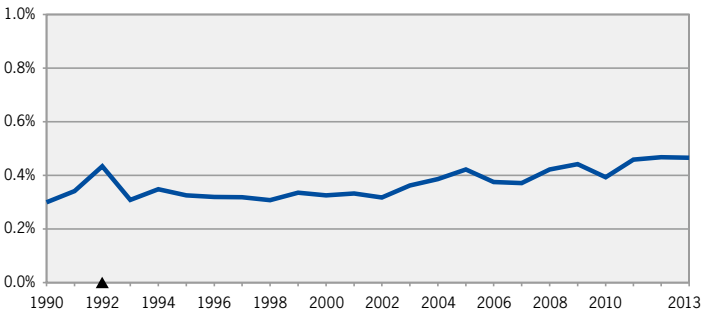
Official development assistance is rising

Poverty in developing countries must be reduced

The right to a life that is dignified and free of poverty does not stop at the Swiss border. Sustainable development also implies that people living in poorer countries have reasonable access to resources.

Official Development Assistance

In proportion to gross national income* (previously gross national product)



* The gross national income is calculated according to the European System of national and regional accounts 1995 (SEC95) 2011, 2012, 2013: provisional data

Sources: Swiss Agency for Development and Cooperation

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- The proportion of the Swiss gross national income (GNI) spent on development assistance stagnated during the 1990s and rose slightly at the start of the new millennium. Roughly 0.41% of GNI has been devoted to Official Development Assistance over the past ten years.
- In 2013, the Swiss government spent more than CHF 2.9 billion on development assistance.
- The Swiss contribution falls below the UN target of 0.7% of GNI.

Equality



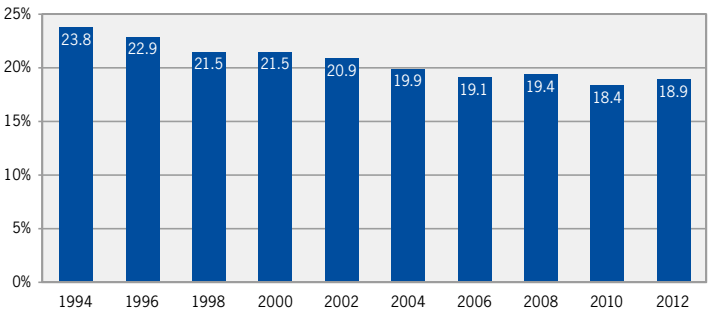
The wage gap between women and men is gradually narrowing

Every individual should enjoy equal rights and opportunities; resources should be fairly distributed

There cannot be equal rights and opportunities when people do not receive equal pay for equal work. Gender-based wage discrimination is often an indication of further inequalities such as women having a harder time reaching decision-making professional positions.

Wage gap between men and women

Wage gap* between men and women as a percentage of men's monthly gross wage, private sector



* Compared to the median wage

Source: FSO – Swiss Earnings Structure Survey (SESS)

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- Overall, the wage gap between women and men in private sector narrowed slightly from 1994 to 2012.
- In 2012, women's monthly salaries were on average CHF 1236 lower than men's in the private sector. This corresponds to a difference of about 19%.
- This difference is partly due to the fact that women are more likely to work in low-wage sectors, are less well-educated and have less work experience.
- Moreover, men tend to earn a higher salary than women even if they have the same qualifications and hold the same position. According to analyses, it is estimated that 40% of the wage gap can be considered gender-based discrimination.

Teenage reading skills



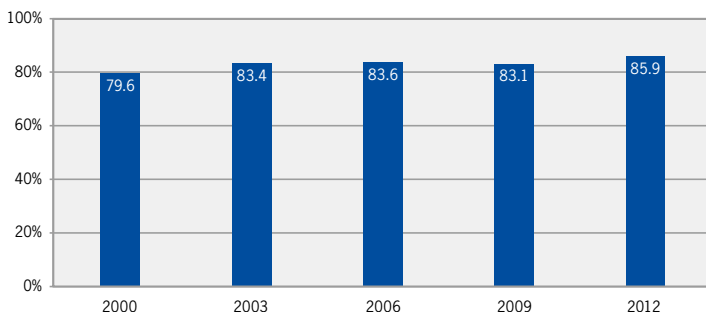
Teenage reading skills are improving

The ability to understand and process information should be fostered. Swiss competitiveness should also be maintained and promoted

Teenagers with poor reading comprehension skills often have a harder time adapting constructively to changes taking place in society. Education ensures that the economy is both innovative and competitive.

Reading skills of 15-year-olds

Share of 15-year-olds reaching at least reading skills level 2 (scale < 1 to 6¹)



¹ 2009: Change in the skills profiles

Sources: FSO, Consortium PISA.ch

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- The percentage of teenagers able to perform basic to challenging reading tasks increased between 2000 and 2012. In 2012, over 85% of teenagers were able to read and understand basic to challenging texts (competence levels 2 to 6).
- Approximately 3% could neither identify the main idea of the texts they read nor recall specific details (competence level < 1).

Public deb



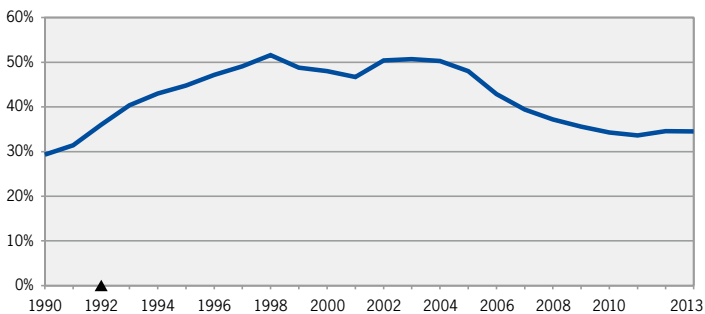
After an increase, the public debt has returned to the level it reached in 1992

The margin of manoeuvre of future generations should not be limited

Heavy indebtedness means that a state is no longer able to adequately provide public services because of accumulated debt. A high debt to GDP ratio is a burden on both current and future generations since interest payments to service the debt tie up substantial capital.

Level of public debt

Gross debt of the Confederation, cantons and communes (without social insurances) in relation to gross domestic product



2013: estimated value

Source: FFA – Financial statistics

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- The debt to GDP ratio has increased considerably during the 1990s. However, in recent years the amount of debt fell again.
- In 2013, the total debt of the Swiss Confederation, cantons and communes amounted to more than CHF 219 billion.
- The Confederation is responsible for more than half the debts, the cantons for almost a quarter and the communes for approximately one fifth.

Investment



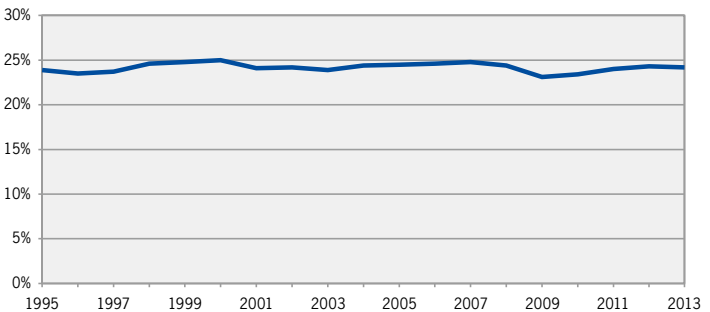
The investment to GDP ratio is about the same

The economic efficiency of a society must be maintained or improved

Economic efficiency depends on whether or not enough goods and services can be produced, which is only possible when money is spent on buildings, equipment, transportation, etc.

Investment to Gross Domestic Product ratio

Gross investments in relation to Gross Domestic Product



2012 and 2013: provisional data

Source: FSO – National accounts

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- The investment to GDP ratio is about the same as it was in 1995.
- In 2013, investments totalled almost CHF 144 billion.

Innovation and technology



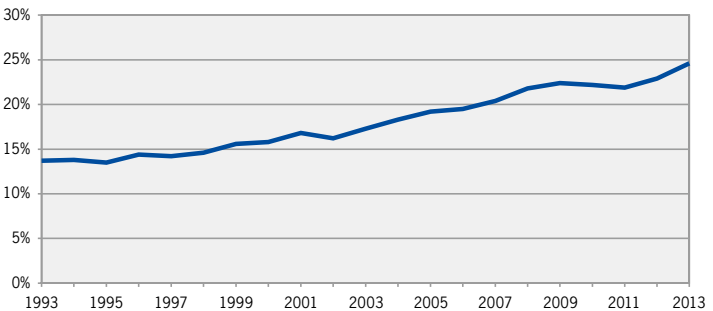
More people are working in science and technology

The economic efficiency of a society must be maintained or improved

Innovation is driven by research and technology. Without innovation, there can be no lasting economic performance. Highly trained personnel in scientific and technical fields make the Swiss economy more competitive.

Human resources in science and technology

Percentage of persons educated and active in science and technology in relation to total working population



Source: FSO – Swiss Labour Force Survey (SLFS)

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- The percentage of people educated and working in scientific and technical fields has grown steadily since the 1990s.
- In 2013, some 1,098,000 people had training and employment in scientific and technical fields, which corresponds to about one fourth of working persons.
- This shows how well Switzerland is adjusting to increased competition worldwide.

Biodiversity



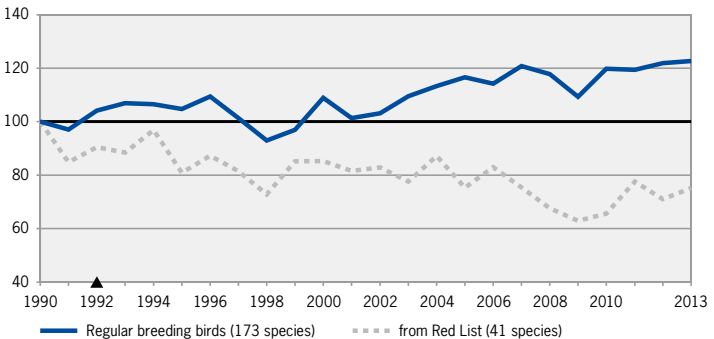
The populations of breeding birds are on the rise

Nature's diversity must be preserved

Biodiversity is important for many reasons: it keeps ecosystems balanced and acts as a potential source of new medicines. Diversity of plants and animals can only be maintained when there are many different types of habitats such as forests, meadows and arable land.

Populations of breeding birds

Trend in breeding bird populations in Switzerland
Index 1990=100



Source: Swiss Ornithological Institute Sempach

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- Considering the 173 rateable species among the 176 species of birds that regularly breed in Switzerland, a positive trend has been observed over the past twenty years. The low value in 2009 is attributable to the winter of 2008–2009, which was particularly harsh. Despite another cold and snowy winter in 2009–2010, many species partially offset the numbers lost in 2010.
- The evolution of the 41 threatened species on the Red List fluctuates considerably but over the whole period the trend points downward. Over the long term, the evolution in the numbers of species on the Red List shows the degree of effectiveness of measures taken to protect threatened species.
- The Red List shows the threatened and rare species. An important criterion for inclusion in the Red List is a fall in the population.

Built-up areas



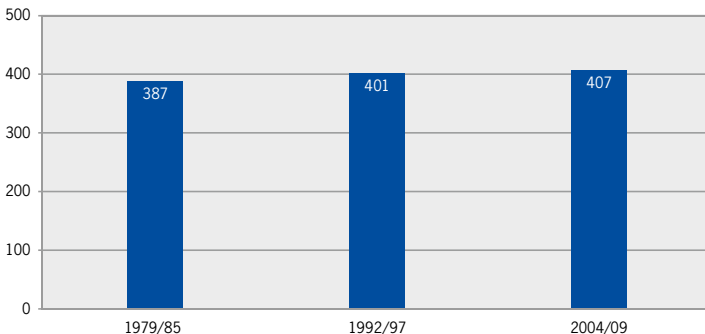
The settlement area required per person is increasing

Long-term solutions must be found to maintain natural life support systems

Soils are an important life support system for humans, animals and plants. The construction of housing, roads and factories invariably results in a loss of important habitats and farmland. This is a process that is very difficult to reverse and therefore also affects future generations.

Per-capita settlement area

Building areas, industrial and commercial areas, special urban areas, recreation facilities, parks and transportation areas, in m²/person



Source: FSO – Land use Statistics, STATPOP

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- There was more than a 5% increase in built-up areas per capita between the 1980s and the second half of the 2000s. In terms of total surface area, there was a 23.4% increase. This amounts to 584 km² or an area equivalent to the size of Lake Geneva.
- In the late 2000s, around 407 m² of land was used per person for housing and infrastructure (equivalent to approximately two tennis courts).
- The increase of built-up areas per inhabitant is caused by the demand for more living space. Subsequently, housing areas have increased by 44% in this period.
- Around half of the built-up areas consist of buildings, 30% are roads and highways and slightly more than 6% are recreational areas and parks.
- Results for the 2004/2009 period show that the growth of housing and infrastructure areas tend to slow down compared to earlier periods.

Freight transport



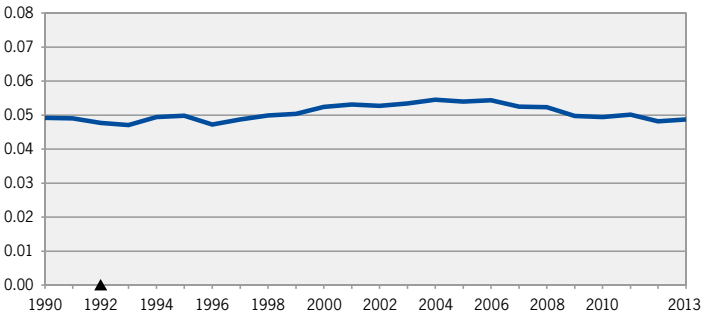
No significant change in the freight transport intensity

Environmental pollution should be reduced as much as possible

Freight transport is an essential part of a healthy economy. However, freight transport – especially motorised – makes noise, releases pollutants and contributes to the depletion of resources. The aim is to keep freight intensity (i. e. the ratio of total tonne-kilometres transported to GDP) as low as possible.

Intensity of freight transport

Performance of freight transport (road and rail) in relation to GDP
at prices of preceding year, reference year = 2005,
in tonne-kilometers/Swiss Franc



2013: provisional data

Sources: FSO – Transport statistics; FSO, SECO – National accounts

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- Freight transport has grown faster than the national economy between the mid 1990's and mid 2000's. This means that an ever-increasing number of goods were transported on ever longer journeys for every Swiss franc earned.
- Since 2006 the intensity of freight transport tends to decline.
- In 2013, close to 29 billion freight tonne-kilometres were covered on both road and rail.
- In the early 1970s, rail transport accounted for three fifths of all freight transport. By 2013, it had dwindled to only two fifths.

Passenger transport



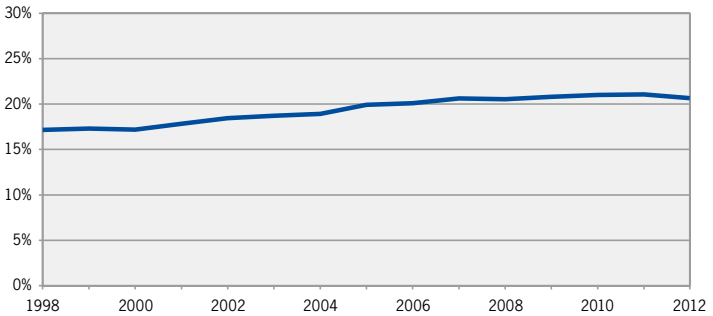
The public to total transport ratio is increasing

Environmental pollution should be reduced as much as possible

Mobility is a vital necessity. In addition, it is of high importance for a healthy economy. A decisive factor is the choice of transport: taking public transport, cycling or walking are better for the environment and for people's health.

Modal split of passenger transport

Share of public transport in total passenger transport by road and rail, in % of passenger km



Source: FSO – Transport statistics

© FSO, Neuchâtel 2015

- The share of public transport in total transport has increased since 1998 and amounted to 20.6% in 2012.
- The total amount of kilometres covered per person has increased by more than 25% between 1998–2012.
- Slow traffic (i. e. cycling or walking) accounted for 6.7%. The car is by far the most widely used form of personal transport.

Energy consumption



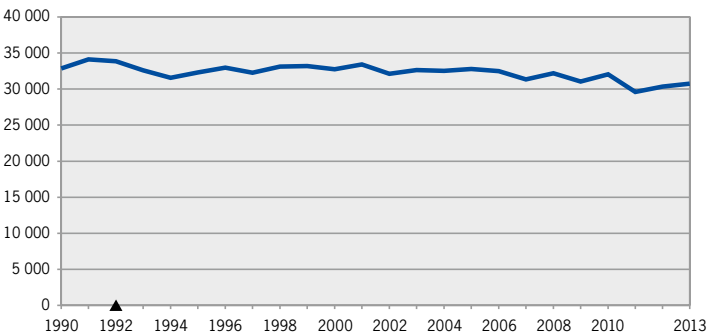
The per capita consumption of energy is decreasing

Renewable and non-renewable resources must be used in moderation

Energy is one of the essential resources for the functioning of our society. Therefore, the availability of energy and the durability of its supply must be ensured. However, the production and consumption of renewable and non-renewable energy has a negative environmental impact due to the emission of greenhouse gases or air pollutants, the generation of non-degradable waste or the impact on streams or landscapes.

Energy consumption

Final energy consumption per capita, in kilowatt hours



Sources: FSO – STATPOP; SFOE – Overall energy statistics

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- The final energy consumption per capita has decreased since 1990. But it is still very high.
- Final energy consumption per capita amounts to over 30,000 kilowatt hours per year, which corresponds to approximately 3600 litres of petrol.
- As a result of population growth, absolute final consumption of energy has increased by 12.8% since 1990. In 2013, it reached 895,990 terajoules, which is the equivalent of about 29 million m³ of petrol or over 366,000 rail tankers.

Material consumption



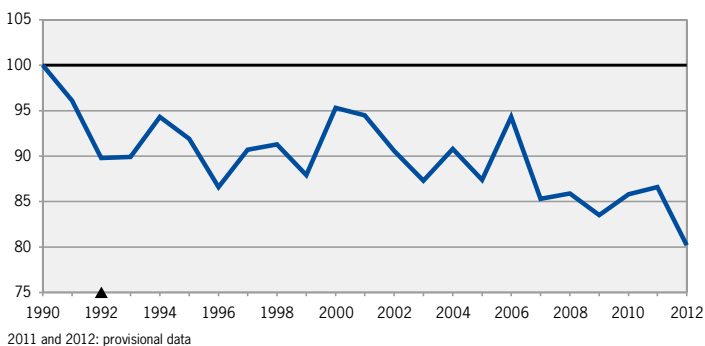
Material intensity is decreasing

Material and energy flows must be optimised so that natural resources can be maintained in the long run

One of the main goals of sustainable development is to bring about the gradual dematerialisation of our economy so as to lessen the environmental impact of human and economic activities. The Total Material Requirement (TMR) of a country is the sum of all direct flows (domestically extracted or imported raw materials like minerals and biomass) used by the national economy as well as all indirect flows (unutilised domestic extraction or hidden flows associated with products imported into Switzerland). Material intensity is calculated by dividing the TMR by the Gross Domestic Product.

Material intensity

Total Material Requirement (TMR) to real Gross Domestic Product (GDP) ratio
Index 1990 = 100



Sources: FSO – Environmental accounts; FSO, SECO – National accounts

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- Between 1992 and 2010 material intensity generally tends to decrease.
- In 2012, the total material requirement amounted to 331 million tonnes or 41 tonnes per capita.

What is sustainable development?

The concept of sustainable development we use today was first described in 1987 in the Brundtland Report of the World Commission on Environment and Development. It is defined as follows:

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

The Brundtland Report adds two elements to this definition which are considered to be fundamental: prioritising the basic needs of individuals (especially the most disadvantaged) and taking due account of the capacity limits of our environment.

In 1992, the Earth Summit in Rio de Janeiro provided the basis for implementing a sustainable development policy by proposing Agenda 21 (Action Plan for the 21st Century). The Rio+20 Conference was an opportunity to renew commitments by defining the next stages of sustainable development in The Future We Want report.

At the national level, Switzerland made a commitment in 1992 to define and pursue a sustainable development policy. This took concrete form in 1997 with the “Strategy for Sustainable Development” of the Swiss Federal Council, which has been periodically revised and whose most recent version includes an action plan for the 2011–2015 legislative period. In addition, sustainable development is enshrined in the 1999 revision of the Federal Constitution (Arts. 2 and 73).

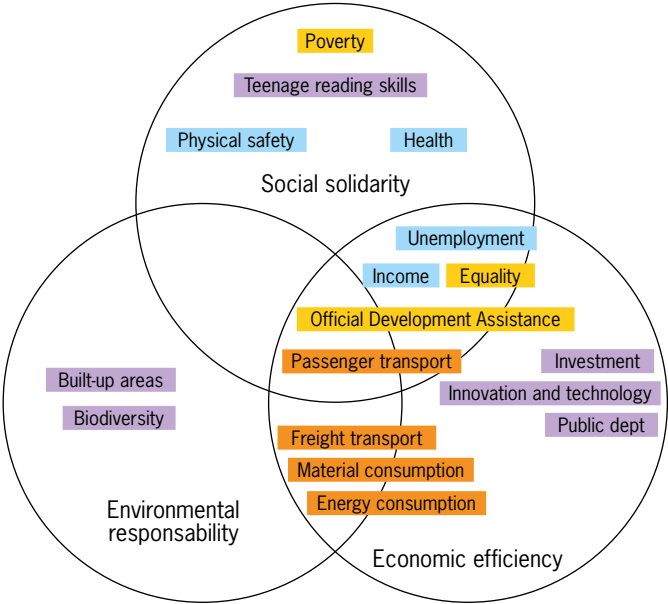
The three traditional pillars of sustainable development (society, environment and economy), which have been widely applied since the Earth Summit of 1992, have been reformulated in Swiss federal government policy as three qualitative objectives:

- social solidarity;
- environmental responsibility;
- economic efficiency.

These objectives are interconnected and can be represented by three intersecting circles. The intersections of these circles symbolise the necessity for sustainable development to balance these three objectives which are sometimes in conflict with one another. More generally, the three-dimensional diagram represents the challenge of sustainable development: to take into account the quality of life of present generations, preserve resources for future generations, equity requirements (interfaces between objective of social solidarity with the two other objectives) and the need to use resources in a rational way (interface between the objective of environmental responsibility with that of economic efficiency).

The diagram on the next page shows the position of the 17 key indicators in relation to the three qualitative objectives and their intersections.

Overview of key indicators, presented according to three qualitative objectives



Additional information:

More information on MONET available at www.monet.admin.ch

- All the indicators online.
- The 45 principles that show the direction towards sustainable development.
- The dashboard shows at a glance the progress made in the ten key challenges in the Federal Council's Strategy for Sustainable Development 2012–2015.

Comprehensive information about sustainable development policy in Switzerland: www.are.admin.ch/sustainabledevelopment

Publications:

FSO, ARE, FOEN, SDC: Sustainable Development Report 2012, Neuchâtel 2012

Swiss Federal Council: Sustainable Development Strategy 2012–2015, Bern 2012

FSO, ARE, FOEN, SDC: Sustainable Development – Pocket Statistics 2014, Neuchâtel 2014

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