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Sustainable Development, regional and international Disparities

737-1000

Sustainable Development – A Brief Guide 2010

17 key indicators to measure progress

Corrected version.

Page 9/poverty: currently no data available.

Updated data will follow in December.



Schweizerische Eidgenossenschaft
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Federal Statistical Office FSO
Federal Office for Spatial Development ARE
Swiss Agency for Development and Cooperation SDC
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Neuchâtel, 2010

Swiss Confederation

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. Thus, sustainable development aims to promote an equitable distribution of resources at a regional and global level.

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 80 regularly updated indicators. The system is based on a series of postulates 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 the trend of each indicator is represented by one of the following symbols:

-  positive (towards greater sustainability)
-  neutral
-  negative (towards lesser sustainability)

For each key indicator the trend since 1990 (or since the data were first collected, if after 1990) is assessed, and not the state of the indicator or the trend with respect to one target (e.g. a political target).

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Health



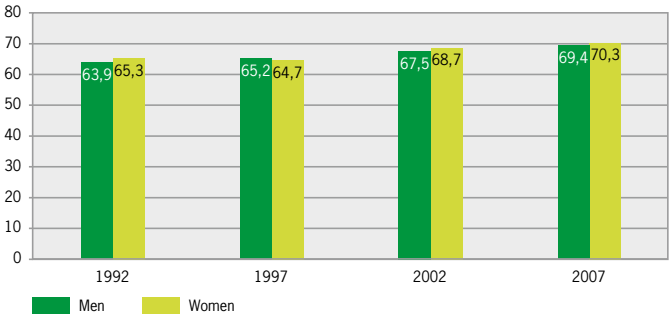
People's health is improving.

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



Source: Federal Statistical Office

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- Over 15 years, the life expectancy of women in good health has increased by 5 years and of men by 5.5 years.
- Between 1992 and 2007, life expectancy in good health has increased more than the life expectancy in general. Life expectancy in general has increased from 81.5 to 84.3 years for women and from 74.6 to 79.6 years for men.

Income



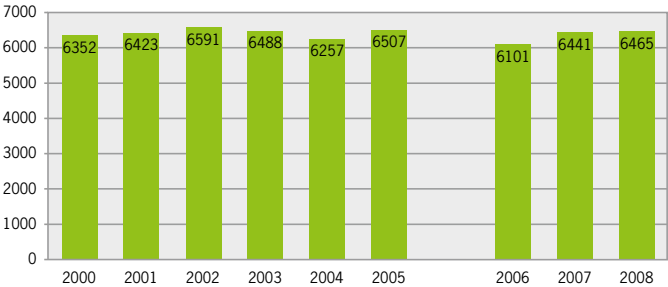
People are not earning more.

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.

Household income

Average disposable monthly household income, in Swiss francs



As of 2006 change in the survey: data are not directly comparable with previous years' values

Source: Federal Statistical Office

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- Between 2000 and 2008, no significant increase in average gross monthly income per household was recorded.
- As the number of people per household has fallen at the same time, the per capita disposable income has risen.
- The households in the highest income bracket (i.e. top 20%) earn about five times more than those in the lowest income bracket (i.e. bottom 20%).

Physical safety

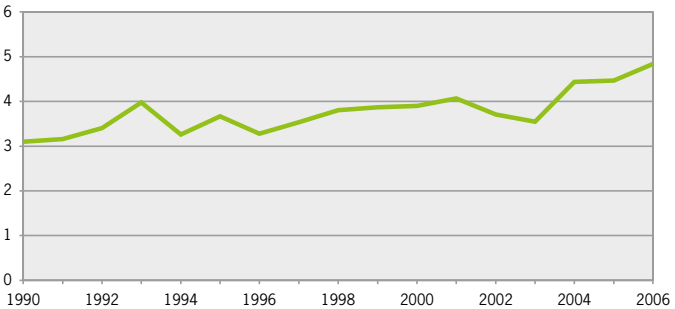
— Violent offences are on the rise.

Physical safety is a vital necessity.

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

Violent offences

Convictions for homicide, rape, grievous bodily harm, violent robbery and hostage-taking per 100,000 people



Source: Federal Statistical Office

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- The number of convictions for serious violence is increasing.
- In 2006, 35.3% of the 363 convictions for serious violent offences were convictions for rape, 30.9% for homicide, 28.9% for grievous bodily harm and 4.9% for violent robbery and hostage-taking.
- The increase in the number of cases reported could be due to the fact that nowadays people are more likely to report violent crime. A growing awareness of the problem of violence increases individuals' propensity to report these acts and to subject the perpetrators to criminal prosecution.
- But it is probable that numerous cases of domestic violence and rape are not always reported.

Unemployment



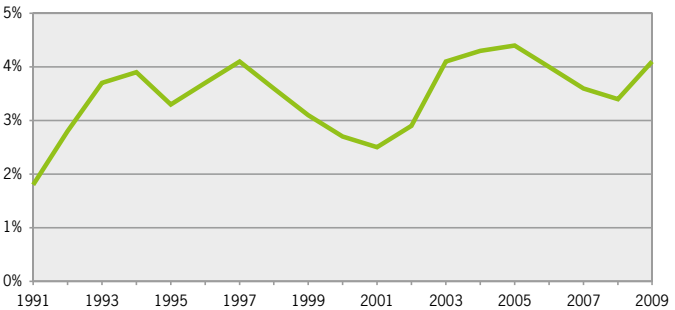
The unemployment rate is rising.

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 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

Percentage of unemployed in relation to total working population



Source: Federal Statistical Office

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- From 1991 to 2009, the unemployment rate increased overall with significant fluctuations; in 2009, the rate was 4.1%.
- The unemployment rate is heavily influenced by the economic situation.
- In 2009, almost 182,000 persons were without work.
- The unemployment rate is, on average, almost twice as high among young working people aged 15 to 24 (8.2% in 2009) as that for the entire population of working age (aged 15–64).

Official Development Assistance



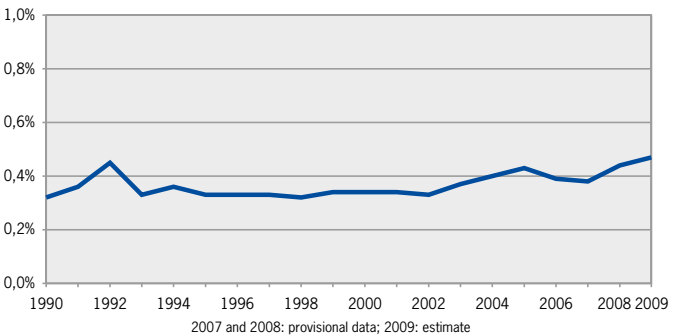
Official development assistance is increasing.

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 at market prices
(previously gross national product)



Sources: Swiss Agency for Development and Cooperation; State Secretariat for Economic Affairs

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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 0.38% of GNI has been devoted to Official Development Assistance over the past ten years.
- In 2009, the Swiss government spent almost CHF 2.5 billion on development assistance.
- The Swiss contribution falls well below the UN target of 0.7% of GNI.

Equality



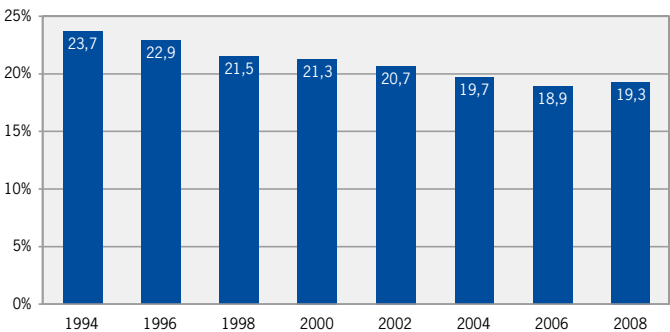
The wage gap between women and men is gradually narrowing.

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 in relation to gross monthly wage of men



Source: Federal Statistical Office

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- Overall, the wage gap between women and men narrowed slightly between 1994 and 2008.
- In 2008, women's monthly salaries were on average CHF 1,208 lower than men's. This corresponds to a difference of almost 20%.
- 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 is due to gender-based discrimination.

Teenage reading skills



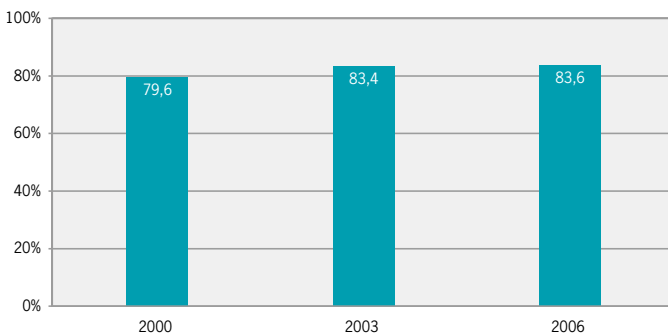
Teenage reading skills are hardly improving.

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 5)



Source: Federal Statistical Office

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- The percentage of teenagers able to perform basic to challenging reading tasks did not improve significantly between 2000 and 2006. In 2006, over 80% of teenagers were able to read and understand basic to challenging texts (competence levels 2 to 5).
- Over 5% could neither identify the main idea of the texts they read nor recall specific details (competence level below 1).

Public debt



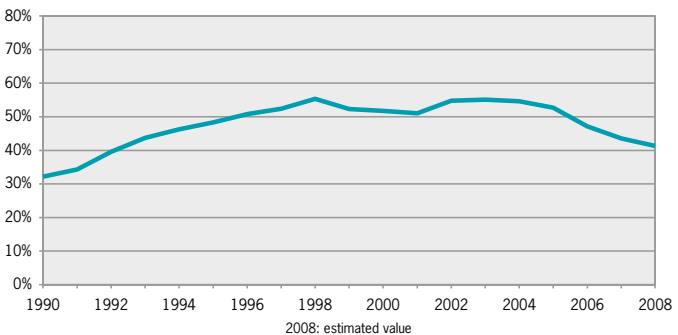
Debt has risen.

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



Source: Federal Finance Administration

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- The debt to GDP ratio has increased considerably since 1990. However, in recent years the amount of debt fell again.
- In 2008, the total debt of the Swiss Confederation, cantons and communes amounted to more than CHF 223 billion.
- The Confederation is responsible for more than half the debts, the cantons for more than one fourth and the communes for one fifth.

Investment



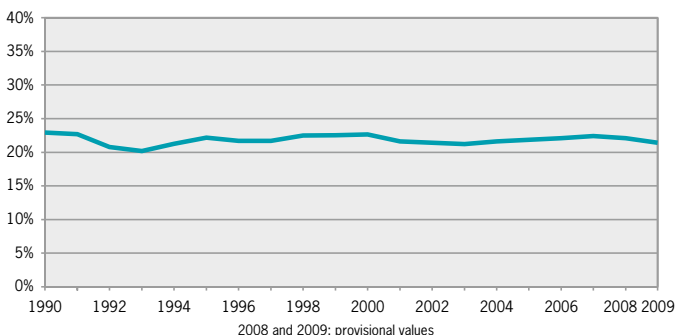
The investment to GDP ratio is about the same.

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 GDP ratio

Gross investments in relation to gross domestic product



Source: Federal Statistical Office

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- The investment to GDP ratio is about the same as it was in 1990.
- In 2009, the investment to GDP ratio amounted CHF 104 billion, which corresponds to nearly one fifth of GDP.

Innovation and technology



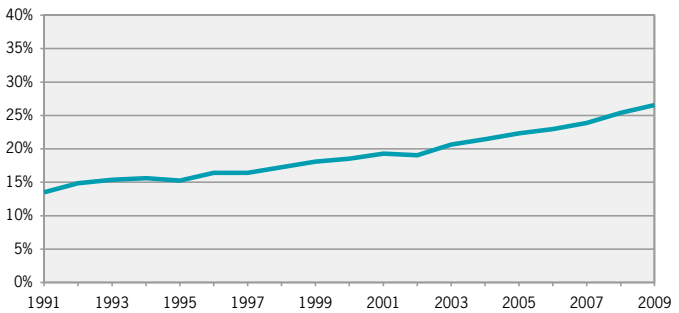
More people are working in science and technology.

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: Federal Statistical Office

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- The percentage of people educated and working in scientific and technical fields has grown steadily since the 1990s.
- In 2009, some 1,137,000 people had training and employment in scientific and technical fields, which corresponds to more than one quarter of working persons.
- This shows how well Switzerland is adjusting to increased competition worldwide.

Biodiversity



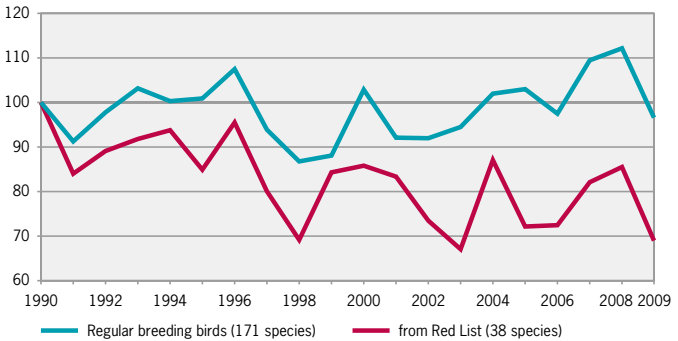
The populations of breeding birds fluctuate.

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 total of the 171 rateable of the 174 species of bird that regularly breed in Switzerland, a slightly positive trend was observed in the years after 2000, mainly due to an increase in the populations of common and widespread species. In 2009, this trend stopped. The low value in 2009 is attributable to the winter of 2008–2009, which was particularly harsh.
- The evolution of the 38 threatened species on the Red List fluctuates considerably but over the whole period the trend points downward. Over the last decade, the numbers of these species appear to have stabilised somewhat (with large fluctuations). But they remain low. In the longer term the change in the number of Red List species demonstrates the effectiveness of the 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



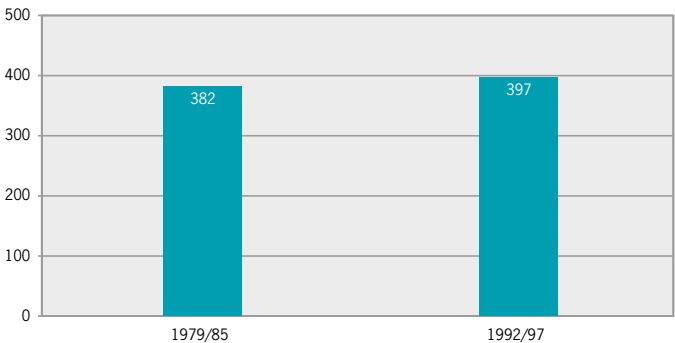
Built-up areas are encroaching upon the landscape.

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.

Built-up areas per capita

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



Source: Federal Statistical Office

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- There was roughly a 4% increase in built-up areas per capita between the 1980s and 1990s. In terms of total surface area, there was a 13% increase. This amounts to 327 km² or an area larger than the canton of Schaffhausen.
- In the mid-1990s, around 400 m² of land was used per person for housing and infrastructure (equivalent to approximately two tennis courts).
- Half of built-up areas are occupied by buildings, 30% by roads and highways and 6% by recreational areas and parks.
- The first results for the 2004/2009 period show that the growth of housing and infrastructure areas is tending to slow down. This result, available since mid-2010, concerns 52% of the Swiss territory. Other results are needed to confirm this trend.

Freight transport



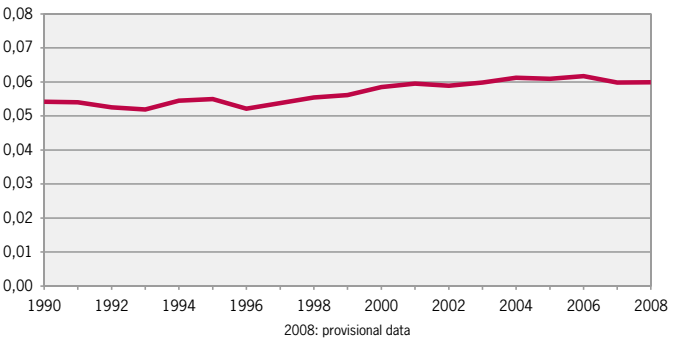
Freight transport is growing faster than the economy.

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 pollutant and contributes to the depletion of resources. The aim is to keep freight intensity (i.e. 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 gross domestic product at previous year's prices with reference year 2000, in tonne-kilometers/Swiss franc



Source: Federal Statistical Office

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- Freight transport has grown faster than the national economy over the past 18 years. This means that an ever-increasing number of goods are being transported on ever longer journeys for every Swiss franc earned.
- In 2008, more than 29 billion freight tonne-kilometres were covered on both road and rail.
- This is due to the fact that more goods are being produced in fewer places, which increases the need for transport over longer distances.
- In the early 1970s, rail transport accounted for three fifths of all freight transport. By 2008, it had dwindled to only two fifths.

Passenger transport



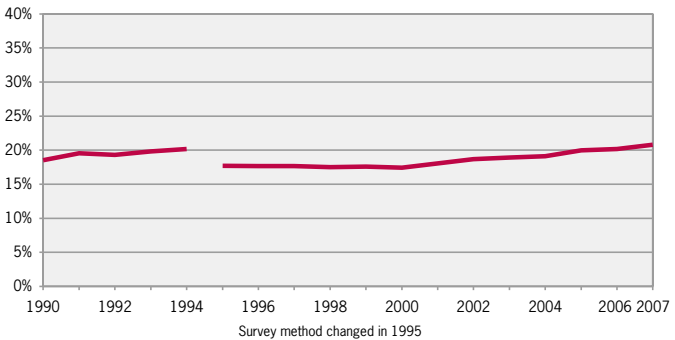
The public to total transport ratio is increasing.

Environmental pollution should be reduced.

Mobility is a vital necessity. In addition, it is of high importance for a health economy. A decisive factor is the choice of transport: taking public transport, cycling and 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: Federal Statistical Office

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- The share of public transport in total transport has increased since 1990 and amounted to 20.8% in 2007.
- In 2007, around 16% more kilometres were covered per person than in 1990.
- Slow traffic (i.e. cycling or walking) accounted for 6%. The car is by far the most widely used form of personal transport.

Energy consumption



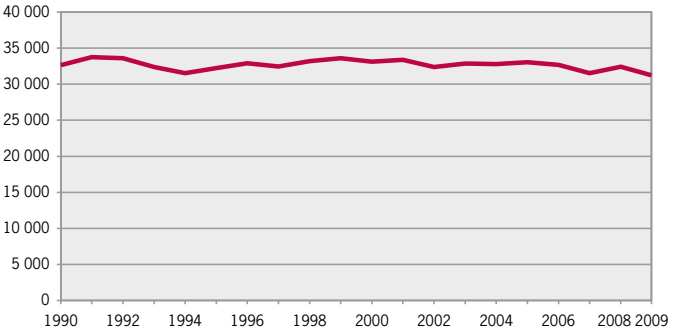
The per capita consumption of energy has stabilised.

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 in kilowatt hours per capita



Sources: Federal Office of Energy; Federal Statistical Office

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- The final energy consumption per capita has remained stable since 1990. But it is still very high.
- Final energy consumption per capita amounts to over 31,000 kilowatt hours per year, which corresponds to approximately 3,700 litres of petrol.
- As a result of population growth, absolute final consumption of energy has increased by 9,9% since 1990. In 2009, it reached 877,560 terajoules, which is the equivalent of about 29 million m³ of petrol or over 358,000 rail tankers.

Material consumption



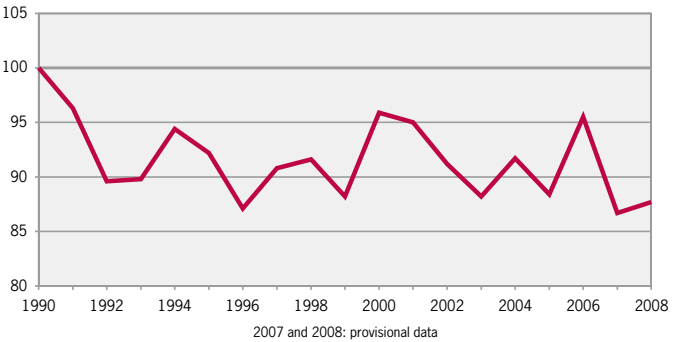
Material intensity fluctuates.

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 gross domestic product ratio
Index 1990 = 100



Source: Federal Statistical Office

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- Between 1990 and 2008 material intensity fluctuated.
- The dematerialisation observed between 1990 and 1996 primarily reflects a lack of economic growth and a strong cutback in activities of the construction sector.
- In 2008, the total material requirement amounted to 346 million tonnes or 45 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). In adopting this plan of action, Switzerland undertook to define and pursue a sustainable development policy.

The implementation of this policy took concrete form in 1997 with the «Strategy of the Federal Council for Sustainable Development», which has been periodically revised and whose most recent version includes an action plan for the 2008–2011 legislative period. In addition, sustainable development is enshrined in the 1999 revision of the Federal Constitution (Arts. 2 and 73).

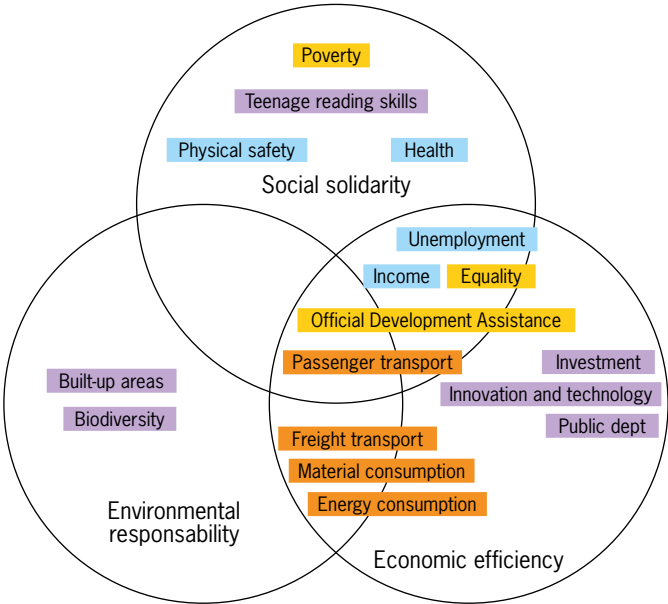
The three traditional pillars of sustainable development (society, the environment and the economy), which have been widely applied since the Earth Summit of 1992, have been reformulated in Swiss federal government policy as three qualitative objectives:

- 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 postulates that show the direction towards sustainable development.
- The dashboard shows at a glance the progress made in the eleven key challenges in the Federal Council's Strategy for Sustainable Development 2008–2011.

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

Publications:

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Imprint:

Published by: Federal Statistical Office

Editor of the third edition, 2010: Sarah Widmer, FSO

Cover graphic: FSO Concept: Netthoevel & Gaberthüel, Biel;
Photograph: © gradt – Fotolia.com

Graphics/Layout: DIAM, Prepress/Print, FSO

Translation: FSO Language Services, available in PDF format or hard copy in German, French, Italian and English

Information: Federal Statistical Office, Environment, Sustainable Development, Territory Section, Anne Boesch, tel.: 032 713 67 65, email: monet@bfs.admin.ch

Orders: Order number: 737-1000, free of charge. Tel.: 032 713 60 60, email: order@bfs.admin.ch, fax: 032 713 60 61