

Global environmental conditions for transport forecasts for 2020

About SIKA

Swedish Institute for Transport and Communications Analysis, SIKA, is an agency working in the transport and communications sector. Our main tasks are to make analyses, descriptions of the current situation and other reports for the Government, to develop forecast and planning methods and to be responsible for the official statistics.

The reports are published in the series *SIKA Rapport* and *SIKA PM*. The statistics are published in the series *SIKA Statistik*, in the journal *SIKA Kommunikationer* and in the *Transport and Communications* yearbook. All publications are available on SIKA's website www.sika-institute.se.

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Background

SIKA has been commissioned by the Swedish Government to produce forecasts for the development of transport in Sweden through to 2020 in consultation with and with the help of the National Rail Administration, the National Road Administration, the Swedish Maritime Administration and the Civil Aviation Administration.

This report describes and explains the environmental conditions used in forecasts for passenger and goods transport through to 2020. The reporting of this commission also includes an overall summary of the entire commission (SIKA Report 2005:6), a report on passenger transport (SIKA Report 2005:8) and a report on goods transport (SIKA Report 2005:9).

The project leader for the work of producing environmental conditions was Jenni Ranhangen. She was assisted by Zara Bohlin and Henrik Edwards.

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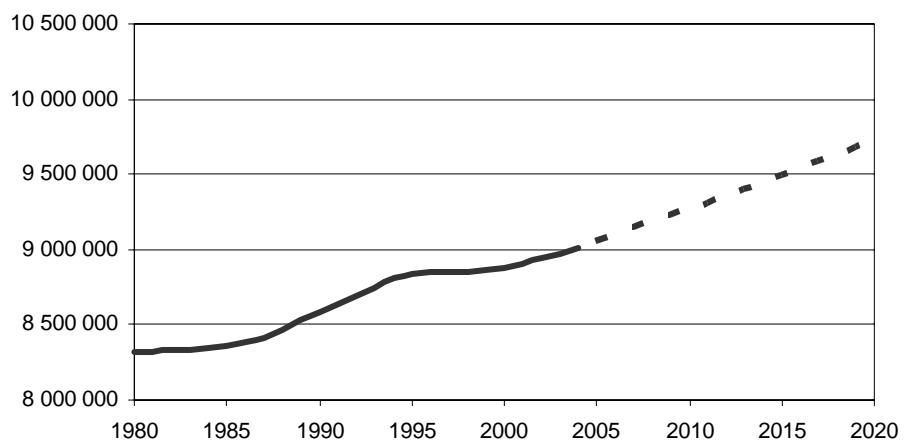
Producing forecasts for passenger and goods transport in Sweden requires information on infrastructure, traffic operation, transport and costs, and also factors outside the sphere of transport, in particular information on current economic and social conditions as a whole and how these might develop in the future. The report describes the global environmental conditions that exist for passenger and goods transport.

Global environmental conditions include data on economic development, population, employment, incomes, industry, foreign trade etc. This data is mostly gathered from Statistics Sweden (SCB) and the Swedish Long-Term Survey (LU). SIKA has processed this basic material through a number of stages in order to adapt it to the requirements for detail (finer divisions of regions and trade sectors) made by the transport models. The global environmental scenarios start from a base year, 2001, and continue through to a forecast year, 2020.

The different areas of application for the transport forecasts mean different requirements in terms of the structure of the scenarios. It has therefore been considered necessary to proceed from two macroeconomic global environmental scenarios, a main scenario and an alternative scenario. The main scenario is called the LU scenario [abbreviation of Swedish name] and is based on conditions in the Swedish Long-Term Survey 2003/04. The alternative scenario is called Agreed Measures (BS), and is also based on LU 2003/04. The difference between LU and BS is that the LU scenario includes an assumption on changed carbon dioxide taxes, while the BS scenario only includes agreed measures. The main reason for including an alternative scenario in the forecast is to obtain consistent scenarios that allow ongoing analyses and effects of further measures. Sweden's reporting of greenhouse gases to the climate convention should also normally be based on scenarios that only include agreed measures.

For input into the passenger forecasts it is necessary to use data on population and employment and for goods forecasts, in addition to this information, also information on the development of business and industrial factors (production, foreign trade and consumption).

According to both the global environmental scenarios, Sweden's population in 2020 will be around 9.7 million, an increase of nine per cent compared with the base year of 2001. The biggest population growth is expected to take place in the metropolitan counties of Stockholm, Västra Götaland and Skåne, plus the counties of Uppsala and Halland. Counties with an expected fall in population are mostly forest areas but also counties in mid and southern Sweden.



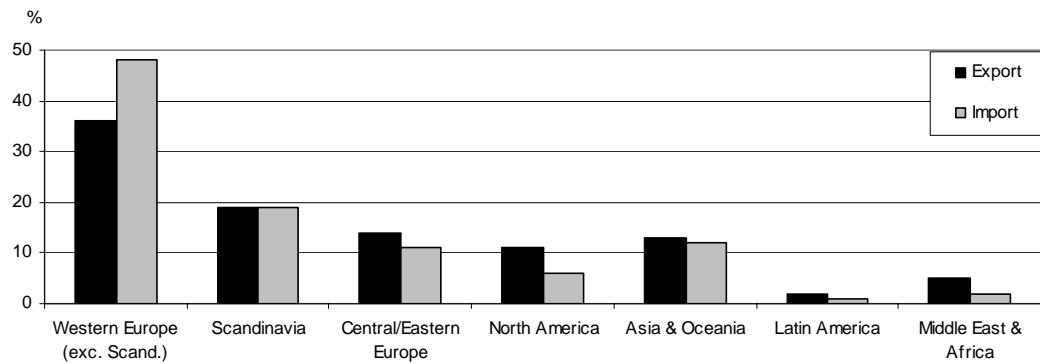
Sweden's population from 1980–2020 according to Statistics Sweden (1980–2004) and forecast.

The number of employed people is expected to rise by 6.2 per cent in the LU scenario and 6.5 per cent in the BS scenario between 2001 and 2020, which equates to just over 250,000 and 263,000 employed people respectively. The increase is expected to take place mostly in the counties of Stockholm, Uppsala, Skåne, Västra Götaland and Halland. Counties where employment is expected to fall the most are Värmland, Dalarna, Västernorrland and Jämtland.

The total value of production is expected to increase according to the LU scenario by an average of 2.3 per cent per year during the period 2001–2020. According to the BS scenario the increase will be 2.4 per cent per year. The difference is explained by an increase in goods production and may be considered reasonable, bearing in mind the fact that there is no restriction on carbon dioxide emissions in the BS scenario.

According to the LU scenario, exports are expected to increase by a total of 4 per cent per year during the period 2001–2020, while imports are expected to see an annual increase of 4.4 per cent. The corresponding figures in the BS scenario are 4.2 per cent and 4.6 per cent per year respectively. The goods-producing sectors are responsible for the major proportion of the foreign trade, a situation which is not expected to change very much between the base year and the forecast year.

On average total consumption is expected to increase by approximately 2.4 per cent per year in both the LU and the BS scenarios. The consumption of goods represents around 40 per cent of the total consumption. The consumption of goods increases slightly more rapidly in the BS scenario but the difference is only marginal.



Swedish foreign trade forecast for 2020, divided into regions, in percentage terms.

It is important to emphasise that the assumptions relating to global environmental conditions in the future as described in this report should not be seen as forecasts from SIKA. There are uncertainties connected with the macroeconomic scenarios which partly derive from the fact that they are not adapted to the needs of the transport sector, among other things with regard to the level of detail and the assumptions made concerning measures and business sector development.