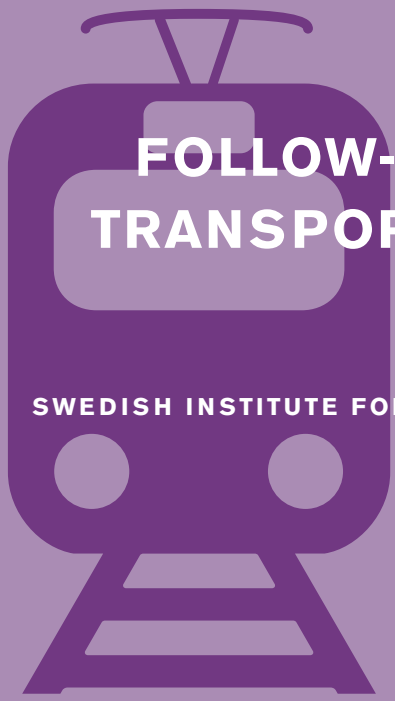
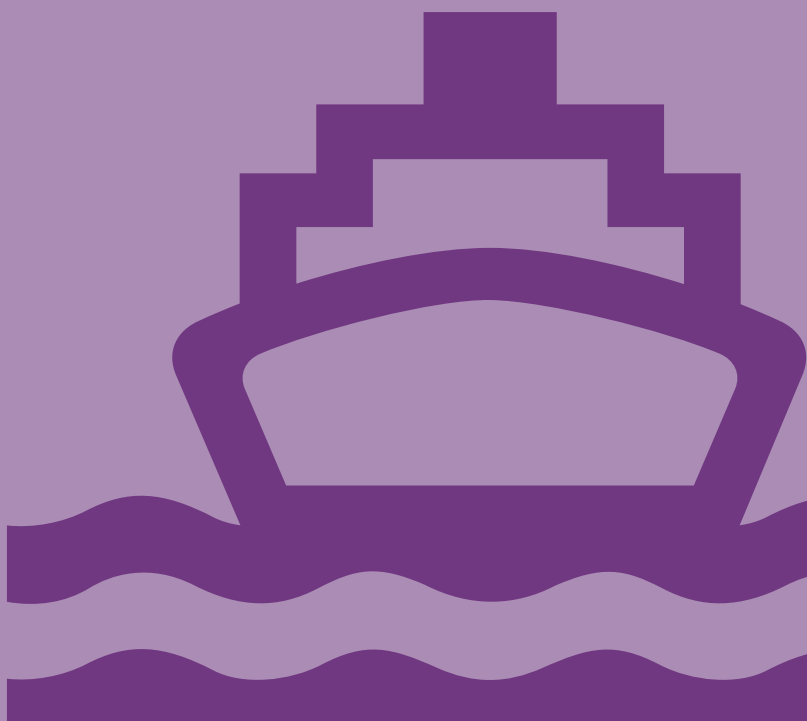


FOLLOW-UP OF THE SWEDISH TRANSPORT POLICY OBJECTIVES

MAY 2003

SWEDISH INSTITUTE FOR TRANSPORT AND COMMUNICATIONS ANALYSIS



PREFACE

This is SIKA's fourth annual follow-up report on the progress made in the transport sector in relation to the transport policy objectives. The overall objective is to ensure socially and economically efficient and long-term sustainable transport resources for the public and industry throughout Sweden. There are also subsidiary objectives on an accessible transport system, positive regional development, gender equality, a high transport quality, safe traffic and a good environment.

In this year's report, we attempt for the first time to follow up the overall objective. We note that, among the subsidiary objectives, it is in particular the objectives for safe traffic and the environment that are problematic and where development is hardly moving in the right direction.

This publication is a summary of SIKA Report 2003:5. It is based on material from the transport agencies – the National Rail Administration, the Civil Aviation Administration, the Swedish Maritime Administration and the National Road Administration, as well as from the National Public Transport Agency and the National Rural Development Agency. All reports from SIKA – complete reports in Swedish and summaries in English – are available on the web-site www.sika-institute.se

Stockholm, June 2003

Staffan Widlert
Director

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Swedish Institute for Transport and Communications Analysis, SIKA

sika@sika-institute.se
www.sika-institute.se
Tel: +46-8 506 206 00
Fax: +46-8 506 206 10

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THE TRANSPORT POLICY OBJECTIVES AND THE SUBSIDIARY OBJECTIVES

Swedish transport policy is guided by an overall objective and six subsidiary objectives for different areas. These objectives have been set by the Swedish parliament, the Riksdag, during the period 1998–2001.

The overall objective for transport policy is to ensure socially and economically efficient and long-term sustainable transport resources for the public and industry throughout Sweden.

- Accessible transport system
  The transport system will be designed so that the basic transport needs of the public and industry may be satisfied.

- Positive regional development
  The transport system will promote positive regional development by both evening out differences in opportunities of various parts of Sweden to develop and also by counteracting disadvantages of long transport distances.

- Gender equality in the transport system
  The transport system shall be designed so that it meets both men's and women's transport requirements. Women and men shall have the same opportunities to influence the construction, design and management of the transport system, and their values shall be given equal weight.

- High transport quality
  The design and operation of the transport system will allow high transport quality for the public and industry.

- Safe traffic
  The long-term objective for traffic safety is that no one should be killed or seriously injured as a result of a traffic accident. The design and operation of the transport system must be adapted to the demands following on from this.

- Good environment
  The design and operation of the transport system will be adapted to the requirement of a good living environment for everyone, where nature and the environment are protected from damage. The effective management of land, water, energy and other natural resources must be promoted.

HOW ARE THE OBJECTIVES BEING MET?

The overall objective of social and economic efficiency and long-term sustainability has not been followed up previously. SIKA notes that it is possible to monitor progress on this objective, although better documentation is required, for instance a socio-economic basis for decision-making is lacking for several important categories of planned measures.

The concepts of social and economic efficiency and long-term sustainability might seem to be opposed to one another. However, we note that there does not have to be a conflict between them, although there are deficiencies in the present way of measuring and calculating various aspects of these concepts. Neither does the social justice aspect of the objective have to be incompatible with social and economic efficiency.

The development of the six subsidiary objectives in the past year has been both positive and negative. In the panel below, we have summarised progress over the past year in relation to the transport policy objective and the subsidiary objectives and the assessment we make of whether the deadlines set for some of the subsidiary objectives will be met.

Overall objective	Progress towards the long-term objective It is possible to assess progress made towards achieving the objective, although better documentation is needed. There is no conflict between efficiency and long-term sustainability.	
Subsidiary objectives	**Progress towards long-term objective in 2002**	**Are the deadlines which have been set being achieved?**
Accessibility (for those with functional disabilities)	Yes	No
Regional development	Uncertain	No targets set
Gender equality	Uncertain	No targets set
High quality transport	Yes	No
Safe traffic	No	No
Good environment		
– Impact on climate (CO_2)	No	No
– Air pollution (S, NO_x, VOC)	Yes?	Yes?
– Noise	No	No
– Ecocycle adaptation	Uncertain	No targets set
– Impact on natural and cultural environment	Uncertain	No targets set

ACCESSIBILITY AND REGIONAL DEVELOPMENT

Accessibility and regional development are multi-dimensional concepts, which are not altogether easy to measure and evaluate. Short journeys can be a result of good accessibility. Improved road or train links can make it easier for people to reach a larger geographical area and more workplaces, more extensive service facilities, etc. This increase the quality of life and can contribute to regional development although, at the same time, it can lead to more and longer journeys.

SIKA notes that travel times in the road and rail networks are largely unchanged although more high-speed trains have reduced travel times between some places. Accessibility has deteriorated again for air travel, measured in terms of the possible length of stay at a place visited during a day trip.

The objective has been set that public transport is to be accessible for those with functionally disabilities at the latest by 2010. SIKA notes that accessibility is increasing for the functionally disabled – both physically in the transport system and in terms of increased awareness and expertise among those who plan and work with transportation. However, it will be difficult to achieve the target by 2010. The transport agencies have estimated that investments of approximately SEK 21 billion would be required, i.e. over SEK 3 billion per year to make public transport accessible to all by 2010.

GENDER EQUALITY

Women and men have different travel patterns and transport needs but their habits in the transport system also differ. Men travel more by car while women walk and use public transport to a greater extent than men. However, the car is still the most common means of transport for both women and men. The purpose of men's and women's travel also differs. Men make more journeys on business, for instance, while women travel for shopping and to obtain services to a greater extent. The traditional gender patterns are still reflected then in our travelling habits.

SIKA also notes that the decision-making procedure in the transport sector is greatly dominated by men, for instance in executive management positions and in various boards and working groups.

However, it is difficult to say anything about developments of gender equality in the past year since too little knowledge is available. We need to acquire more knowledge about what we mean by a transport system with equal opportunities and we need to improve the methods of measuring progress.

HIGH TRANSPORT QUALITY

The concept of transport quality also contains a number of dimensions and complicated contexts. We have decided to present transport quality with a limited number of measures.

The quality of the roads continues to be high, although lorry traffic is increasing and it is too fast and too heavily loaded. This leads to the roads being destroyed and a high level of resources having to be used for operation and maintenance of the roads. One measure to restrict the wear and tear on the roads by lorries may be to reduce their excess speed and overloads by more efficient surveillance.

Train delays have reduced compared with recent years although they are still at a higher level than in 1998. The transport agencies fear that the objective for the number of disruptions to goods transport will not be achieved.

The expansion of increased axle load for goods transport by railway is continuing and the transport agencies make the assessment that the objectives for 2007 will be met at the present rate of expansion.

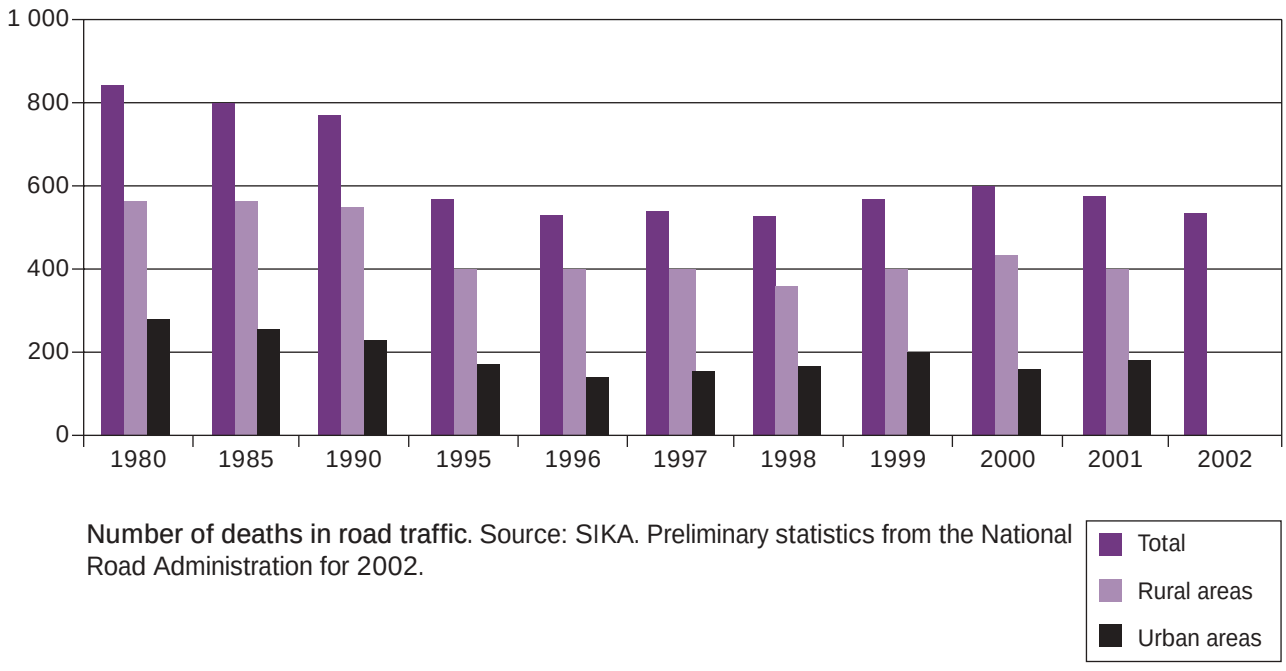
Delays in air travel to and from Arlanda are continuing. Most of these are at most 15 minutes, and the delays are small compared with other European airports.

SAFE TRAFFIC

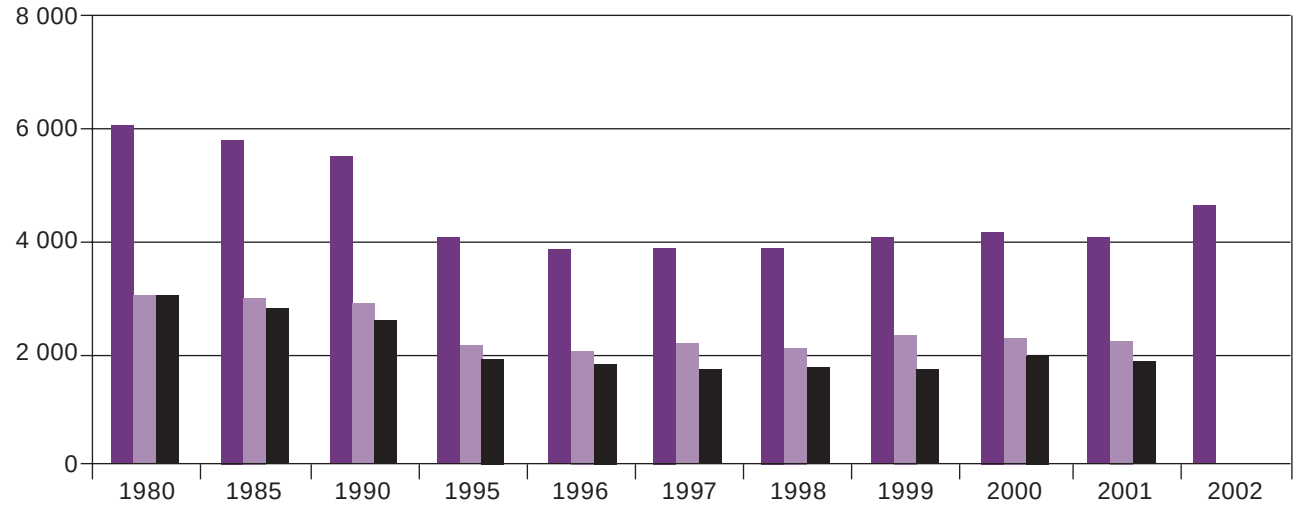
The number killed and seriously injured on the roads was the same in 2002 as in previous years. This development continues to cause concern. Achievement of the zero vision, i.e. the long-term objective that no one is to be killed or seriously injured as a result of road accidents, seems to be very far off.

However, SIKA considers that there are a number of measures which would considerably increase road safety. These include more effective control on the roads of observation of speed limits, abstinence from alcohol, and the use of seat belts as well as measures in vehicles such as alcohol locks, belt reminders, and speed-restricting technology. However, the transport agencies cannot decide upon these types of measures but this is a matter for the government, the Riksdag and the EU.

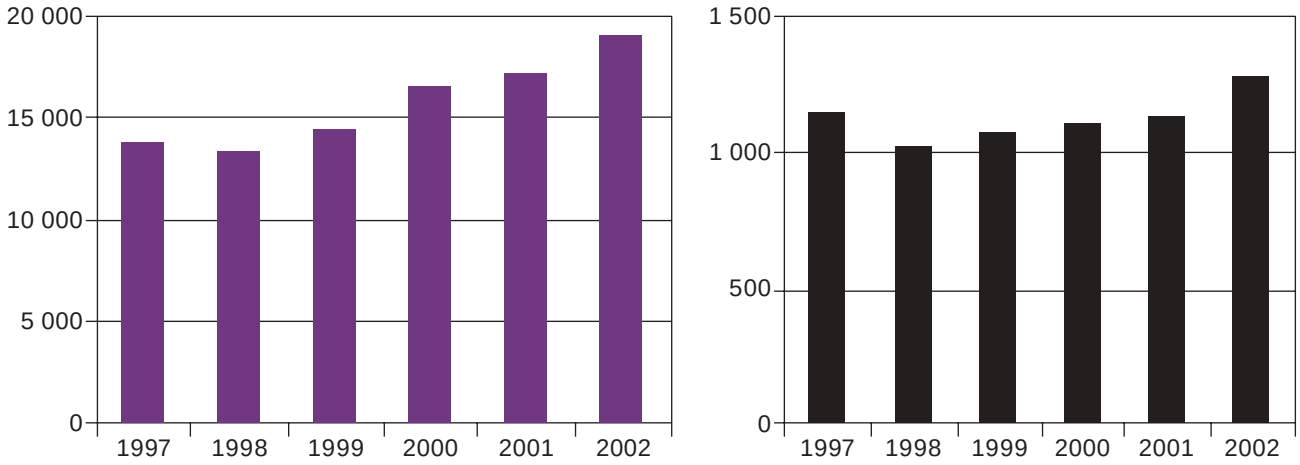
Safety in the other modes of transport is generally very high and has been stable for a number of years. SIKA considers therefore that no special transport safety objectives are required for safe traffic on the railways, by air and ship.



Number of deaths in road traffic. Source: SIKA. Preliminary statistics from the National Road Administration for 2002.



Number of seriously injured in road traffic reported to the police.
Source: SIKA. Preliminary statistics from the National Road Administration in 2002.



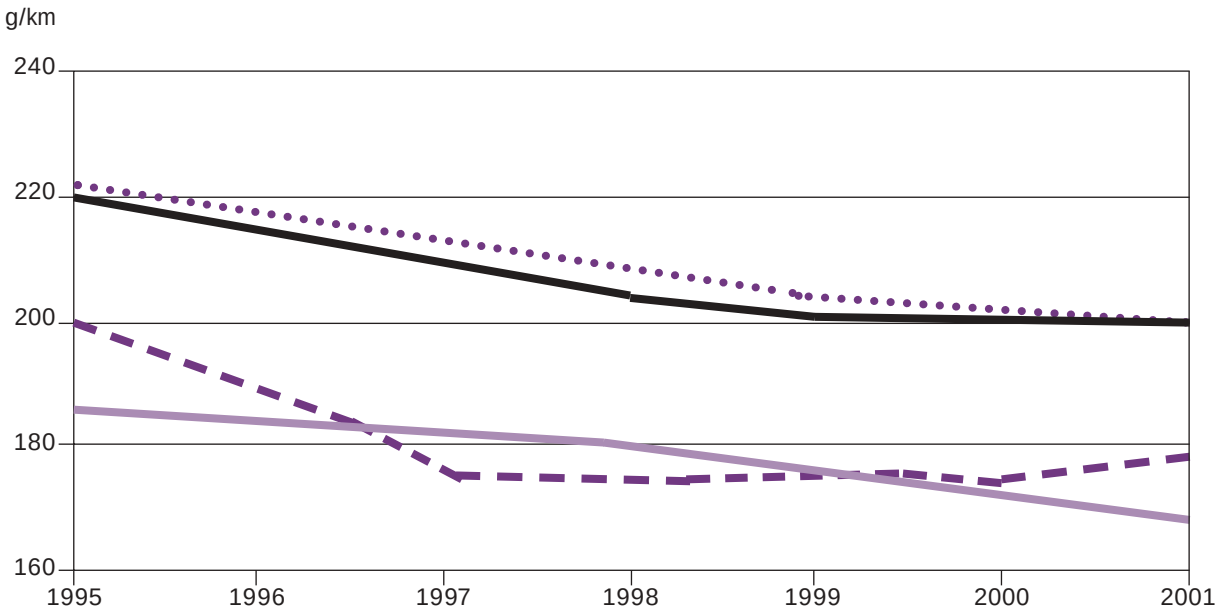
Drunk driving. Number of reported drunk driving offences (left) and alcohol breath tests (right) carried out by the police. The number of reported drunk driving offences is dependent of the number of alcohol breath tests. Source National Road Administration

GOOD ENVIRONMENT

The emissions of carbon dioxide by the transport sector have increased by approximately five per cent in 2002 in comparison with 1990 and emissions are expected to increase by approximately 15 per cent (from 1990) to 2010 unless further measures are taken. This means that it will not be possible to achieve the transport policy objective of stabilising emissions at the 1990 level.

SIKA considers that it is not possible to achieve the objective only by technical development of vehicles and other measures that can be carried out at low cost. Emissions of carbon dioxide from the transport sector need to be restricted in a number of ways: by continued technical development, by changes in driving methods and by reducing the number of kilometres driven. This in turn requires many different types of instruments of control.

As regards other emissions from traffic, development is moving in a more positive direction, however and it will be possible to achieve a number of objectives. This applies, for instance, to emissions of sulphur dioxide, nitrous oxides and

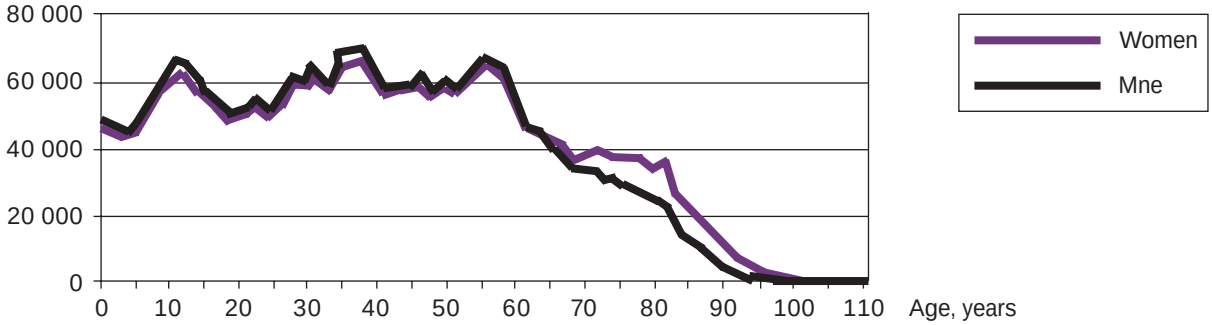


Development of carbon dioxide emissions for newly-registered vehicles in Sweden and in total for the EU. It can be noted that Swedish vehicles are less fuel-efficient and that they therefore produce a higher emission of carbon dioxide per kilometre than the average for the EU. N.B. the scale starts at 160. Source: National Road Administration

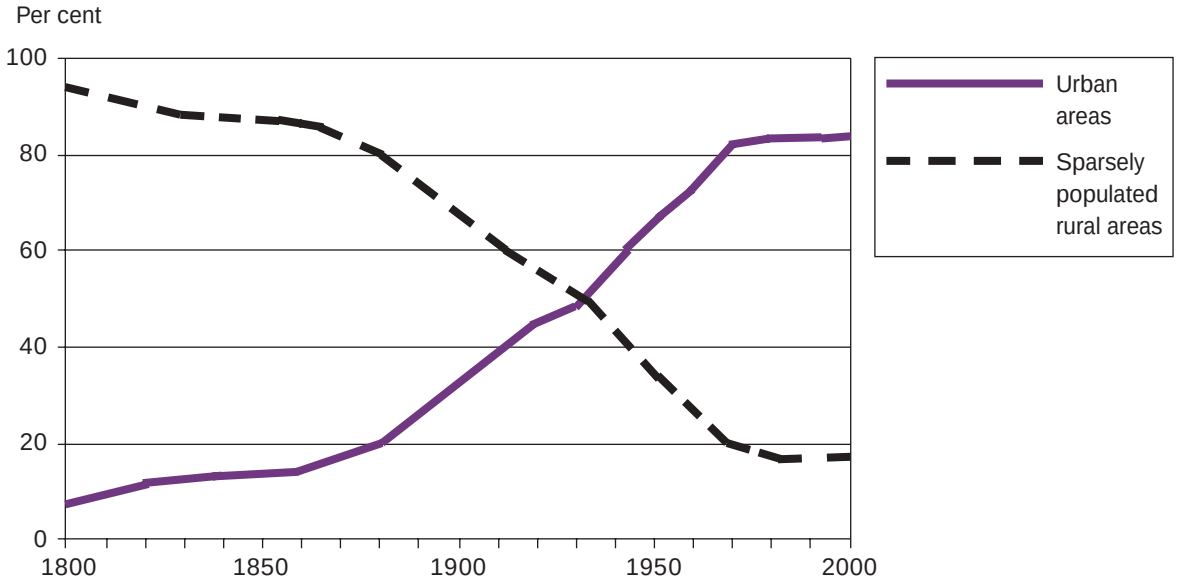
volatile organic compounds (VOC). With regard to the effects on health of air pollution in urban areas, it will, however, be difficult to achieve the environmental quality norms for nitrogen dioxide and particles in some urban areas.

The number of persons exposed to traffic noise is increasing, despite the responsible authorities taking various measures to reduce noise. This is due to an increase in traffic both on the roads and on the railways. It is expected that it will be possible to achieve the guideline values for noise indoors for newly constructed and reconstructed transport infrastructure. In the case of national roads and railways, the transport agencies make the assessment that they will meet the target with a delay of some years. Noise disturbance from Sweden's municipal roads will, however, affect a considerably larger number of people, and major inputs will be required here to achieve the noise target.

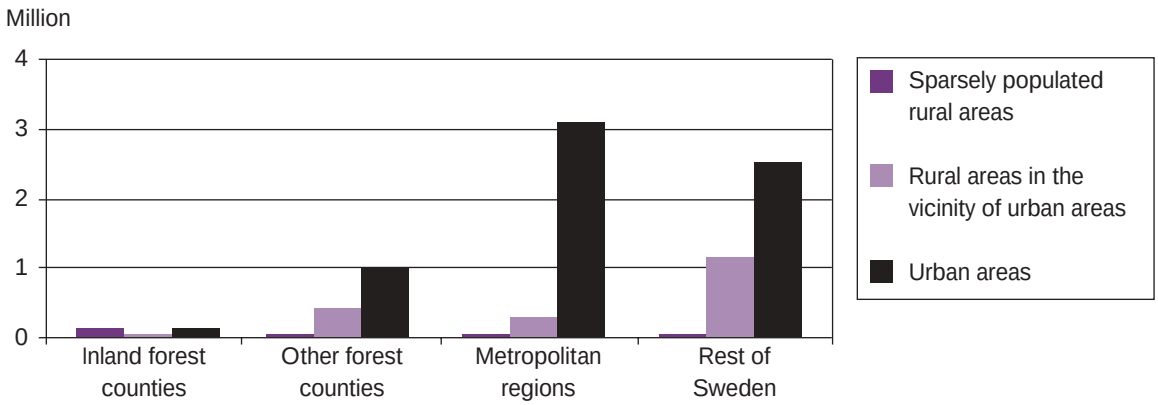
Within the natural and cultural environment, work is taking place within all modes of transport to formulate quality requirements, and the adaptation of the transport system has made most progress in the road sector. Work on ecocycle adaptation and the natural and cultural environment is in process and moving in the right direction.



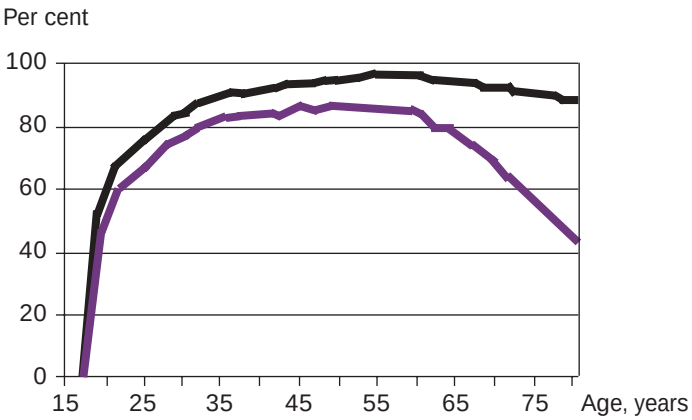
Sweden's population by age and sex in 2002. The age structure for men and women is very similar until retirement age when the number of women exceeds the number of men. Source: Statistics Sweden.



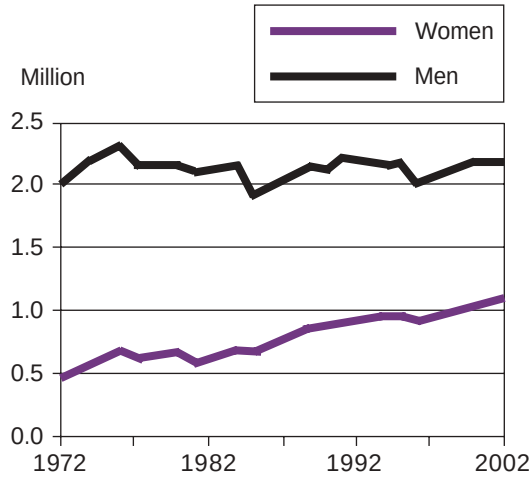
Population development in urban and sparsely populated rural areas respectively, per cent. It can be noted that the proportion of urban inhabitants has developed from less than ten per cent at the beginning of the nineteenth century to almost 85 per cent in 2000. Around 1970, the trend was broken, however, and since then development has stabilised at a more even level. Source: Statistics Sweden



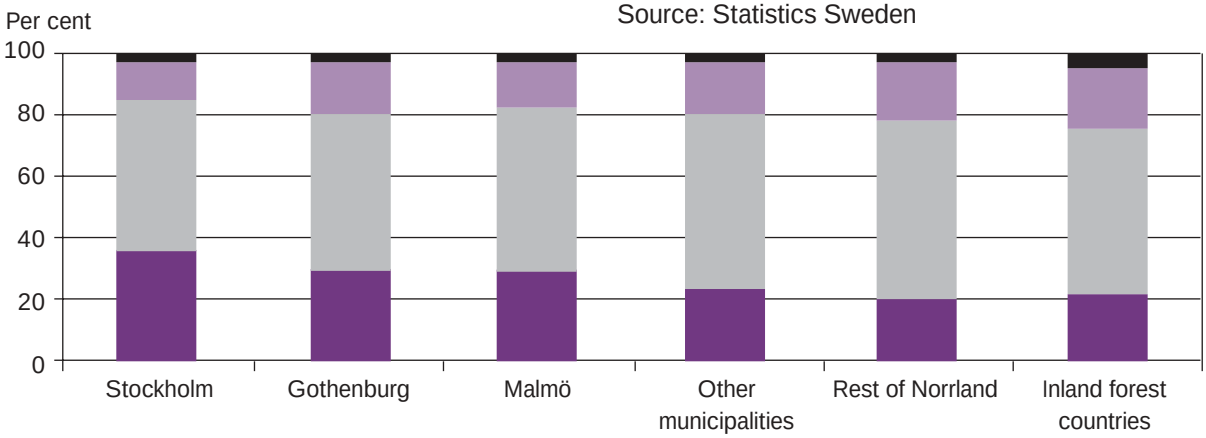
Sweden's population by urban area, rural areas and sparsely populated rural areas respectively, 2000. Breakdown according to the National Rural Development Agency. In the metropolitan regions, 90 per cent live in urban areas and only one per cent in sparsely populated areas. In the forest counties, the majority of the population, approximately 65 per cent, live in urban areas and only ten per cent in sparsely-populated rural areas. However, in the inland forest counties, 30 per cent live in sparsely populated rural areas and 45 per cent in urban areas. Source: Statistics Sweden



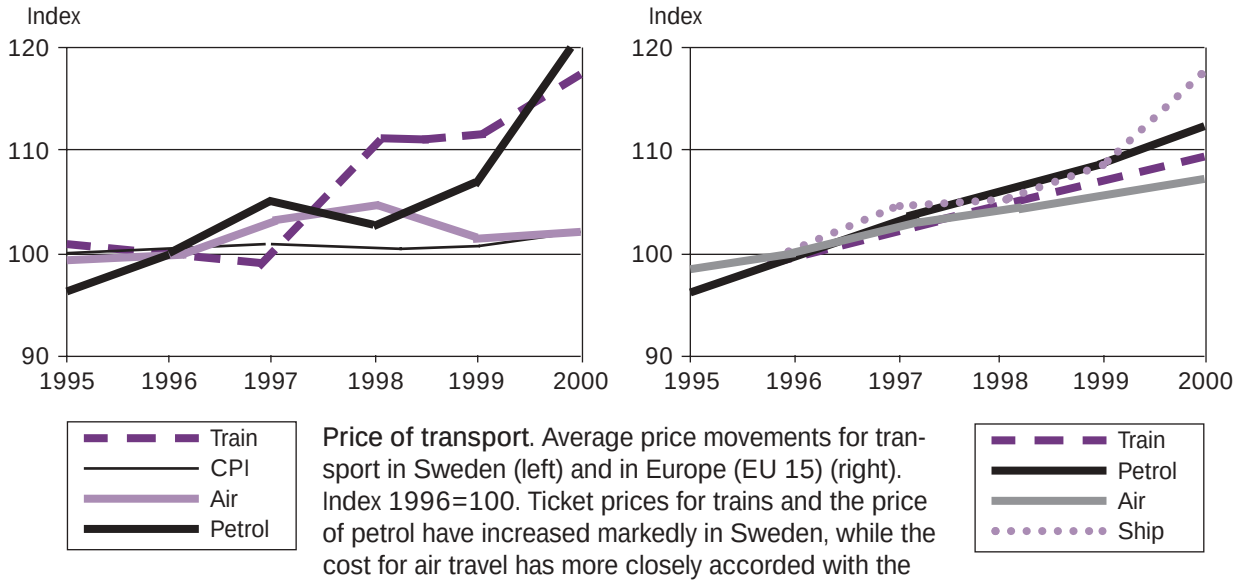
Proportion of persons with driving licence in 2002 by sex and age. A much smaller proportion of older women have a driving licence compared to older men, although the difference between the sexes for the proportion with a licence is considerably less for persons under 60 years of age. Source: National Road Administration.



Cars on the roads by sex of owner. A much higher proportion of men own a car compared to women, although women have greatly increased their share of ownership during the past thirty-year period. In 1972, 18 per cent of cars registered by natural persons were owned by women. In 2002, this proportion had increased to 33 per cent. Source: Statistics Sweden

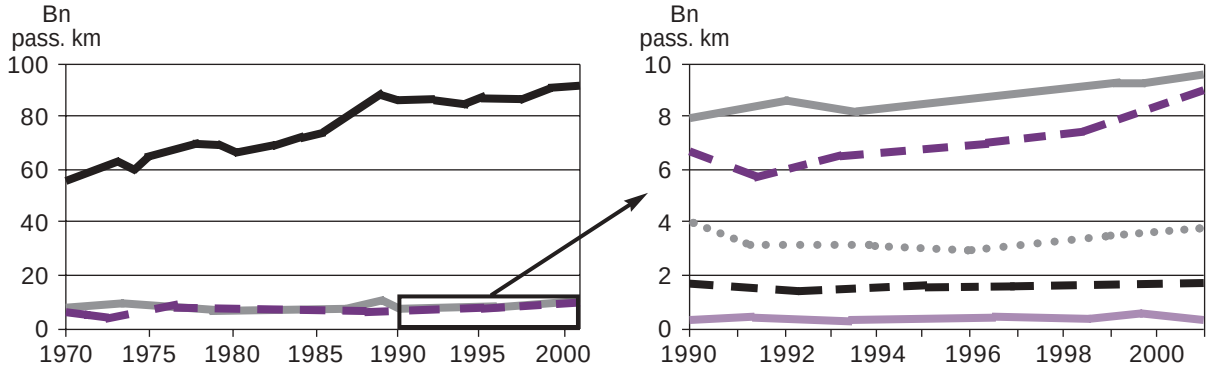


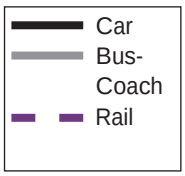
Number of cars by household and by region, average 1999–2001. The proportion of households without their own car varies between just over 20 per cent in Norrland and the forest counties and more than 35 per cent in Stockholm. Over half of Sweden's households have a car and approximately 3 per cent of households have three cars. Source: SIKA



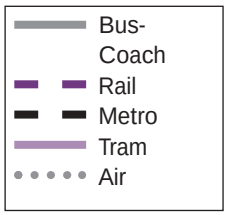
Price of transport. Average price movements for transport in Sweden (left) and in Europe (EU 15) (right). Index 1996=100. Ticket prices for trains and the price of petrol have increased markedly in Sweden, while the cost for air travel has more closely accorded with the consumer price index. Source: Eurostat.

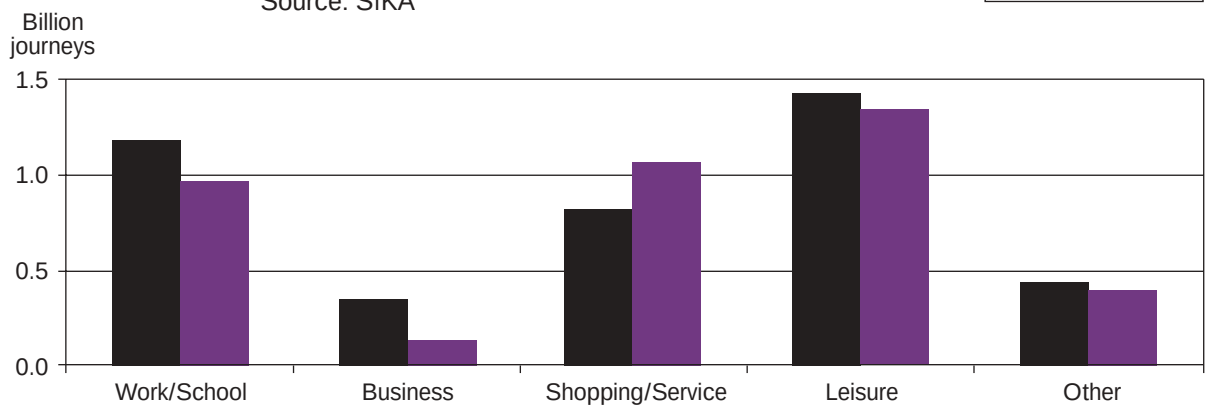
PASSENGER TRAVEL



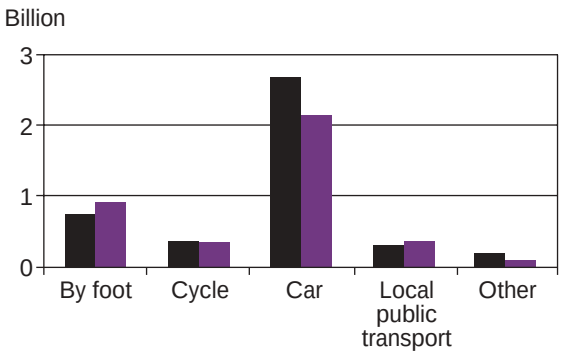


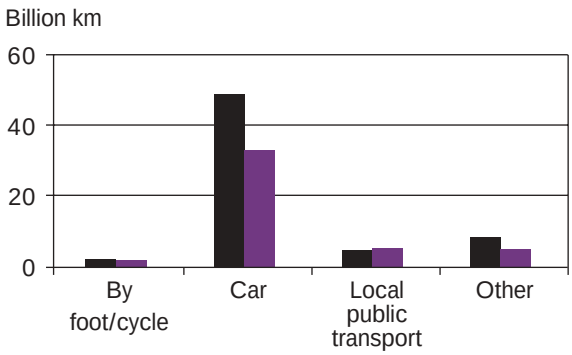
Development of passenger transport. Detail of travel by public transport on the right. While travel by bus/coach and train, in passenger kilometres, has been relatively stable for the past thirty years, car travel has increased by more than 60 per cent. However, rail travel has increased by almost 50 per cent in the past years and bus/coach travel has also increased. Source: SIKA

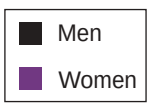




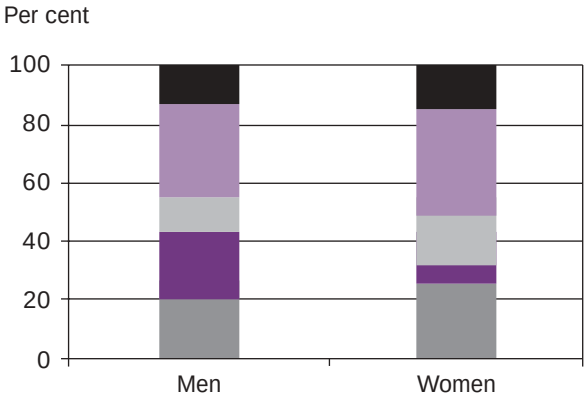
The number of domestic journeys by purpose in 2001. Leisure travel is the most common type of journey for both men and women and accounts for a third of all travel. Journeys to and from work or school and shopping and service journeys account for approximately a quarter of all journeys each. Men make more journeys on business, while women make more shopping and service journeys than men. Source: SIKA

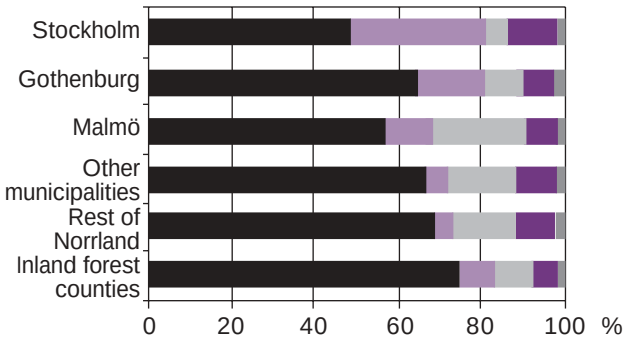






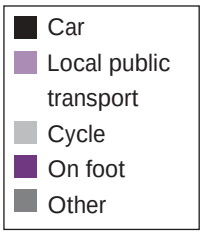
Journeys by mode of transport. The number of journeys (on the left) and length of journey in kilometres (on the right), in 2001. The diagrams clearly show that the car dominates as a mode of transport both as regards the number and length of journeys. Walks and cycling account for almost 30 per cent of the number of journeys although as these are usually short, they account for less than 5 per cent of the total distance travelled. Other modes of transport account for smaller proportions.

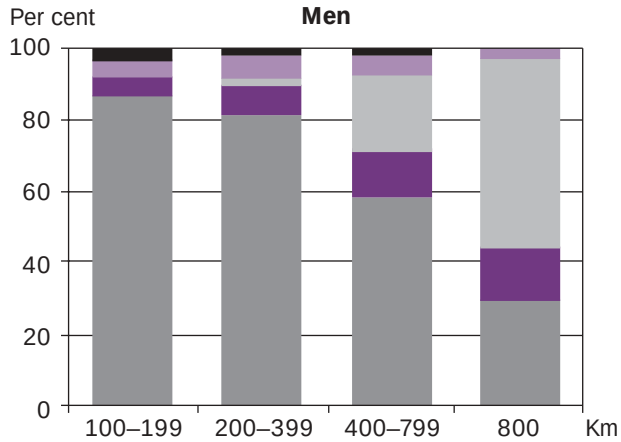


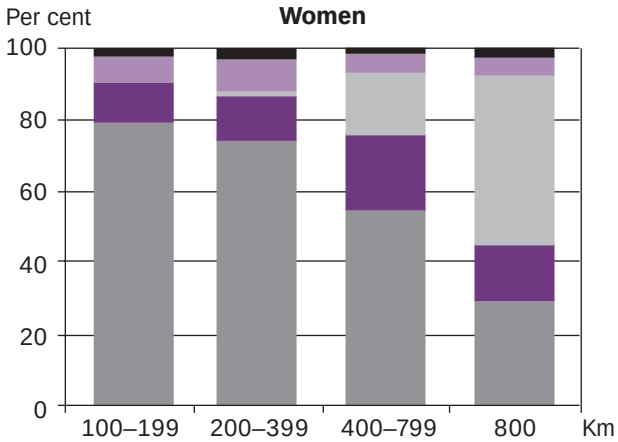


How men and women use the car, domestic travel, average 1999–2001. The category "Shopping/service" includes journeys in connection with health care and the category "Other" driving other persons. It can be noted that the proportion of journeys to work and school as well as leisure journeys is approximately the same for men and women. However, men make more journeys on business while women make more shopping and service journeys relatively.
Source: SIKA

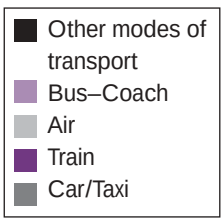
Work journeys are shown by region and mode of transport, average 1999–2001. This diagram also clearly shows that the car is the most common mode of transport while it also shows that the choice of mode of transport varies a lot, depending on where one lives. The biggest cities, Stockholm and Gothenburg, have better public transport than the rest of Sweden and therefore also a considerably larger proportion of the population travel by public transport to work there – in Stockholm more than 30 per cent and in Gothenburg over 15 per cent. In Malmö, almost a quarter of all those travelling cycle to work.



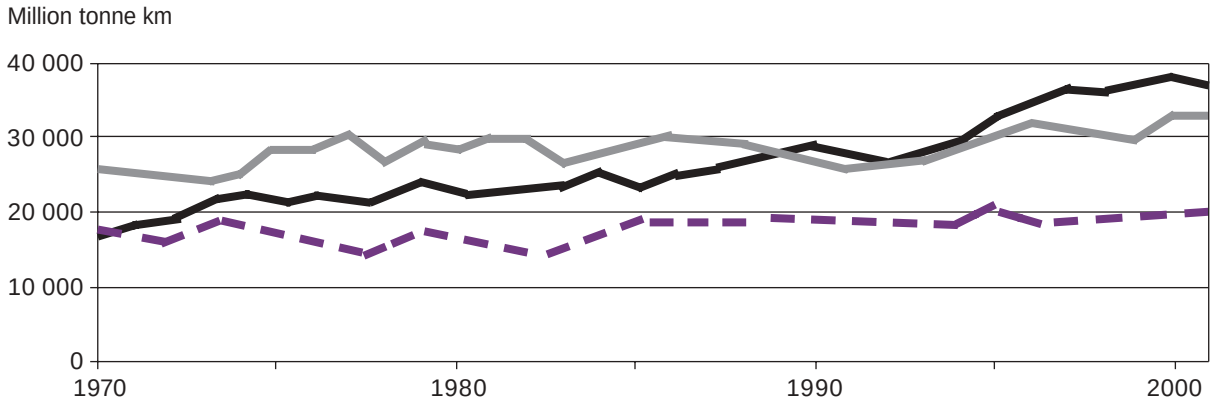




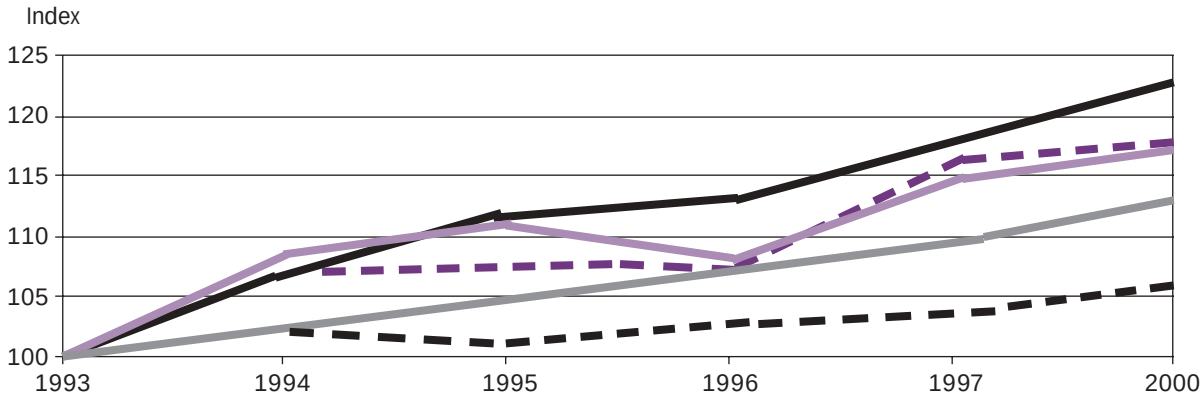
Long-distance journeys. How men (left) and women (right) choose their mode of transport for long journeys, over 100 kilometres, average 1999–2001. There is less difference between the sexes in choice of mode of transport for long journeys than for short journeys. It can be noted that the importance of the car decreases with increasing journey length. For journeys up to approximately 400 kilometres, the car is totally dominant, approximately 80 per cent, while air travel is the most important mode of transport (approx. 50 per cent) for journeys of over 800 kilometres.



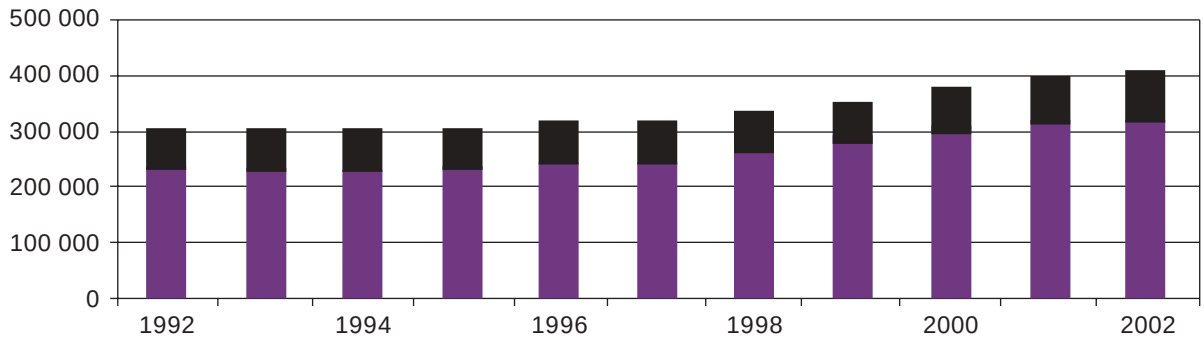
GOODS TRANSPORT



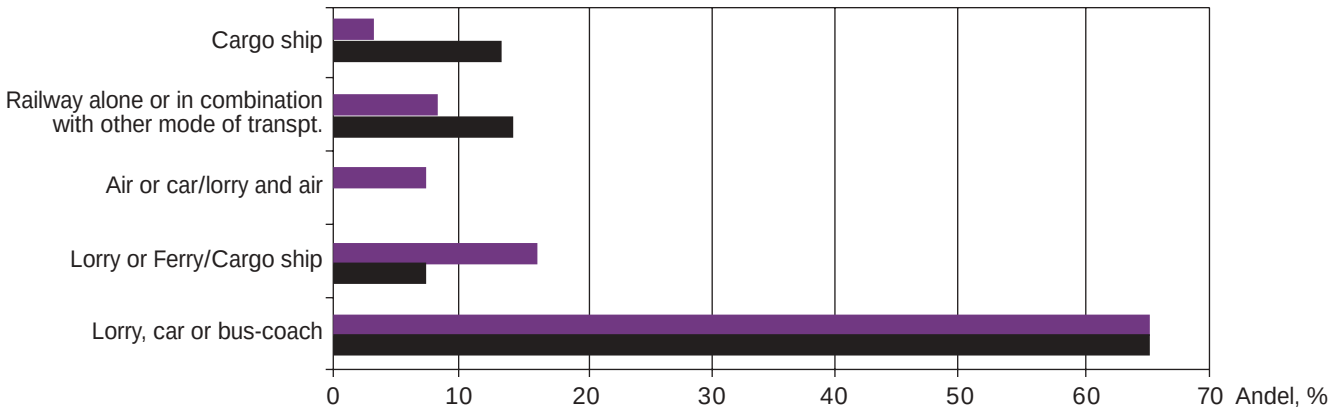
Development of goods transport in Sweden, tonne kilometres (goods in tonnes times distance transported in km). While lorry traffic has almost doubled in thirty years shipping has only increased moderately and rail traffic been at a constant level. Source: SIKA/Statistics Sweden



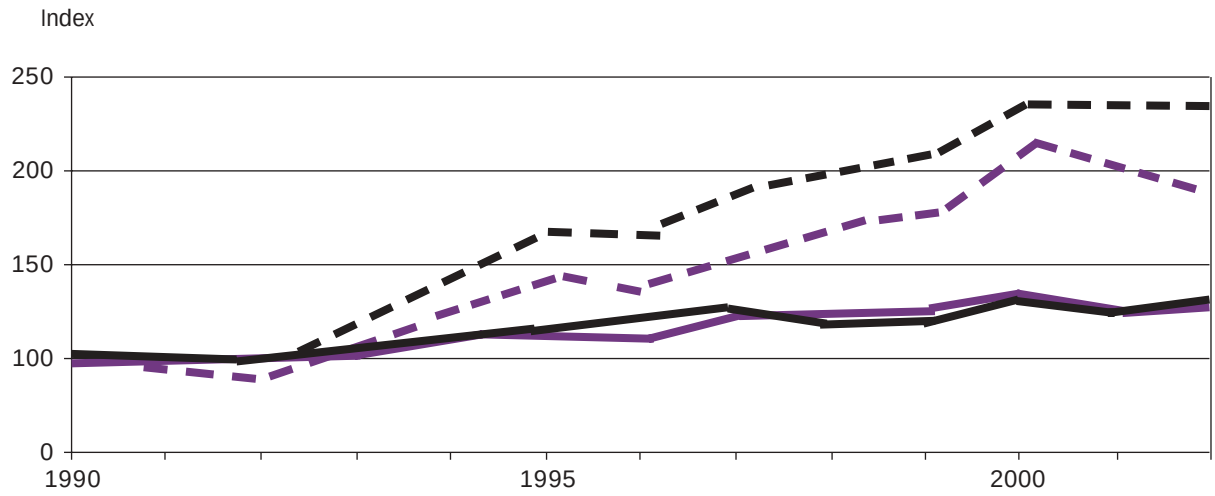
Development of goods transport in Europe (EU 15) on average, index 1993=100. It can also be noted that lorry traffic has also increased most in a European perspective. Source: Eurostat



The development of heavy and light lorries in the past ten-year period. There is a considerably greater number of light lorries, i.e. under 3.5 tonnes, than heavy lorries and they have moreover increased greatly in number. The number of heavy lorries has, on the other hand, remained constant over the same period. Source: SIKA/Statistics Sweden



The proportion of goods by weight and value in 2001. The lorry dominates as a mode of transport, both by weight and value, at approximately 65 per cent. However, there is a difference for other modes of transport. The second most important mode of transport in terms of value is lorry combined with ferry or cargo ship. Air transport consists wholly of high-value goods, while cargo ship and railway are primarily used for transport of low-value goods.
Source: SIKA/Statistics Sweden



Foreign trade by weight and value, index 1990=100. While both export and import, measured in tonnes, has increased by just under 30 per cent since 1990, trade in value has increased considerably more – the import value has almost doubled and the export value has increased even more.
Source: Statistics Sweden

ABOUT SIKA

The Swedish Institute for Transport and Communications Analysis, SIKA, is an agency responsible to the Ministry of Industry, Employment and Communications, working within the sector of transport and communications. We have three main areas of responsibility:

- To carry out studies for the government.
- To develop forecasts and planning methods.
- To be the responsible authority for official statistics.

SIKA was established in 1995 and has now about 30 employees. We are organised in four departments – for Analysis, Research & Evaluation, Statistics and Administration. We possess considerable competence in the goods and passenger transport sector, methods of economic analysis, forecasting models and statistics.

More information about SIKA is available on the website. This contains information on activities, government commissions, the organisation, operational plans and the annual report, publications and statements on documents circulated for comment. The website also contains a database with statistics on transport and communications.

Office address: Maria Skolgata 83, Stockholm
Postal address: P.O.Box 17 213, SE-104 62 Stockholm
Telephone: +46-8 506 206 00
Fax: +46-8 506 20 10
e-mail: sika@sika-institute.se
www.sika-institute.se