

What were the reasons for developing a traffic forecast for 2030?

A realistic assessment of the future traffic trends in Germany is the essential basis for the ongoing activities on compiling a new 2015 Federal Transport Infrastructure Plan. For this purpose, the Federal Ministry of Transport and Digital Infrastructure commissioned an up-to-date and scientifically sound traffic forecast, with 2030 as the horizon year.

What is the structure of the 2030 traffic forecast?

In total, the 2030 traffic forecast consists of six parts. Based on the 2030 regionalized structural data forecast, which forecasts economic and demographic trends, as well as on the 2030 maritime transport forecast (forecast of maritime traffic, volume of cargo handled by ports and inland traffic to and from seaports), nationwide interconnectivity is determined in the form of origin-destination matrices of freight and passenger traffic for the baseline year of 2010 and the forecast horizon of 2030. This transport interconnectivity is „apportioned“ - as the experts phrase it - to the road, rail and waterway networks. The results comprise the traffic volumes and the vehicle mileage of the individual modes of transport on the individual route sections of the corresponding infrastructure networks for 2030.

What are the contents of the 2030 forecast of transport interconnectivity?

Transport interconnectivity was calculated for all modes of transport in the passenger and freight sectors at district level within Germany and for journeys to and from other countries. Transport interconnectivity means forecasting origin-destination traffic for various journey purposes in the passenger transport sector (for instance commuting, shopping) and for different groups of goods in the freight transport sector (for instance ores, foodstuffs). Building on the calculated volumes

of traffic and tonne/passenger kilometres, a forecast was made of traffic-related greenhouse gas emissions, especially CO₂ emissions.

What are the key findings of the forecast of transport interconnectivity?

The volume of traffic (number of trips/journeys) and traffic in terms of passenger and tonne kilometres (achieved by multiplying the number of passenger journeys made and the distances covered, and the volume of freight lifted by the distance travelled) will continue to increase in Germany over the period to 2030. Here, it is apparent that there are different trends between the individual modes of transport and between the regions of the country.

A few benchmark figures regarding passenger traffic

- The volume of traffic in the passenger sector (including non-motorized trips) will rise from a total of 101.8 billion passenger journeys to 103.0 billion passenger journeys between 2010 and 2030 (+ 1.2 %). Motorized traffic will increase by around 3.8 % and cycling by around 4.6 %, whereas walking will decrease by around 7.8 %.
- Despite declining population figures, passenger kilometres in motorized passenger traffic will continue to increase – from a total of 1,184.3 billion in 2010 to 1,328.7 billion in 2030 (+ 13 %). Passenger car traffic will increase by around 10 %. This increase is attributable, in particular, to a higher level of car ownership among the elderly population, whose numbers are growing sharply. Rail journeys will increase by around 19 %. Journeys made by road-based public transport, including regular long-distance coach services, will increase by around 6 %. Air transport will continue to record the highest growth rates (+ 65 %).
- The growth in passenger kilometres is mainly a result of the sharp rise in the number of jour-

neys covering a long distance (holiday/leisure travel, business trips). On the other hand, there will be a significant decrease in the number of journeys made by apprentices, students and pupils (due to demographic change).

- Trends in the private transport sector will be heavily influenced by trends in the passenger car population. In the period covered by the forecast, the density of passenger cars will increase from 631 to 694 cars per 1,000 population aged 18 or over (+ 10 %). The increase in the vehicle fleet is attributable to sections of the population among which car ownership is still below average (the elderly, women, immigrants) and to the increasing number of two-car households.

A few benchmarks figures regarding freight traffic

- Freight lifted will rise from a total of 3,704.7 million tonnes in 2010 to 4,358.4 million tonnes in 2030 (+ 17.6 %). The sharpest rise will be in the rail mode (+ 23.6 %), followed by inland waterways (+ 20.0 %) and the roads (+ 16.8 %).
- Tonne kilometres will increase at a significantly greater rate than passenger kilometres. Freight moved will rise from a total of 607.1 billion tonne kilometres to 837.6 billion tonne kilometres (+ 38 %) between 2010 and 2030. The continually high dynamism of international trade, with its impact on cross-border (+ 42 %) and transit traffic (+ 52 %), is primarily responsible for this. In contrast, the rise in domestic traffic will be disproportionately low (+ 31 %).
- As far as the individual modes are concerned, the greatest increase will be on the railways (+ 43 %), followed by the roads (+ 39 %) and inland waterways (+ 23 %). The most dynamic growth (around 73 %) will be in the combined transport segment.

What will traffic trends be like at the regional level?

The trend in passenger kilometres travelled over the period to 2030 will be similar to population trends, and will thus vary greatly from one region to the next. There will be above-average growth in the south of Germany, especially in the urban hinterlands of the major cities. In contrast, there will in some cases be a decrease in the eastern federal states. Exceptions are the Leipzig and Dresden metropolitan areas and the region around Berlin, where there will be a significant increase. As a result, there is likely to be falling capacity utilization of transport infrastructure and lower load factors on public transport, especially in parts of Eastern Germany. On the other hand, the pressure on the transport system will continue to grow for sizeable regions of Southern and Western Germany and in urban conurbations, which is precisely where the capacity utilization of the infrastructure is already high today.

What is the picture regarding CO₂ trends in the transport sector?

Despite the fact that passenger and freight kilometres will continue to increase, end-use energy consumption will fall by around 10 % over the period to 2030. CO₂ emissions will decrease by around 22 %. If the baseline year of 1990 (Kyoto Agreement) is taken as a basis, CO₂ emissions from traffic will have fallen by around 26 % by 2030.

What will the findings of the 2030 forecast of transport interconnectivity be used for?

The findings of the forecast will be used as a major basis for the long-term management of transport infrastructure investment and for the targeted development of transport policies and programmes of the Federal Government and the

federal states. In addition, the 2030 forecast of transport interconnectivity is also the basis for the economic and spatial planning assessment of stand-alone projects within the scope of the 2015 Federal Transport Infrastructure Plan.

Recommended links:

- **Federal Ministry of Transport and Digital Infrastructure**
<http://www.bmvi.de>
- **Federal Transport Infrastructure Plan**
Information on the Federal Transport Infrastructure Plan on the Ministry's website
http://www.bmvi.de/DE/VerkehrUndMobilitaet/Verkehrspolitik/Verkehrsinfrastruktur/Bundesverkehrswegeplan/bundesverkehrswegeplan_node.html
- **2030 Traffic forecast**
Internet article on the 2030 traffic forecast on the Ministry's website providing further information and downloadable final reports
<http://www.bmvi.de/SharedDocs/DE/Artikel/UI/verkehrsprognose-2030.html>

Publication data

Published by:

Federal Ministry of Transport and Digital Infrastructure

Edited by

Federal Ministry of Transport and Digital Infrastructure
Division K 14, Forecasts, Statistics and Special Surveys

Picture credits:

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As at:

April 2015

Printed by:

Federal Ministry of Transport and Digital Infrastructure
Division Z 32, Ministry Printers



Federal Ministry
of Transport and
Digital Infrastructure

The 2030 forecast of transport interconnectivity

A brief overview of the forecast of transport interconnectivity – a research project commissioned by the Federal Ministry of Transport and Digital Infrastructure

