

Development in Brief



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Urban mobility in developing countries: Too little space for too much traffic?

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Cities are not only engines for economic growth and social development, but are also major contributors to environmental degradation and climate change. The transport sector is one of the largest emitters of greenhouse gases. On the one hand, uncontrolled urbanisation leads to extensive and geographically disintegrated urban structures, which can only be accessed by energy-intensive and inefficient private transport. This is spreading rapidly: since 2012 there have been approximately 1 billion cars worldwide, by 2050 this number should grow to over 3 billion. On the other hand, inner-city structures with commercial centres do not leave sufficient space for the rising volume of traffic. The percentage of traffic areas in well developed cities lies at more than 20%, but in Dhaka for example only 7%.

Congestion ensues where there is too little space for a lot of traffic, leading not only to delays in delivery and production processes, but also to rising health costs due to increased numbers of traffic accidents and higher air pollution. According to the World Bank, for example, the economic and social costs of traffic jams in Cairo total up to 4% of GDP. Poorer parts of the population are particularly affected because they have to move to often poorly connected areas due to land and rental prices, and thereby have to accept the sometimes prohibitively high transport costs (and transfer times) in order to get to work or school.

The mobility of people and goods is a prerequisite for economic and social development. So how can the available road space be used in developing and emerging countries to bring people and goods to their destination in a quick, climate-friendly, safe and affordable way? How can rapid urbanisation and transport development be steered towards more sustainable paths? The "Avoid, Shift, Improve" (ASI) approach developed in Germany in the 1990s is particularly suitable here

and has been used by many development organisations to date.

Avoid: urban structure and traffic

The best traffic is the kind that does not occur in the first place. The design of a city determines the number and length of all necessary roads. In addition, it lays down the ways in which these routes can be covered. In cities which have spread over a large area with a low population density, there are long roads that can be covered almost entirely by personal vehicles only. Energy consumption and CO₂ emissions increase significantly there. In compact cities, journey starting points and end destinations are closer together. Many routes can also be tackled on foot or by bicycle. A higher population density even along corridors allows for efficient and climate-friendly public transport to be established. For example, Houston in the USA consumes approximately 20 times as many gigajoules per inhabitant per year for urban transport as Hong Kong.

Shift: towards public and non-motorised transport

The more routes which can be covered by public or non-motorised transport, the more sustainably urban mobility is developed. People travelling by bus or train take up less space and consume less energy than those travelling by car. That means fewer greenhouse gases, less congestion and, not least, less cost per person and kilometre. Safe walking and cycling paths and modern public transport reduce local air pollution and the number of accidents. Health costs are cut. Measures are important here that make non-motorised and public transport faster, safer, more comfortable and more attractive overall. Dedicated lanes and traffic light priority control speed up bus and train transport. Safe and accessible bus stops as well as modern information systems increase the attractiveness of public transport. Well-designed hubs facilitate transfers from one mode of transport to

another, e.g. from bus or bike to underground or suburban train. These measures include free or subsidised public transport tickets given by employers to employees and for hotel guests as well.

Measures are also needed that slow down and increase the price of individual transport. Giving priority to buses, trains and bicycles slows car traffic down. The shortage and higher cost of parking spaces, in conjunction with an urban congestion charge in some cases, make private transport less attractive. Particularly in developing and emerging countries where rising income in cities is used for cars as a status symbol, the timely combination of pull and push approaches is important.

Improve: traffic flow and drive systems

Even with success in avoiding and shifting, cities will still have to cope with high traffic volumes. Traffic control systems can optimise the flow of traffic and so reduce fuel consumption. Alternative or more efficient engines and fuels reduce energy consumption and greenhouse gas emissions. In relation to fuels, however, subsidies will have to be reduced in many countries first.

Conclusion: act now to prevent repeating mistakes of industrialised countries

The expected growth rates for cities and traffic present developing and emerging countries with huge challenges. With a view to reducing energy consumption, emissions, economic and health costs, and offering particularly disadvantaged parts of the population improved physical access to social services and employment opportunities, the ASI approach offers a wide range of measures and perspectives to make urban mobility more sustainable. ■