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Sustainable urban transport – beneficial not only for the climate Five reasons for a global traffic revolution

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Cities need transport because mobility creates opportunities for advancement, both on an individual level and for society as a whole. It is the prerequisite for development and progress, for economic growth and trade – and is thus an important instrument in the fight against poverty. Efficient, environmentally friendly and affordable means of transport also increase individuals' well-being. People who can travel safely and without significant environmental impacts lead more self-sufficient and healthy lives. Sustainable transport systems are also important for spatial planning because they "eat up" less area; they consolidate spaces more efficiently instead of constantly building new multi-lane roads. There are in fact many reasons beyond climate change mitigation for promoting people-oriented, sustainable transport in cities.

The urban population is growing – and traffic is growing with it. By the middle of the century, two thirds of all

people will live in cities. This also increases the need for transport options. However, too many cities have relied too heavily on personal means of transport and are now at risk of choking on their own traffic. According to estimates, the number of automobiles will nearly double to 1.7 billion by the year 2035. That amounts to one vehicle for every five people. In addition: in emerging and developing

countries, just as in industrialised countries, many people associate convenience, independence and speed with personal means of motorised transport. Cars or motorbikes are status symbols – a driver of growing traffic worldwide. Plus, there are often no alternatives to this type of motorisation because cities have not yet managed to design comprehensive, attractive and affordable public



Congestion in Cairo: cities are smothered by their traffic.

transport offerings. Instead, municipalities are reacting to their growing populations and the overall increased need for mobility by frantically building more and more new roads. In Beijing, for example, the fifth of what are now six ring roads is nearly 100 kilometres long. Roads are often made wider at the expense of public spaces, usually with no effect on the flow of traffic because the new roads are immediately filled with new cars.

This all contributes to the situation today where transport is already responsible for more than a quarter of global greenhouse gas emissions – and this figure is climbing rapidly. Establishing sustainable transport systems is advisable due to climate issues alone. But the benefits go far beyond that: they affect other areas that are important for the advancement of or in cities. Thus there are at least five good reasons to highlight the necessity of quickly implementing a global traffic revolution.

1. Climate

Unbridled motorisation has dramatic consequences for the climate and the environment. In addition to cars, the number of mopeds, scooters and motorcycles is also dramatically increasing, particularly in urban centres. It is no longer even possible to reliably determine how seriously. But it is without a doubt also contributing to increasing exhaust gases in cities.

Today the transport sector is already the fastest-growing emitter of greenhouse gases and thus plays a key role in climate change mitigation. Without countermeasures, energy requirements for traffic will increase by an estimated 70 per cent by 2050. This is why a shift to climate-friendly, public modes of transport is imperative to curb resource consumption and reduce the emission of climate-damaging gases. This must be combined with more efficient motors, a transition to electromobility and approaches for so-called shared mobility, like the concept of car sharing, for example. Otherwise the internationally agreed objective of limiting global warming to 1.5 to 2 degrees will not be achievable.

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Example: suburban railway in Tunis

Five suburban railways with a total length of 85 kilometres are currently being built in Tunisia's capital. The suburban railways will quickly and safely transport 350,000 people daily in a way that is environmentally friendly. This reduces carbon dioxide emissions by approximately 50,000 tonnes per year and thus makes a valuable contribution to climate change mitigation. KfW is supporting Tunis during railway construction.

2. Poverty

Poverty is urbanising alongside humanity. According to UN information, over 800 million people live in slums. They have to cope with unreasonable living conditions, suffer from insecure income and often have little or no access to education for themselves and their children. Insufficient transport options in cities reinforce these conditions. To escape the vicious circle of poverty and hopelessness people need a range of services and employment and must be able to physically reach them.

Although the massive increase in cars may make it seem otherwise, more vehicles does not automatically mean more mobility or access. The opposite is usually the case. Poor people in particular can rarely afford individual mobility options. They must often also spend the majority of their income – up to 70 % in some cities – on means of transport. Money that they then lack for better living conditions, education, food or health services.

The poor urban population is virtually trapped in districts that are often remote, unofficial and underserved in every respect. This population is not integrated and has few prospects of participating in economic, social and cultural urban life. Safe, non-

motorised transport and a well-developed, affordable public transport system are thus essential in the fight against poverty and marginalisation.



Example: Kochi ferries

The port city of Kochi in southern India comprises numerous islands. To make sure their inhabitants can still access all parts of the city, Kochi is building an integrated water transport system that KfW is funding. This connects the more distant islands to the mainland and thus provides access to jobs, schools and hospitals. Poor people in particular benefit from this because they usually live far away from the city centre.

3. Economy

Transport and the economy are closely tied together. Where one is slow or lacking, the other also stagnates. There is a reason that people have always settled near transport hubs like rivers, fords or trade routes. Conversely, insufficient or inadequate transport options hinder productivity, employment chances, operational processes and distribution chains.

In Cairo, for example, traffic jams cost the equivalent of approximately 4 per cent of the Egyptian economic output each year. Those are unproductive expenses that could be put to much better use.

Traffic jams also reduce the average speed. Needing several hours to travel to and from work is a common occurrence in many cities. In the Brazilian city of São Paulo, for example, traffic jams can be over 300 kilometres long on peak days. That has consequences: longer delivery times make goods from industry and agriculture more expensive, working hours are lost and supply chains cannot fully meet demand.

Fewer transportation barriers and jams cost as well as more mobility are local economic advantages that benefit the local economy – and with it, the local residents. However, congested roads will only be prevented in the long run by shifting to public modes of transport. Only they can transport a

growing number of people and goods from A to B in a short amount of time. This is why sustainable transport systems are important lifelines for the economy.



Example: tram in Rio

Together with Istanbul and Mexico City, Rio de Janeiro is one of the three cities with the worst traffic situation in the world. Studies based on GPS data have shown this. A route that should normally take a half hour lasts well over twice as long in Rio. As a consequence, Rio's inhabitants spend hundreds of hours every year in traffic jams. This is why the city is now expanding its public transport network with support from KfW. The first of various tram lines went into operation in 2016.

4. Health

Today 1.2 million people already die in traffic; many of the deaths occur in urban traffic. In emerging and developing countries, the number of traffic fatalities has now exceeded deaths from tuberculosis and malaria. In the next 15 years, this number is expected to grow to two million and then be just as high as the number of HIV/AIDS victims today. Twenty times more people are injured in traffic, in some cases with serious effects on their economic situation and social security. The majority do not have any insurance that pays for loss of income in cases like this. While the number of traffic casualties in industrial countries is falling, the number in the rest of the world will double by 2030 (compared with 2000).

The increasing air pollution from urban traffic also presents a growing health hazard. Fine-particle pollution has become a serious problem in many cities around the world. The pictures from Asia where people only move through their cities with masks

covering their mouths and noses have become well known. Fine-particle pollution can cause chronic respiratory diseases and even ultimately lead to death.

Poorer people in particular, who are often less protected and must travel longer distances, suffer as a result of noise and fine-particle pollution. Conversely, sustainable transport systems can very quickly provide a remedy. Spot calculations have shown that investments to lower health risks and costs can be quickly recouped. Public transport is therefore a benefit for the health of the urban population in every respect.



Example: Cycle paths in South Africa

Many people in South Africa still live in poorly served suburbs and townships. Johannesburg, Durban and Polokwane are building safe cycle and pedestrian paths as an expansion and a temporary solution. They are part of an inclusive and sustainable transport strategy and will make people more mobile – while also keeping them physically fit.

5. Spatial planning

Urban transport and spatial planning belong together. Decisions about traffic routes influence not only the mobility behaviour of a population over many years, they also play a substantial role in determining the way space is used. And they shape the cityscape. Today - as a general rule - when the urban population doubles, it takes up three times the inhabited space. Motorised individual transport in particular takes up an extreme amount of space and often intensifies urban sprawl tendencies, which also cause high economic costs.

Cities must be designed and laid out in ways that are compact and suit

mixed uses so that they can master the challenges of the future. In contrast to motorised individual transport, public transport can make a decisive contribution to the best possible use of area and space. Traffic corridors and routes, stations and hubs usually help condense residential areas and businesses, creating cities with short transport distances.

The value of land and properties also increases once they have a transport connection. There is also an economic aspect in addition to city planning aspects. In the end, space is created when there is less automobile traffic and fewer cars; room for other purposes like parks and places for recreation and social activities is the result. That increases the quality of life in a city.

Sustainable traffic systems bring benefits in terms of the use of space in cities, where land is becoming increasingly scarce due to population growth. This is why urban and traffic planning have to form one unit.



Example: TUMI, a new initiative

To promote sustainable transport, the German Federal Government created a new initiative called the Transformative Urban Mobility Initiative (TUMI). KfW is implementing this initiative and is financing sustainable transport projects all over the world. They can be underground or suburban railways, but also GPS or app-based traffic control systems or integrated traffic and spatial planning concepts. The initiative is global and will initially run for five years. The percentage that FC contributes to TUMI amounts to one billion euros per year.

Investments in sustainable traffic systems are worthwhile for many reasons. Climate change mitigation is one important reason but it is not the only one. They also help efforts to

overcome poverty, achieve economic progress, drive back health hazards and use limited urban space as intelligently as possible.

It is therefore all the more important to comprehensively plan and create urban mobility concepts in an integrated way. Digitalisation can make a valuable contribution in this process. This type of planning is incumbent upon the municipalities, which certainly must be strengthened in this respect. Only then can they manage their residential and traffic development in the manner required for modern urban management. And only then can they be connected to their surroundings, which is necessary for the food supply alone. So there are sufficient reasons for sustainable and future-oriented mobility. The time has come for a global traffic revolution.



Photos

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