World Health Organization
REGIONAL OFFICE FOR Europe

EUROPEAN ENVIRONMENT AND HEALTH PROCESS

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Better Health. Better Environment. Sustainable Choices.

Fact sheet 1

Cities

Transport, health and environment

This fact sheet should be read in conjunction with the fact sheets on air pollution, noise, urban planning and waste which represent urban challenges to be tackled at the local scale, but are not covered in detail in this fact sheet.

Summary

Sustainable transport policies that promote public transport, safe cycling and walking, and electric mobility – and which are integrated with compact urban planning – can promote health, reduce pollution and congestion, support action to address climate change, and make cities more livable and attractive places. The WHO and UNECE Transport, Health and Environment Pan-European Programme (THE PEP) supports these policy shifts in Member States.

Overview

Transport is a major sector of the European economy: in the European Union alone, it employs some 10 million people and accounts for 5% of GDP. At the same time, transport causes significant pressures on the environment and health through: emissions of air pollutants, greenhouse gases and noise, biodiversity fragmentation, land-taking, traffic congestion, the inefficient use of urban space, injuries, and reduced opportunities for physical activity. Many of these pressures occur in urban environments – where 73% of Europeans live today – and cannot be addressed solely through technological innovations, the benefits of which have been offset by growth in transport demand.

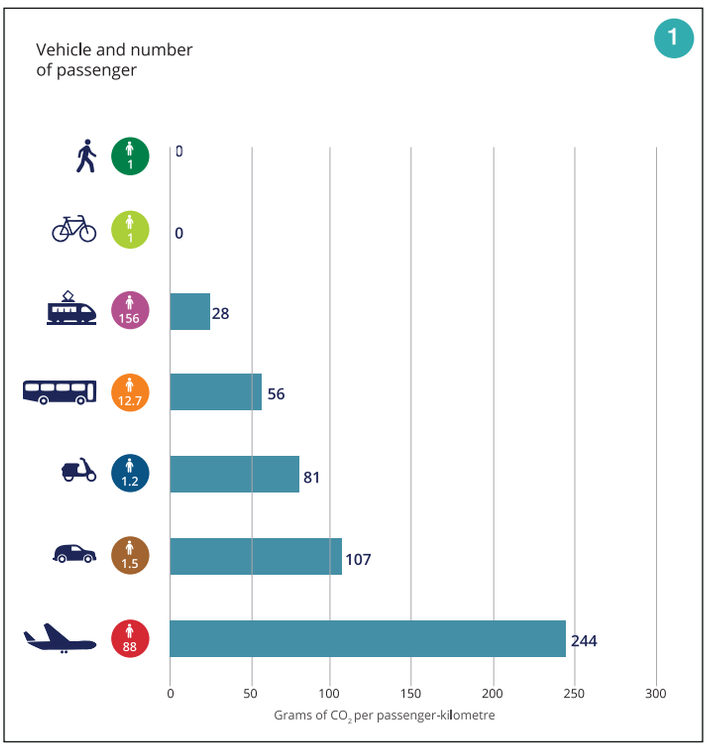
Opportunities exist to address these environmental challenges while improving both health and the quality of urban life. These include: integrated sustainable transport and urban development policies, which support a shift towards public transport, cycling and walking; a reduction in private, motorized vehicle use; and an increase in electric vehicle use. A growing number of Member States and cities are experimenting with these policies, promoting changes to cultural attitudes, behaviours and consumption patterns.

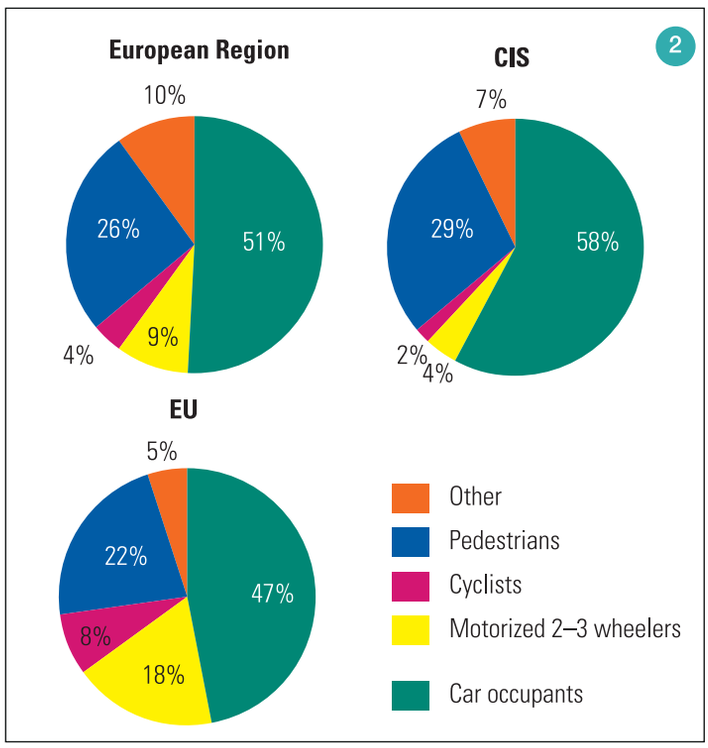
Key messages

- Sustainable and healthy transport policies are one of the building blocks to “make cities and human settlements inclusive, safe, resilient and sustainable”. They also contribute to “ensure healthy lives and promote well-being for all at all ages” by reducing: air pollution and physical inactivity, which are important risk factors for non-communicable diseases; and road traffic deaths and injuries, particularly among vulnerable road users.
- With road transport accounting for the vast majority of greenhouse gas emissions from the transport sector (approximately 73% in the EU, with passenger cars accounting for 44.4 %), policies that promote a shift towards more public transport, in combination with active mobility, have been assessed as providing the greatest co-benefits (see Fig. 1). This is largely due to their positive effects on health, notably through increased opportunities for physical activity.
- Cities can play a major role in addressing the multiple challenges posed by transport through: compact, high-density design that reduces the need to travel long distances; and by investing in safe cycling and walking networks and public transport. At the same time, cities can benefit from less congestion, pollution and noise, and more opportunities for citizens to be healthy and enjoy a better quality of urban life, which in turn make them more attractive places to live.
- Working within the framework of the THE PEP, a policy platform originating from the Third Ministerial Conference on Environment and Health, several Member States are engaged in partnerships to: develop methods and tools to support the assessment of the health impacts of transport-related policies and interventions; share information and expertise; and benefit from each other’s experiences.

Figure 1: Specific CO^2 emissions at average occupancy for various transport modes, 2014.

Figure 2: Distribution of deaths by type of road user in the European Region, CIS and EU.





Source: TERM 2016: Transitions towards a more sustainable mobility system. Copenhagen: European Environment Agency; 2016 (https://www.eea.europa.eu/publications/term-report-2016, accessed on 9 May 2017).
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Source: European facts and the global status report on road safety 2015. Copenhagen: WHO Regional Office for Europe; 2015 (http://www.euro.who.int/__data/assets/pdf_file/0006/293082/European-facts-Global-Status-Report-road-safety-en.pdf, accessed on 9 May 2017).

Key Facts

- Road traffic crashes killed some 85 000 people in 2013 – 26% were pedestrians and 4% cyclists and are the leading cause of death for people aged 5–29 in the WHO European Region (see Fig. 2).
- Road transport is a significant source of air pollution. Exposure to ambient air pollution is estimated to cause almost 500 000 premature deaths per year in Europe.
- The transport sector is the largest contributor of nitrogen oxide emissions, accounting for 47% of total EEA 33 Member Country emissions in 2014. Transport also contributed 13% and 15% of total PM_{10} and $PM_{2.5}$ primary emissions, respectively, in the EU-28 in 2014. Non-exhaust emissions from road traffic are estimated to equal about 50% of the exhaust emissions of primary PM_{10}, and about 22% of the exhaust emissions of primary $PM_{2.5}$.
- Insufficient physical activity is estimated to be associated with nearly 1 000 000 deaths per year in the WHO European Region.
- Regular cycling and walking, at levels comparable to meeting the WHO global recommendations on physical activity for health, of 150 minutes per week of moderate-intensity physical activity for adults reduces all cause mortality by about 10%.
- Up to 1.6 million healthy life-years are lost every year due to transport noise in EU cities. About 100 million people, 73 million of which live in cities, are exposed to road traffic noise above 55 dB (40 dB is the WHO recommended guideline value for noise at night) in the EEA-33 Member Countries. Of these, 32 million are exposed to very high noise levels above 65 dB.
- In the EU-28, road transport – including international shipping, accounts for the largest amount of transport energy consumption, equivalent to 73% of total demand in 2014. The proportion of diesel in the total consumption of petroleum products by road transport increased substantially from 51% in 2000 to 69% in 2014.
- Over-reliance on motorized transport makes jobs, services, education and leisure activities less accessible to disadvantaged societal groups.

“Best buys”

- Integrating transport and urban development policies can deliver more compact cities, and facilitate a modal shift towards more cycling, walking and public transport.
- Demand management interventions, such as: car and bike sharing; incentives for public transport use; restrictions on private vehicle use; and parking policies, as well as behavioural changes, such as eco-driving (resulting in lower fuel consumption), can support reductions in the emissions of air pollutants, greenhouse gases and noise.
- Speed reductions in urban areas and 30 km/hour streets increase safety for vulnerable road users.
- Developing national policies for active mobility can help place cycling and walking more prominently on the national political agenda. Within the THE PEP, Member States are working in partnership towards the development of a Pan-European Master Plan for Cycling Promotion, expected for adoption at the Fifth High-Level Meeting on Transport, Health and Environment, to be held in Austria in 2019.
- Electric mobility, including e-bikes, can support decarbonizing transport, and increase the uptake of cycling by more population groups.
- There is a need to improve capacities to comprehensively address the economic and other effects of transport and urban development policies and interventions on health and the environment, as well as to assess new technological developments, such as vehicle automation.

Bonn - *Source:* WHO/F. Racioppi

Rome traffic - *Source:* WHO/V. Shkaruba

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