

# Green and healthy jobs in transport:

launching a new Partnership under THE PEP



**THE PEP**

*Transport, Health and Environment  
Pan-European Programme*



**World Health  
Organization**  
Europe

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Providing access to goods, jobs, services, education and leisure through an environmentally friendly, health promoting and economically as well as socially viable transport system is a key factor to the improvement of our environment and quality of life and to economic and social growth.

Transport itself is also an important sector of the economy, providing employment for more than 16 million people in the European Union alone and directly contributing 11% to its GDP. With this level of social and economic importance, the transport sector is also well placed to champion the new global agenda of green economy, by exploring new opportunities for job creations and economic development, while at the same time maximizing the possible gains for environment and health through innovative transport policies. There is in fact a new opportunity to reframe the role that transport plays with respect to society, environment and health by focusing on the positive role that “green” transport can play in achieving better health, a cleaner environment, greater social cohesion, better quality of life and economic growth. However, existing experiences with interventions and policies that offer great potential for maximizing benefits for the environment, health and the economy, particularly those related to the promotion of active travel (cycling and walking) in urban areas, are still rather scattered and have largely been at the fringes of transport policy debates.

## THE PEP is launching a new Partnership on green and healthy transport jobs

To address this, the Transport, Health and Environment Pan-European Programme (THE PEP) is launching a new Partnership as a follow-up to THE PEP High-level Meeting in Amsterdam in 2009 and its Goal 1 as well as THE PEP 2010 Symposium on green and healthy-friendly investments and jobs in transport. The purpose of this Partnership is to bring together interested Member States, experts and policy-makers from the transport, environment and health sectors and develop a set of actions and joint projects aiming at:

- 1. Stimulating** a debate and a shared understanding on what a green and healthy job in transport is by bringing environmental and health considerations into the existing discussion on “green jobs” creation.
- 2. Documenting** the breadth of existing experiences in Europe and other parts of the world with new policies and approaches for creating green and healthy jobs in transport.
- 3. Analysing** the potential of greening “old jobs” and creating “new green jobs” in transport and mobility and assessing the qualitative and quantitative impact of such approaches have on the environment, health, transport and the economy.
- 4. Sharing** good practice and disseminating the experiences, policies and approaches
- 5. Developing** strategies and actions for stakeholders to implement Goal 1 of the Amsterdam Declaration in order to promote green jobs in transport.

The added value of this new THE PEP Partnership will therefore be to consolidate the evidence from such experiences and bring them onto the transport policy horizon to facilitate their consideration and uptake by Member States, subnational and local authorities.

Member States, experts and policy-makers who are interested in joining this THE PEP Partnership are welcome to contact THE PEP secretariat at [secretariat@thepep.org](mailto:secretariat@thepep.org)

## Why focus on walking, cycling and public transport for passengers?

THE PEP aims at developing policies that maximize benefits for transport, environment and health. There is great potential for this through active transport (walking and cycling) and efficient public transport. Their main benefits are reduced air pollution, noise and green house gas (GHG) emissions, reduced energy consumption, increased physical activity (which in turn reduces the risk of cardiovascular diseases, diabetes type 2, some forms of cancer and hypertension), reduced congestions, improved road safety and better protection of landscapes and urban cohesion. Additionally, providing walking and cycling options, which are both cheap, and affordable efficient public transport will also help reducing inequalities regarding access to transportation and therefore access to jobs, education and leisure.

## Defining green and healthy transport jobs: an on-going debate

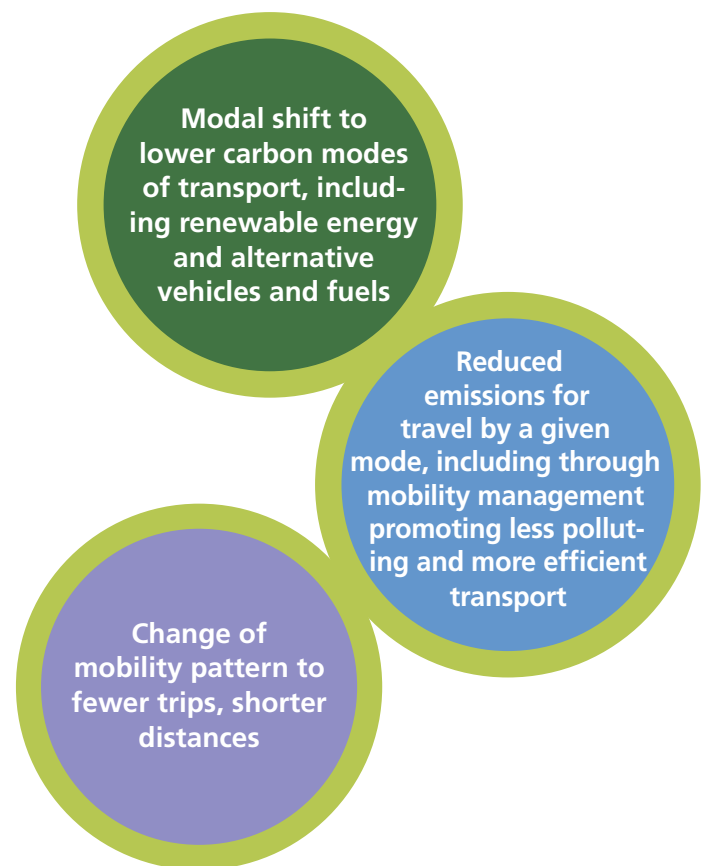
Over recent years, a continuing debate has developed on the definition of "green jobs". Some definitions focus on goods and services which are mainly directed at improving/conserving the environment, while others stress the importance of looking beyond specific sectors and move the economy toward a more environmentally sustainable footing. The US Bureau of Labor Statistics provides a two-part definition of green jobs: firstly, jobs in businesses whose goods or services 'benefit the environment or conserve natural resources', and secondly jobs where workers are improving the environmental record of their establishment. However, an important limitation of this definition is that the choice of comparator can make it too easy to call a job a green job. To help address this issue, the United Nations Environment Programme argues for linking concepts of 'green jobs' to a desired end-state, a low-carbon economy.

In the context of THE PEP, green and healthy transport jobs (GHTJ) are defined as jobs that form part of a wider solution to climate change, helping to facilitate the necessary reduction in emissions whilst promoting goals of broader environmental improvement, health, well-being and equity.

### Further information:

- OECD 2005. Opening Markets for Environmental Goods and Service, available at <http://www.oecd.org/dataoecd/63/15/35415839.pdf>
- United States Department of Labour, Bureau of Labor Statistics. Defining Green Jobs, available at [http://www.bls.gov/green/green\\_definition.pdf](http://www.bls.gov/green/green_definition.pdf)
- UNEP 2008. Green Jobs: towards decent work in a sustainable, low-carbon world, available at <http://www.unep.org/greeneconomy/LinkClick.aspx?fileticket=hR62Ck7RTX4%3d&tabid=1377&language=en-US>

## Moving to a low carbon transport system through a combination of:



## Changing jobs

Transition to greener and healthier transport not only shifts numbers of jobs from one type to another but also creates new job profiles. Over the transition to a low carbon transport system, some jobs will be on-going

and some will expand over time, while others will be more front-loaded.

Such a shift could affect jobs in four ways, according to the EU report on "Environment and labour force skills":

<b>Creation of additional jobs in new or expanding areas</b>	For example, bicycle infrastructure and electric bicycle production, urban space design and mobility management
<b>Adaptation of jobs to make them greener</b>	For example, electricians or plumbers travelling to work by cargo bicycle rather than by car, and driving instructors teaching about more energy efficient driving techniques
<b>Substitution of jobs</b>	For example, a shift from road to rail freight would lead to job loss in the former area but job gain in the latter area
<b>Elimination of jobs</b>	For example, some jobs currently existing in the automobile industry

## Where are the green and healthy transport jobs?

<p><b>Supporting Active Travel</b> bicycle retail and maintenance, (high-quality) bicycle production, construction and maintenance of high quality infrastructure and environments for walking and cycling, provision of clothing, accessories, facilities for walkers and cyclists</p>	<p><b>Improving Public Transport and increase attractiveness</b> Construction and maintenance of public transport vehicles and infrastructure, operating public transport systems, bike hire schemes, pedicabs, car-sharing schemes, developing and maintaining integrated travel networks, development of "bike and ride" systems</p>	<p><b>Technological Measures to Reduce Emissions per Mode</b> production and development of technologies for electric and other lower-carbon vehicles, production of renewable energy</p>
<p><b>Encouraging Behavior Change</b> installation of lighting, neighbourhood patrols and street maintenance, mobility advisors and behaviour change practitioners, cycle training, public transport route planning, training in more energy efficient driving techniques, and environmental skills training</p>	<p><b>Mobility Management</b> Establishing mobility centers, promoting customer friendly inter-modal mobility systems, promoting innovations in mobility services and transport technologies, innovations in the transport chain, awareness raising, training and education</p>	<p><b>Freight</b> Production, maintenance and operation of cargo bikes and electrically assisted cycles, logistics and planning to focus more on the environmental aspect</p>
<p><b>Reducing Car Use</b> implementing pedestrianization, parking enforcement, the operation of road pricing schemes, mobility management</p>	<p><b>Reducing Travel Demand</b> Information and Communications Technologies industries, local and decentralized businesses</p>	<p><b>Tourism</b> Provision, maintenance of bicycle hire schemes, route planning for walking, cycling and public transport, local small retailers, local providers of accommodation, community regeneration and heritage development and maintenance schemes, development of locally produced food</p>

## Show cases for creating local green and healthy transport jobs

Green and healthy transport jobs in public transport and walking and cycling include those based on high technology, such as those concerned with the development of electric vehicles and renewable energy, but go beyond this. While these jobs are necessary, many other jobs could be created that range from unskilled to professional. Many of these are particularly attractive in local and low-income settings:

1. Many GHTJ are local, providing greater empowerment to the communities and producing benefit to the local economy, which will be particularly important for areas of high unemployment.
2. Jobs in walking and cycling for transportation in urban areas usually do not require large-scale investment programmes compared to highways, underground systems or similar, but are very scalable at the local level.
3. Investments in green jobs can be funded through re-directing resources from less green jobs to investments into greener jobs, e.g. investments in mobility management and alternative transport technologies as well as through implementing the polluter-pays-principle and fair pricing schemes.

## The Austrian framework program for mobility management to support the environment, the economy and green jobs

The Austrian Action Programme for Mobility Management *klima:aktiv mobil* – which is a national implementation example of the Amsterdam Goals – has been launched by the Federal Ministry of Agriculture, Forestry, Environment and Water to reduce CO<sub>2</sub> emissions by promoting environmentally sustainable mobility. For example through environment-friendly vehicles, alternative fuels, energy efficient mobility management, eco-driving, cycling and public transport while stimulating green jobs. After five years it already supports over 1800 businesses, communities, cities and regions achieving 450,000 tons of CO<sub>2</sub> reduction per year. Small- and medium-sized enterprises particularly benefit from this. Since 2007 the programme has given financial support of €42.5 million for projects to reduce GHG emissions in transport. This stimulated a total investment sum of €271 million and created and saved about 3000 green jobs. This positive performance of the programme highlights the potential for GHG reduction, new business opportunities and the creation of green jobs in transport through a supportive and proactive national framework in close collaboration with businesses, communities, cities and regions. *klima:aktiv mobil* is part of the umbrella program *klima:aktiv* which also covers the areas of energy saving, renewables, construction and refurbishing. This is an important contribution to the Austrian “Master Plan for Green Jobs” presented by the Ministry of Agriculture, Forestry, Environment

and Water together with the Austrian Chamber of Commerce. The “Masterplan for Green Jobs” in combination with *klima:aktiv mobil* applies two approaches to creating green and healthy jobs in transport: stimulation of investments in environmentally friendly mobility and creation of new green and healthy job profiles as well as greening existing jobs. For example, *klima:aktiv mobil* offers training and certification of driving teachers as eco-driving trainers and bicycle technicians for e-bike technology. The “Masterplan for Green Jobs” expects that around 15,000 green jobs will be created by expanding public transport, electric mobility and cycling. Other areas include renewable energies, energy efficiency, eco-farming and eco-tourism. Currently already 200,000 Austrians work in the economically vital and growing environmental sector. The goal is to create 100,000 additional green jobs by 2020.

**Further information:** [www.klimaaktivmobil.at](http://www.klimaaktivmobil.at); [www.green-jobs.at](http://www.green-jobs.at); [www.lebensministerium.at](http://www.lebensministerium.at); [robert.thaler@lebensministerium.at](mailto:robert.thaler@lebensministerium.at)

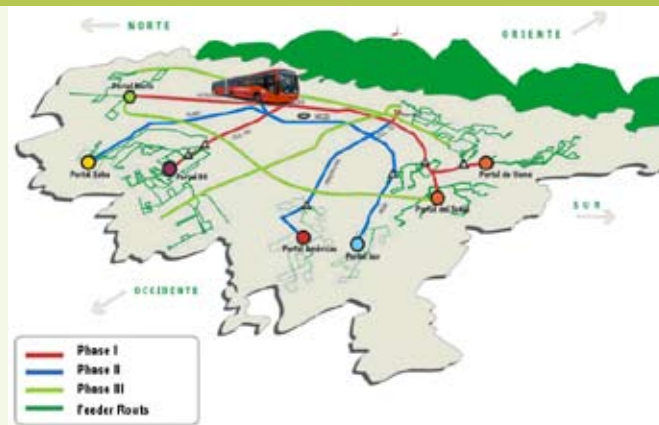


*Electric bicycle boom in Austria: good for the environment and the economy*

## Addressing inequalities through fair public transport for all: the TransMilenio experience

The TransMilenio is a massive bus rapid transit system and Bogotá's response to serious problems from uncontrolled urban growth. TransMilenio has led to significant shifts in modal split and consequent savings in greenhouse gasses through reduced traffic volumes and emissions. Health impacts of transport have been reduced by promoting walking and cycling and reduced air pollution and traffic injuries. By 2009, the system had generated almost 40,000 direct and 55,000 indirect jobs. The system is particularly interesting as it also addresses social responsibilities. While traditionally the transport sector has employed men, in the TransMilenio system women have been able to significantly increase their workforce participation. Female participation is currently 24% of the total system workforce, among whom 62% are single mothers, while in activities such as fare collection and bus washing the participation of women reaches 70% and 43%, respectively. It also requires a minimum of participation from small businesses in the operation of the system.

The system has brought city-planning, environmental, social, cultural, operational and economic benefits to



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*The TransMilenio system created 95,000 jobs and reduced traveling time 32%, gas emissions 40% and accidents 90%.*

the city and has improved the environmental quality, the quality of life and the well-being for citizens of Bogotá.

The introduction and scaling up of the TransMilenio required substantial investments in infrastructure. The national government provided up to 70% of the investment and 30% came from the local government. Revenues from oil and related businesses covered 50% of the total costs. The operation of the system is provided by public and private participation.

**Further information:** Deysi Rodriguez, Operations and Environmental Office, Tel. +57 (1) 220 3000 ext. 1119, [deysi.rodriguez@transmilenio.gov.co](mailto:deysi.rodriguez@transmilenio.gov.co)

## Innovative strategies to provide access and mobility choices also in rural areas beneficial to local environment, economy and society

Two important pillars of successful public transport are attractive mobility services and the provision of information on the offered services. To promote public transport several regional mobility centers have been established by the regional Austrian authorities and supported by the *klima:aktiv mobil* program. The services offered go beyond simple time table information on public transport routes. It aims at improving public transport in general, attract new customers and provide support. As such, the mobility centers are also contact points for businesses, communities, transportation providers, institutions, schools and tourism associations. The mobility centers are the main coordinating body for the regional

public transport plans. They also provide training and support for mobility management in communities, businesses, schools and the elderly. Good practices are the mobility centers in the Austrian Provinces of Upper Austria, Styria and Burgenland.

To improve the "last mile" in rural public transport local on-demand mini buses and taxi systems have been introduced to complement the regional bus and train network. Some good practice examples for regional public transport are the integrated public transport systems in the Austrian Provinces of Vorarlberg and Tyrol and the successfully operating local mini buses of the communities of Breiten-

brunn, Mörbisch and Purbach. These on demand community buses were established as a direct result of THE PEP Austrian-Hungarian-Slovakian project on environmentally sustainable transport and tourism in sensitive areas – Pannonian Lake Neusiedl/Fertő-tó region.

#### Further information:

[www.klimaaktivmobil.at](http://www.klimaaktivmobil.at); [www.lebensministerium.at](http://www.lebensministerium.at); [robert.thaler@lebensministerium.at](mailto:robert.thaler@lebensministerium.at);  
 THE PEP Project and local mini buses: [www.sensiblegebiete.at](http://www.sensiblegebiete.at);  
[www.b-mobil.info](http://www.b-mobil.info); [www.purbach.at](http://www.purbach.at); [www.breitenbrunn.at](http://www.breitenbrunn.at);  
[www.mörbisch.at](http://www.mörbisch.at);  
 Mobility centers: [www.perg.mobitipp.at](http://www.perg.mobitipp.at); [www.mobilzentral.at](http://www.mobilzentral.at);  
 Integrated regional public transport systems: [www.vmobil.at](http://www.vmobil.at);  
[www.vvt.at](http://www.vvt.at)



*On-demand buses in rural areas make public transport services more accessible in Austria*

## Eco-tourism: Bringing in more tourists to boost local economies



SwitzerlandMobility is the Swiss national approach to sustainable mobility for tourism through publicized routes with standardized signalization and interoperability for walking, cycling, mountain biking, skating and rafting. This is further supported by a fully integrated timetable for public transport (from railways, buses, funiculars to waterways). Within its network for non-motorized traffic, all SwitzerlandMobility routes are linked to the services of numerous public and private partners. These include government and authorities (transport, health, environment, spatial planning, energy, culture and economic affairs) and

*A network for non-motorized traffic, SwitzerlandMobility helps generate up to US\$ 600 million of revenues annually for businesses along its routes*

private businesses that offer services in transport, sport, accommodation and gastronomy. After initial investments from 2004 to 2008 of about US\$ 16 million, the annual estimated turnover of SwitzerlandMobility and its partners since then is US\$ 400-600 million, not including indirect benefits for health and environment.

This example is not unique to western Europe. In central Asia some experiences are emerging with small companies, often run by young entrepreneurs, that develop as start-ups related to broader projects in the area of ecological tourism development. Such companies offer scenic bicycle tours in Central Kazakhstan which provide great opportunities to bring additional business (accommodation, food etc) to communities along the routes. The initial main investment in setting up such small enterprises is labour for field investigations and information collecting, not requiring high capital investments.

**Further information:** <http://www.switzerlandmobility.ch>;  
<http://etpack.ecotourism.kz/index.php?lang=english>



## Thousands of jobs in bicycle production and retail in Europe

Within Europe there is substantial variation with some EU countries producing very few bicycles, while others, such as Italy, the Netherlands, and Germany, are major centres of bicycle manufacturing. In Germany, there are estimated to be around 4,000 jobs in bicycles, parts, and components manufacturing.

There is the potential for a considerable increase in bike ownership and for the production of higher-end bicycles, including cargo bikes and electric bikes.

While bicycle production can take place elsewhere, high levels of cycle use will create local jobs selling and repairing bicycles. For example, Copenhagen, a city where nearly 40% cycle to work, now has 309 registered workplaces that either sell or repair bicycles, accounting for 650 full-time jobs. Even in Germany there are five times more jobs in bicycle retail and repairing than in manufacturing: approximately 22,000.

Although it is not possible for every European country to become a bicycle exporter, higher modal shares for cycling would translate into local, labour



intensive jobs in bicycle retail and repair. As bicycles are used for a greater variety of journeys and tasks, more jobs will be created in this area. For example, to retro-fit modern electric bicycle technology to existing pedal bicycles. This could be a good solution for older people experiencing difficulty in riding longer distances with the positive side-effect of prolonging the life of the bicycle.

**Further information:** <http://www.cphpost.dk/business/business/119-business/51914-citys-biking-industry-rakes-in-13-billion.html>; <http://www.tour-magazin.de/?p=8036>

## 47,000 public transport jobs in London

A modal shift means a very high potential for job growth in public transport, as public transport systems will need to be improved and expanded to replace car travel. A flavour of this can be gleaned from London, where public transport has a high and rising modal share, particularly in terms of commuter trips. Public transport now accounts for 90% of travel into central London during the morning peak.

London's extensive public transport system supports 43,600 jobs in bus and coach operation and 3,300 jobs in rail. Many of these jobs are as drivers or operatives, while others are professional, managerial and clerical roles. In addition to these, jobs directly linked to public transport are transport planners, community transport workers and rail engineering staff.

But even in cases with high modal shares for public transport and relatively high numbers of jobs, there is potential for further growth. Public transport could be made more accessible by providing additional personnel (conductors, train guards and station staff) to assist customers with disabilities or those carrying luggage or children. In addition to direct employment, indirect and induced jobs are also important. Existing estimates indicate that every 100 direct rail jobs support 140 indirect jobs, whereas 100 direct motor industry jobs only support 48 other jobs.

**Further information:** <http://www.pteg.net/NR/rdonlyres/D09F59E8-72C6-438C-8964-60A1993A8F48/0/EmploymentintheSustainableTransportSectorpdf.pdf>; <http://www.tfl.gov.uk/assets/downloads/corporate/travel-in-london-report-3.pdf>

## Reducing the external costs of transport: development of cycling infrastructure in Copenhagen

Creating and maintaining infrastructure for pedestrians and cyclists has the potential to support significant employment, creating local and physically active jobs. In Germany, for example, it is estimated that there are 7000 jobs specifically in cycling infrastructure.

In Copenhagen the main categories of infrastructural jobs related to cycling include construction of new infrastructure and maintenance, road inspection and cleaning, construction of road equipment like signs and crash barriers, road security, road planning (analytic and strategic work) and prioritization.

Substantial cycling infrastructure investments form the basis of cycling in Copenhagen and are a key reason why so many citizens and businesses can enjoy the

benefits. The Municipality has used factors including safety, comfort, transport time, tourism and branding to calculate the benefits of cycling. Combining all the factors, the council estimated that transferring one road user from car to bicycle avoided €0.1 of external cost per km during off peak hours and created €0.16 of external benefits. The creation of infrastructure may support more indirect and induced jobs. A study from Baltimore estimated that for every US\$ 1 million spent on bike lanes 14.4 direct and indirect jobs were created, 11.3 jobs for every US\$ 1 million spent on pedestrian projects, compared with only 6.8 jobs on road resurfacing.

**Further information:** [http://www.bikeleague.org/resources/reports/pdfs/baltimore\\_Dec20.pdf](http://www.bikeleague.org/resources/reports/pdfs/baltimore_Dec20.pdf)

## Public bicycle for hire: thousands of new job opportunities across Europe

Bike hire schemes are the fastest growing form of public transport. A recent review for the United Nations found that Spain is currently the world leader with 105 systems, 28% of the global total. The highest density is in Paris with 9.6 bikes per 1000 inhabitants and the Paris hire scheme has created around 400 direct jobs.

Public bike hire schemes are increasingly complex with docking stations, integration with public transport ticketing, real time web availability and GPS tracking. The expansion into electric bikes, as in Stuttgart, offers the potential to increase their use in difficult situations, e.g. older people, people with disabilities or trips in hilly areas.

Maintenance and logistics are major operations. Bikes need to be repaired, replaced, and redistributed. Capital and operating costs can be covered through usage fees, sponsorship and advertising or car parking revenues. The Paris Vélib' system managed to cover all the costs in the first year from advertising and sponsorship, even generating revenue for the local government.

There is still potential for a major expansion from current schemes. Recommendations are to focus on dense cities and/or denser areas within cities. But even in smaller and lower density towns hire schemes can make sense at public transport stations and public facilities. Calculations from Spain have suggested that cycle hire schemes in every town over 20,000 inhabitants would lead to a total of 4,200 direct jobs in services and repairs.



*4,200 jobs could be created in bike hire schemes in Spain.*

**Further information:** <http://ebikespace.com/stuttgart-wheeling-its-way-pedelec-city-statu/>; [http://www.un.org/esa/dsd/resources/res\\_pdfs/csd-19/Background-Paper8-P.Midgley-Bicycle.pdf](http://www.un.org/esa/dsd/resources/res_pdfs/csd-19/Background-Paper8-P.Midgley-Bicycle.pdf); [http://ftp.sevillafilmmoffice.com/velo-city2011/presentaciones/dia25/Plenario\\_4/Joaquin\\_Nieto.pdf](http://ftp.sevillafilmmoffice.com/velo-city2011/presentaciones/dia25/Plenario_4/Joaquin_Nieto.pdf)



## Learn more about THE PEP

Making the link between all three sectors, the Transport, Health and Environment Pan-European Programme (THE PEP) provides a policy framework that aims at creating healthy and environmentally sustainable transport. THE PEP is a joint initiative of the World Health Organization Regional Office for Europe and the United Nations Economic Commission for Europe that facilitates a more effective use of resources and better coordination at the national and international levels.

## Contact

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