

## **THE PEP 2018 Symposium: Achieving multiple benefits through active mobility: reduced emissions and noise, better environment and improved human health**

*Draft Concept note prepared by the secretariat*

### *Summary*

At its seventh session (Geneva, 22–23 October 2009), the Steering Committee of the Transport, Health and Environment Pan-European Programme (THE PEP) discussed how to engage member States and other stakeholders more actively on priority issues for THE PEP (ECE/AC.21/SC/2009/7–EUR/09/5088363/7, para. 8). To that end, the Committee agreed that, beginning with its eighth session, in-depth discussions, or symposia, would be organized, including speakers from the private sector, academia, government and civil society (ECE/AC.21/SC/2009/8–EUR/09/5088363/8, para. 46).

Topics would be in line with THE PEP priority goals as adopted by the Third High-level Meeting on Transport, Health and Environment (Amsterdam, 2009) and address one goal per year. With the adoption of the Paris Declaration by the Fourth High-level Meeting (Paris, 2014), priority goal 5 (to integrate transport, health and environmental objectives into urban and spatial planning policies) was added. Following the Fourth High-level Meeting, the extended Bureau of THE PEP Steering Committee confirmed the wish to continue holding THE PEP annual symposia. At its fifteenth session, the Committee decided that the Symposium in 2018 would tackle priority goal 3 – to reduce emissions of transport-related greenhouse gasses, air pollution and noise (ECE/AC.21/SC/2017/2–EUPCR1612201/4.4/SC15/2).

This concept note was prepared by the secretariat to provide the background on the content and format of and issues to be covered at the 2018 Symposium.

## **I. Transport and urbanization trends impacting health and environment**

### **A. Facts and figures about transport, health and environment**

1. Transport is a major sector of the European economy: in the European Union (EU) alone, it employs about 10 million people and accounts for five per cent of gross domestic product (GDP). Transport is an essential component of life, providing access to services, goods and activities. At the same time, transport causes a significant burden on the environment, health and well-being and national economies in the region through: emissions of air pollutants, greenhouse gases and noise, land-take, traffic congestion, injuries and reduced opportunities for physical activity. Many of these pressures occur in urban environments, where 73 per cent of the European population live today and more than 80 per cent of them are expected to live by 2030.
2. Air pollution remains the largest environmental risk to health. New data from the World Health Organization (WHO) show that 9 out of 10 people in the world breathe air containing high levels of pollutants. In recent decades air quality across the pan-European region has improved. Nevertheless, a large proportion of the European population is still exposed to air pollution that exceeds WHO Air Quality Guidelines. In 2016, approximately 600,000 premature deaths were attributable to the joint effects of household and ambient air pollution in the region.
3. According to a study by the WHO Regional Office for Europe and the Organization for Economic Cooperation and Development in 2015, the economic cost of deaths and diseases from air pollution in the WHO European Region amounts to US\$ 1.6 trillion.<sup>1</sup> This figure is the equivalent of one-tenth of GDP of the European Union in 2013.
4. The transport sector (predominantly the road sector) contributes up to 50 per cent of ambient air pollution in urban areas and is responsible for nearly one quarter of total energy-related CO<sub>2</sub> emissions.
5. Road traffic is the major cause of human exposure to noise pollution in our cities. According to the European Environmental Agency (EEA), about 100 million people are exposed to road traffic noise above the WHO recommended guideline in the 33 EEA member countries. Of these, 32 million are exposed to very high noise levels. Up to 1.6 million healthy life-years are lost every year due to transport noise.<sup>2</sup>
6. The large urban areas of the region suffer from serious road congestion. Road congestion in the EU costs nearly €100 billion every year, or 1% of the bloc's GDP.<sup>3</sup> In the period from now to 2030, a combination of population growth and per capita increases in GDP is likely to generate more traffic and congestion throughout the region's road transport network.
7. Road traffic injuries have a huge impact on health and development. They are the leading cause of death among young people aged between 15 and 29 years and cost governments approximately three per cent of GDP. Even though the UNECE region

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<sup>1</sup> [http://www.euro.who.int/en/media-centre/sections/press-releases/2015/04/air-pollution-costs-european-economies-us\\$-1.6-trillion-a-year-in-diseases-and-deaths,-new-who-study-says](http://www.euro.who.int/en/media-centre/sections/press-releases/2015/04/air-pollution-costs-european-economies-us$-1.6-trillion-a-year-in-diseases-and-deaths,-new-who-study-says)

<sup>2</sup> [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0019/341128/Fact-Sheet-1-City-Transport-health-and-environment.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0019/341128/Fact-Sheet-1-City-Transport-health-and-environment.pdf?ua=1)

<sup>3</sup> [https://ec.europa.eu/transport/themes/urban/urban\\_mobility\\_en](https://ec.europa.eu/transport/themes/urban/urban_mobility_en)

has the lowest road traffic mortality rate in the world, road traffic accidents in the region killed about 115 600 people in 2015 (for every person who dies from a road crash, at least 41 have non-fatal injuries requiring hospital admissions).

8. The setting of ambitious goals to reduce road deaths and injuries by 50 percent by 2020, subsequently adopted as part of the 2030 Agenda for Sustainable Development, is a reflection of the growing recognition of the contribution of road safety to health, development and broader environmental objectives and the potential for action.
9. Excessive reliance on car transport can have a negative impact on the access to public and green areas and opportunities for physical activity. Physical inactivity is now identified as the fourth leading risk factor for global mortality. According to WHO, worldwide, 23 per cent of adults and 81 per cent of adolescents (aged 11–17 years) do not meet the global recommendations for physical activity.
10. Insufficient physical activity is estimated to be associated with nearly one million deaths per year in the WHO European Region. Globally, physical inactivity is estimated to cost \$54 billion in direct health care, of which 57 per cent is incurred by the public sector and an additional \$14 billion is attributable to lost productivity.

## **B. Introduction to the issue**

11. From the 1950s the transport policy strategy in the majority of the countries in the European region has privileged investments favouring the use of motor vehicles. Even today, in many countries, governments often allocate public expenditures in favour of new road construction rather than of other urban transport investments. In some countries this trend is seen as a measure of modernization, progress and development, although from many perspectives (pedestrians, cyclists, residents, aesthetics, health risks and environmental quality) it may be considered as degradation.
12. In contrast with this approach, a growing number of countries are embracing a new vision of the liveable city in which all residents have access to open space and parks, health and community services, leisure and culture activities. In this kind of city, public transport, shared cars and bicycles are preferred modes of transport and digital technology is supporting their use - the more people are sharing transportation modes, public space, information and new services, the more attractive the city is considered.
13. Space limitations within cities mean that it is generally almost impossible to build new motorised transport infrastructure and that conflicts may arise when discussing the (re)allocation of public space to different transport modes and/or other uses of public relevance (e.g. recreational and green spaces). Motorised modes require more land than cycling and transport infrastructure can have a permanent and often irreversible impact on the land use and land intrusion although some innovative solutions have been devised to convert disused rail lines to cycle paths and convert disused rail sidings into new urban developments.
14. Furthermore, any new investment can be a burden on public budgets. For this reason, central and local authorities need to consider how to achieve the best return on investment, optimise the use of the existing roads and develop new infrastructure for active travel users. These actions will relieve the pressure on urban areas arising from private passenger and freight road transport. This is fundamental to better accommodate and manage the ever-increasing demand for mobility as well as to

facilitate urban commuting for those who have a longer journey and therefore cannot live or work without a motorised transport leg of their trip.

15. Over the past years, numerous official papers and scientific studies have emphasised the importance of keeping cities liveable. In 2007, the European Economic and Social Committee declared that “important as cars are in modern society, car-oriented cities are neither possible nor desirable. Instead, public transport and environmentally friendly private transport (e.g. cycling or walking) should be the mainstays of modern urban transport planning”.
16. Despite an intensively discussed health and environment benefits of sustainable transport systems, a large number of cities and urban areas in the European region are facing challenges in limiting the use of private cars, improving public transport systems, encouraging non-motorized modes, creating pedestrian zones and, in general, meeting urban sustainability standards.
17. A fundamental change in approach is needed from governments and people to achieve more efficient, equitable, healthy, safe and environmentally friendly transport. An important way to promote healthy and sustainable transport alternatives is to ensure that health and environmental issues are clearly on the agenda when the spectrum of transport solutions are being evaluated, decisions are being made and policies formulated.
18. THE PEP 2018 Symposium will highlight the multiple benefits resulting from sustainable urban mobility and discuss in depth how improvements in sustainable mobility management and transport system efficiency can lead to a multiple benefit to environment and human health, reflecting THE PEP Priority Goal 3.

## **II. The policy response**

### **A. Linking active mobility, health and environment**

19. Physical activity has multiplicative health, social, environmental, cultural and economic benefits for communities and nations. Regular physical activity is a well-established factor for the protection and prevention of the leading noncommunicable diseases (NCD), particularly heart disease, stroke, diabetes and breast and colon cancer, among others. It also contributes to the prevention of other important NCD risk factors, such as hypertension, overweight and obesity, and is associated with improved mental health, delay in the onset of dementia and improved quality of life and well-being.
20. Recognizing a need for stronger global, regional and national coordination in respect of physical activity, WHO members States endorsed the Global Action Plan on Physical Activity (GAPPA 2018–2030) in May 2018. The goal of GAPPA is a 15 per cent reduction in the global prevalence of physical inactivity by 2030 (using a baseline of 2016). The plan’s vision for “more active people for a healthier world” will be achieved through a shared mission, namely, ensuring that “all people have access to safe and enabling environments and to diverse opportunities to be physically active in their daily lives”.
21. In this context, active mobility (mainly through walking, cycling and the use of public transport) as a means of transportation is a highly promising approach to integrate physical activity into individuals' daily lives. The uptake of active mobility impacts not only the health determinants of individual travellers who decide to walk, cycle or use public transport, but also of society as a whole. Investment in policy

action in this direction offers great socioeconomic benefits and can contribute directly to achieving GAPP and the Sustainable Development Goals.

22. However, if taken in isolation and not accompanied by other transport measures, there are certain health risks, such as the increased risk of traffic injuries and an increased inhalation rate of air pollution, that active travellers need to consider.
23. As part of the EU-funded project “Physical Activity through Sustainable Transport Approaches (PASTA)”, a systematic literature review was carried out and a health impact assessment tool was used to quantify the associated health effects of active mobility.
24. Studies concluded that the health benefits of physical activity outweigh the estimated detrimental effects of personal air pollution exposure and even the risk of traffic incidents.<sup>4</sup>
25. Furthermore, the reduction of car traffic and thus car congestion (better accessibility, reduction of lost travel time) can improve the economic competitiveness of the urban area. Environmental sustainability will be affected dramatically through reductions in the emissions of harmful pollutants, noise and greenhouse gases considering that, in many cities of the region, transport is often the main source of these emissions.
26. A study in 2014 estimated that, if the world expanded public transportation, walking and reaching a 11 percent of cycling modal share in cities, the amount of carbon dioxide emissions reduction could reach 1,700 megatons per year in 2050<sup>5</sup>.
27. Additionally, data from a 2015 study<sup>6</sup> indicates that, in a scenario where 14 per cent of travel in the world’s cities is by bike or e-bike in 2050, carbon dioxide emissions from urban transportation would be 11 per cent lower than in a scenario where efforts to promote sustainable transportation sidestep bicycling.
28. All this hinges on getting people out of their cars and stimulating sustainable alternatives leading to a cleaner, safer and more efficient transport system in urban areas.

## **B. Encouraging sustainable transport**

29. The integration of health, environment and other social concerns into transport policies requires high-level political commitment to intersectoral cooperation and willingness to change current strategies. It is essential that decision makers in national and local governments understand and commit themselves to take action to

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<sup>4</sup> [http://www.pastaproject.eu/fileadmin/editor-](http://www.pastaproject.eu/fileadmin/editor-upload/sitecontent/Publications/documents/PASTA_LessonsFromHealthImpactAssessment.pdf)

[upload/sitecontent/Publications/documents/PASTA\\_LessonsFromHealthImpactAssessment.pdf](http://www.pastaproject.eu/fileadmin/editor-upload/sitecontent/Publications/documents/PASTA_LessonsFromHealthImpactAssessment.pdf)

<sup>5</sup> The results of the study are calculated comparing a business-as-usual and a High Shift scenario on the basis of quantity and quality of public rapid transport services. The authors of the study defined the Rapid Transit per Resident (RTR) indicator as the number of kilometres of metro, light rail, urban commuter rail, and Bus Rapid Transit lines per million urban residents. In the 34 members of the Organization for Economic Development and Cooperation (OECD), the authors calculated an RTR in 2014 of 60, compared to 9 in the remainder of the world. Under a business-as-usual baseline case, it was forecasted that the RTR would remain unchanged until 2050, while under a High Shift scenario, it would grow by 50 percent (to 90) in the OECD countries and triple (to 30) in the rest of the world.

<sup>6</sup> [http://www.velonews.com/2015/11/news/study-cycling-can-reduce-transportation-co2-by-10\\_389139](http://www.velonews.com/2015/11/news/study-cycling-can-reduce-transportation-co2-by-10_389139). The study is by University of California Davis and was commissioned by the Union Cycliste Internationale, the European Cyclists’ Federation and the Bicycle Product Suppliers Association.

transform transport policy and urban development and achieve improvements that are both sustainable and sustained. Once decision makers have a strong vision for transformation, the implementation phase should begin.

30. As priority tasks the national and local authorities should ensure that:
  - a. non private transport services effectively serve the mobility needs of the population and the public transport networks adequately covers residential areas
  - b. authorized bus services are environmentally-friendly, reliable, convenient, fast, comfortable and safe
  - c. various system measures such as segregating bus lanes on existing roads, synchronizing time tables, aligning tariffs for public transport tickets, integrating ticketing with other modes and promoting frequent travellers could be enacted.
31. Furthermore, authorities would have to promote cycling as an equal component of an integrated transport and mobility policy. This requires powerful political support at all levels in order to develop a cycling culture in a country. It also requires the creation of an environment that facilitates an increased level in cycling. Promotion actions include the construction and maintenance of cycling infrastructure, services such as bicycle repair, bicycle sharing schemes and bicycle courier and last mile freight services. Good-quality cycle routes should be suitable for the less confident cyclists also; however, it is not encouraged to provide cycle tracks in urban areas at the expense of footpaths.
32. A survey coordinated by the European Commission reviewed the transport habits of its population and looked at how frequently they use various modes of transport. The results showed that less than one in five citizens of the European Union uses public transport (16 percent) or cycles (12 percent) while half use a car every day.<sup>7</sup>
33. To successfully bring changes to existing policies, citizens should be involved in the planning process from the very beginning. Even though most people might agree that transport-related emissions and traffic congestion are a problem, not everybody would be ready for change.
34. In the light of the above, governments need to take measures to motivate people to shift from motorized transport to cleaner, healthier travel, particularly for shorter journeys. These measures can include awareness-raising and communication campaigns to influence the opinion of the public as well as fiscal incentive policy instruments and tools to encourage people out of their private vehicles.
35. There is, however, no single policy solution. Effective and coordinated national actions to reverse the current trends and promote active travel modes require a strategic combination of policy responses, selected and tailored to the nuances of the country context, in particular where urban policy initiatives and actions are not the competency of national but of local or regional governments.

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<sup>7</sup> [http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs\\_406\\_en.pdf](http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_406_en.pdf)

### **III. Policy frameworks and supportive tools that promote sustainable transport initiatives**

36. Several regional and global policy frameworks promote sustainable transport initiatives in the pan-European region. One of the main policy instruments for improving air quality on the regional, national and local levels in the United Nations Economic Commission for Europe (ECE) and WHO/Europe region is the ECE Convention on Long-range Transboundary Air Pollution (Air Convention) to which 51 member States are Parties. The Convention and its eight protocols lay down the principles of international cooperation for air pollution abatement and provide the leading example of a regional multilateral environmental agreement to bring together research and policy.
37. In 2016 the Eighth Environment for Europe Ministerial Conference (Batumi, Georgia) endorsed the voluntary Batumi Action for Cleaner Air (BACA) initiative for improving air quality within the ECE region. Ministers recognized the need for swift actions to address emissions from key sources, including transport, and recommended that governments should defend expenditures on measures to reduce emissions of air pollutants, as research showed that the benefits of improved air quality exceeded by far the cost of pollution-reduction measures.
38. Furthermore, the Sixth Ministerial Conference on Environment and Health (Ostrava, Czech Republic, 13–15 June 2017) adopted the Ostrava Declaration on Environment and Health, in which member States committed themselves to be “supporting the efforts of European cities and regions to become healthier and more inclusive, safe, resilient and sustainable through an integrated, smart and health promoting approach to urban and spatial planning, mobility management, the implementation of effective and coherent policies across multiple levels of governance, stronger accountability mechanisms and the exchange of experience and best practices in line with the shared vision established by the New Urban Agenda”.
39. In addition, the 2030 Agenda for Sustainable Development sets quantitative goals across the social, economic and environmental dimensions of sustainable development. Although sustainable transport is not represented by a standalone Sustainable Development Goal, it is mainstreamed across several Goals and targets, especially those related to health, energy, infrastructure and cities and human settlements. Key policy, institutional and regulatory measures need to be put in place to create the necessary enabling environment for mainstreaming the Goals into national policies and programmes along with the necessary coherent coordination.
40. To tackle complex challenges of integrating different policies and assessing the health and environmental effects of the transport sector requires analytical tools that were not available until recently. Lately, different methodologies have been developed, promoted and applied for making integrated assessments and monitoring progress; these account for social and environmental costs and identify the strategies with the greatest net benefits.
41. For example, several tools were developed under THE PEP by either WHO/Europe or the ECE Sustainable Transport Division. One such WHO/Europe tool is the health economic assessment tool (HEAT) for walking and cycling – a user-friendly online tool designed to help urban planners, transport authorities and health practitioners to make the case for new investment in active mobility and to quantify the economic value of active mobility.

42. The fourth version of HEAT, launched in September 2017, includes new modules on mortality from air pollution and road traffic injury, along with a module to estimate changes in carbon emissions resulting from modal shifts towards cycling and walking.
43. WHO/Europe also developed the step-by-step manual for developing national action plans on transport, health and environment (NTHEAP). NTHEAP is a key tool and mechanism for developing sustainable and healthy transport in a country. NTHEAP calls for working across sectors and provides a comprehensive and intersectoral way of planning and implementing transport, health and environment actions at the national level.
44. The ECE Sustainable Transport Division developed the For Future Inland Transport Systems (ForFITS) tool to evaluate transport activity, energy use and carbon dioxide emissions in a range of possible policy contexts. It provides governments with a means to assess the likely impact of changing transport policies on carbon dioxide emissions.
45. The pan-European master plan on cycling promotion, being developed under one of THE PEP partnerships, represents a potentially important framework for promoting active mobility in the region. The overall objective of the master plan is the promotion of cycling on pan-European level and the establishment of cycling as an equal mode of transport. The master plan is expected to be considered for adoption by the member States at the Fifth High-level Meeting on Transport, Health and Environment (Vienna, 2019).

#### **IV. Organization and format of the Symposium of THE PEP 2018**

46. To focus attention on the situation identified in the previous chapters, the issues and questions that could be addressed at THE PEP 2018 Symposium by the presenters and during the interactive discussion may include the following:
  - i. What are the trends in the ECE-WHO/European region in mobility demand management?
  - ii. To which extent are these trends addressing issues concerning noise and air pollution, especially in cities?
  - iii. How effective are current policies in managing mobility, improving efficiency and addressing the impact of air pollution, noise, GHG emissions and congestions from transport? What can be done to make these policies more effective? What are the financial incentives and how effective are they?
  - iv. How to make public transport services more attractive for citizens?
  - v. What has been done in member States to develop and support active mobility?
  - vi. What is the situation in the pan-European region when it comes to promoting active mobility, with specific reference to cycling policies? Which instruments are used to ensure the effectiveness of measures to promote active mobility?
  - vii. What has been or could be done for the promotion of cycling as an integral mode of transport systems and mobility management, with other modes of private and public transport?

- viii. What might be the optimal distribution of roles and responsibilities between central governments and local authorities to achieve the best results in promoting cycling?
  - ix. How might new technologies assist in achieving sustainable transport in cities?
  - x. What might governments, city authorities, business and civil society do to promote active modes of transport?
47. The Symposium will be part of the sixteenth session of THE PEP Steering Committee (Geneva, 12–14 December 2018). It will take place at the WHO headquarters in Geneva on 12 December 2018 from 10 a.m. to 3 p.m., with interpretation (English, French and Russian). The Symposium will open with a keynote address, followed by a moderated panel discussion.
48. The secretariat will summarize the discussions for the Steering Committee. The Committee will be invited to review the results of the Symposium and to consider possible follow-up actions in the context of THE PEP and its future work programme. A detailed programme of THE PEP 2018 Symposium, including speaker and panellists, will be available in November 2018.
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