Item 7(c) of the provisional agenda
THE PEP Partnerships

Draft outline of a concept note on "Jobs in green and healthy transport revisited: making the green shift"

Note by the Secretariat

I. Background

1. The Transport, Health and Environment Pan-European Programme (THE PEP) is a unique intersectoral and intergovernmental policy framework to promote mobility and transport strategies that integrate environmental and health concerns. It involves the transport, health and environment sectors of 56 member States in the UNECE-WHO European region, including also intergovernmental organizations and civil society in support of integrated approaches and solutions to achieve sustainable and healthy transport and mobility all over Europe. UNECE (Environment and Sustainable Transport Divisions) and WHO Regional Office for Europe provide the secretariat for the process.

2. THE PEP Partnership on Jobs in Green and Healthy Transport (PJGHT), one of the implementation mechanisms of THE PEP, was established to support the implementation of THE PEP priority goal "to contribute to sustainable economic development and stimulate job creation through investment in environment and health-friendly transport". The PJGHT aims to stimulate a debate and shared understanding on jobs in green and healthy transport, analyse the potential for greening "old" jobs and creating "new green" jobs in transport and mobility and assess the qualitative and quantitative impacts on the environment, health, transport and economy.

3. In 2014, with its publication "Unlocking new opportunities: jobs in green and healthy transport", the partnership explored potential job creation through greener, healthier, more efficient transport. The publication focused on potential job creation from public transport, cycling and walking. An analysis of the available evidence suggested that these modes could be significant employers and contributors to the green economy. Importantly, the publication adopted a two-part definition of a " job in green and healthy transport" . First, these jobs form part of a wider solution to climate change by helping to bring about the necessary reductions in emissions and improvements in energy efficiency (hence green). Secondly, these jobs simultaneously contribute to the promotion and use of safer, cleaner, more active modes of transport that can contribute directly to reductions in health risks (hence healthy). For a job to be included in this definition, it must fulfil both criteria. In addition, jobs in green and healthy transport should contribute to one or more of the following objectives:

- reduce air and noise pollution and greenhouse gas emissions;
- reduce energy consumption;

- increase the safety of walking and cycling;
- improve transport efficiency;

4. Building on the 2014 publication, the partnership undertook in the 2017 publication "Riding towards the green economy: cycling and green jobs" a new study reviewing the methods used in other studies to estimate the number of jobs associated with cycling for various locations and gathering more evidence on cycling-related jobs directly from cities. Through a combination of a bottom-up and top-down approach, the study resulted in a re-assessment of the number of jobs that could be created in 56 major cities if they has the same cycling modal share as Copenhagen.

5. This work ultimately intended to support advocating investments into more cycling, using also the argument that they contribute significantly to the creation of jobs, particularly in the communities where they are made, in addition to providing multiple environmental and health benefits.

II. Objective and scope

6. At its 14th meeting in November 2016, the Steering Committee of THE PEP decided to expand this work in preparation of the Fifth High-level Meeting on Transport, Health and Environment, scheduled to take place in Vienna, Austria in 2019, in order to assess the economic potential for job creation from public transport, cycling and walking. France has made an extrabudgetary financial contribution to support this project.

7. The proposed objective of this project is to provide policymakers with information on the potential impacts on jobs of policies that create a shift to environmentally friendly modes of transport, including public transport, electric vehicles and possibly active mobility. The impacts on jobs would be expressed both in terms of net numbers of jobs and by identifying where new skills are needed. By comparison, the previous two studies of 2014 and 2017 focused on potential for jobs in green and healthy transport with a focus on the cycling sector and were based mostly on surveys from participating cities, as well as the use of available statistical data. Thus the proposed scope of this study is considerably wider than the previous ones, and should strengthen further the argument that investments into healthy and sustainable transport are not only desirable and necessary for environment and health reasons, but also in terms of new job opportunities.

8. The information for policymakers would be based on economic modelling against a set of realistic policy scenarios. The scenarios would need to be defined through a consultative process with member States and other stakeholders. The economic modelling could be carried out in cooperation with the International Labour Organization (ILO) Green Jobs Programme, which has experience of carrying out such analyses in other sectors and could also support the development of scenarios and communication with economic modellers. ILO is currently working with the Norwegian University of Science and Technology (NTNU), which has both the modelling experience and the necessary databases of information on economic activity; outline information on NTNU databases and modelling is provided below. Other partners are possible, including universities and other institutions that may offer suitable economic modelling. An international steering group involving the necessary breadth of expertise would support the implementation of the plan.

III. Methodology

Databases

9. The global multi-regional input-output (MRIO) databases can be used to estimate the social and employment implications of a transition to green economy. MRIO databases report the inter linkages between final consumption, the flow of intermediate and final goods and factor inputs into production. The environmental and socio-economic extensions to these databases allow for an analysis of the corresponding impacts along global value chains resulting from changes in the global production networks.

10. Only five global MRIO databases are currently available. EXIOBASE, funded by the European Research Programme and developed by NTNU University Norway with partners, is proposed as a base for the analyses in this project due to its balance between sectoral detail and country coverage. The country coverage of EXIOBASE is Europe-focused, but includes North America and Russia, and it has five regions, Europe, Middle East, Asia, Africa and America. The sector detail in EXIOBASE, with 163 industries and 200 products in the supply-and-use table, are well suited to model the 'green transport' industries.

Scenarios and Modelling

11. The MRIOs can then be used to project alternative policies into the future. Regarding green transport, for analyzing the transition from conventional private road transport relying mostly on individual internal combustion engine cars to green transport using electric vehicles, including electric bicycles, public transport and active mobility, different industries and product need to be considered, Electric vehicles, conventional and electric bicycles need to be built and, once they have penetrated the market, there will be a clear switch from conventional fuels to electricity, public transport and active mobility.

12. Once policy scenarios are developed, MRIO allows to potentially analyze (i) total, direct, indirect and net employment effects (including in declining industries), (ii) GDP and value added effects, and (iii) possible any other extension of interest where data is available (e.g. speed of transport, congestion, time etc).

13. In this project, we suggest focusing on passenger transport, not goods transport. The main components are a shift from cars with internal combustion engines (ICE) to electric vehicles (EVs) and bicycles and a switch from final household demand for road transport to rail/public transport and cycling. This will require initial investments into EV and bicycle, walking infrastructure and capital. Note that both of these mean a decrease in final household demand for diesel and petrol and that this goes hand in hand with a reduction in gas station use but increase in public transport services and bicycle repair. Furthermore, when considering an increase in final electricity demand for EVs we also need to proportionally increase the demand for distribution and trade services of electricity. The dimensions of these switches will need to be further determined.

14. Initially, because of green transport not being part of International Standard Industrial Classification of all Economic Activities industries, there is no or only very little information regarding the input coefficient vectors for both the technology producing industry and those using it. The input-coefficients for the motor vehicle and cycling industry will need to be adapted according to other studies, as to

represent a switch from ICE vehicle production to EV, bicycle and public transport production. The investment into infrastructure and the new technology. Further, ILO and NTNU could provide some expert judging on the trade regarding EV components. The default is always constant trade shares, resulting in changes in trade only due to the demand for different products.

15. The shift from road transport to rail transport from the demand side should also be done for intermediate demand. At least a modelling of the fuel switch, away from gasoline towards (preferably green) electricity is necessary, as the leading scenario by IEA specifications only consider the entire transport sector and not only person transport.

16. The full modelling of the green transport industries and the policy scenarios to be used to project the MRIO into the future will require more discussion between the main partners of this project.

IV. Next steps and proposed timeline

17. The Steering Committee may wish to express its support for the implementation of this project, on the basis of the present draft concept note.

18. As a proposed next step, a mini workshop/roundtable will be organized, where the main ideas and directions of the study will be presented in more detail, discussed and agreed. The present concept note will provide the basis for the discussions. If this proposal is endorsed by the Steering Committee, proposed dates and venue for the roundtable will be announced as soon as possible.

19. Participants for the roundtable could/would include interested governments; relevant international organizations some of which may wish to take leadership role; other non-governmental organizations; interested academic institutions and researchers, and other potentially relevant stakeholders. These stakeholders would form an informal “Steering Group” that would advise on substantive matters in the implementation of the project.

20. The results of the study will be published and launched in the form of a THE PEP publication at the 5th High Level Meeting on Transport, Health and Environment, that is scheduled to take place in Vienna, Austria in 2019.