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**HIGH-LEVEL MEETING ON TRANSPORT, ENVIRONMENT AND HEALTH
THE PEP Steering Committee**

(Second session, 29 and 30 March 2004,
agenda item 4.A(v))

ECO-DRIVING IN THE CENTRAL AND EASTERN EUROPEAN COUNTRIES

Introductory note by the WHO/Europe and UNECE secretariats

1. This paper has been prepared by the Netherlands for submission to the Steering Committee of the Transport Health and Environment Pan-European Programme (THE PEP) at its second session, 29-30 March 2004, under agenda item 4.A(v) on "Implementation of THE PEP programme of work 2003 - 2005 – Progress report on the implementation of current activities".
2. It presents the contents and outcome of a pilot project on improving driver behaviour, undertaken in Riga, Latvia with involvement of representatives from Poland, Ukraine, Lithuania and Estonia. The report has been drafted by VTL, which is a specialized training institute in the Netherlands for the transport and logistics sector.
3. The Dutch project was targeted primarily to policy makers in national Governments, the transport industry, and experts on training issues in the transport and logistics branch. Its principal objectives consists of: (a) promoting the application of eco-driving methods in regular training

schemes for the training of professional drivers; (b) raising awareness of opportunities for the transport industry to contribute to the reduction of CO₂ emissions by implementing low-cost training methods; and (c) demonstrating the use of on-board fuel consumption feedback devices.

4. The project contributes to the implementation of an activity included in THE PEP work plan, under the priority area of demand side management and modal shift, namely “Improving driver behaviour through large-scale introduction of “eco-driving” programmes, in-car feedback instruments, traffic management measures and measures to ensure respect for existing speed limits.”¹

5. At its first session, on 10-11 April 2003, the Steering Committee took note of the project proposal and welcomed the activities in this field.²

6. At its second session, the Steering Committee may wish to discuss further the contents and outcome of the pilot project as described in this paper. It may also wish to consider the inclusion of this project into the work programme of THE PEP for 2003-2005, as well as the possibilities to contribute to extending and further implementing the project at the Pan-European level.

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¹ ECE/AC.21/2002/9 - EUR/02/5040828/9, Annex I, Action II.5.

² ECE.AC.21/2003/6 - EUR/03/5040828/6, para. 28.

Annex

Eco-Driving in the Central and Eastern European (CEE) Countries

Final Report submitted by VTL, December 2003

1. INTRODUCTION

Today, much attention is focused on the reduction of fuel consumption of road transport, because of the reduced reserves of fossil fuels and global concern about the so-called greenhouse effect of CO₂ emissions. Today, as in the future, the most important problems caused by traffic are accidents and environmental harm. From an environmental perspective, the main problem is increasing carbon dioxide discharges. Carbon dioxide appears always in connection with burning. Carbon dioxide discharge causes the greenhouse effect, i.e., the gradual warming of the climate.

Since the early seventies, great effort has been put into improving the fuel economy of cars. Besides the type of car, the fuel economy of the car is influenced by the behaviour of its driver. The main factor affecting fuel consumption is driving style, which can be influenced in different ways.

One might say that, today, environmental and health aspects have been integrated more and more into transport policies and decisions. This appears obvious from the Ministerial Declaration adopted during a joint High Level Meeting of UNECE and WHO/Europe on 5 July 2002. A Pan-European Programme on Transport, Health and Environment (THE PEP) was adopted, which brings together and focuses the UNECE and WHO/Europe activities on key priorities:

- Integration of environmental and health aspects into transport policies and decisions;
- The shift of the demand for transport towards more sustainable mobility;
- Urban transport issues.

One of the concrete activities mentioned in THE PEP is (item 2.5):

‘Improving driver behaviour through large-scale introduction of “eco-driving” programmes, in-car feedback instruments, traffic management measures and measures to ensure respect for existing speed limits’. This project was executed within this framework, and can be considered a contribution of the Netherlands to the elaboration of this activity of THE PEP. It is a first pragmatic step towards improving driver behaviour within the Pan-European framework.

In addition to the Pan-European Programme on Transport, Health and Environment, the integration of environmental aspects into transport policies can be identified in the new European

*Directive on the initial qualification and periodic training of drivers of certain road vehicles for the carriage of goods or passengers, amending Council Regulation (EEC) No 3820/85 and Council Directive 91/439/EEC and repealing Council Directive 76/914/EEC.*³

The project was executed in Riga, Latvia in close co-operation with the Latvian Ministry of Transport and the employers' association of international road carriers Latvijas Auto. During the project, observers from Poland and the Ukraine were present, and, during the seminar, input was given by representatives from Lithuania and Estonia.

2. CONTEXT OF THE PROJECT

2.1 Latvian Background

In October 1998, the Latvian National Centre of road carriers was officially opened by the president of Latvijas Auto, the employers' organization for the transport industry, and the Dutch ambassador in Riga. The establishment of this training centre was one of the results of the project Latvijas Auto, improvement of road transport in Latvia, a project carried out by a consortium of NEA, VTL and CBR/CCV, and financed by Senter. This project also included a "train-the-trainers" programme, focusing on the European driving licence directives.

Staff of Latvijas Auto, the Latvian Ministry of Transport and individual hauliers participated in the beginning of 2001 in workshops organized by CBR and VTL to set up the new standards for drivers' training European wide. This was organized on request of the International Road Transport Union (IRU). The involvement of individual entrepreneurs was extensive. In 2002, the Road Traffic Safety Directorate and the Latvian Ministry of Transport asked for technical assistance to fine-tune the institutional system for drivers' training and examination. This project was carried out by CBR and VTL, and financed by the Netherlands Government.

In general, one might say that the infrastructure exists for drivers' training and examination in line with EU regulations and quality levels. Road safety is considered one of the priorities of the National Transport Development Programme. As they realize that good driving is more than holding the steering wheel, the time seemed to be right to introduce the New Driving Style, based on four key words: economic, safe, rational and defensive.

The first step taken in this project was to identify the state of affairs in Latvia regarding the topics of environment, road safety, and transport. This identification mission took place between 1 and 5 October. The intention was also to mobilize the Latvian partners and to prepare the execution of

³ Directive 2003/59/EC.

the workshop/seminar at the end of October. A meeting with representatives of the Ministry of Transport in Riga, the Road Traffic Safety Directorate (CSDD) and Latvijas Auto was organized. The Ministry of Transport was very much willing to distribute the concept of eco-driving within the transport industry. In order to inform the Dutch representative in Latvia, a visit was paid to the Netherlands Ambassador. The Project Manager had an interesting meeting with a representative of RCN Conti, a company with the following mission: “deliver the most effective and efficient fleet management and logistics solutions for transport industry”. Fuel monitor systems is one of their solutions. This representative showed great interest in taking up the responsibility for the eco-driving concept in Latvia.

In general, one might say that, during this identification mission, the initial steps towards the introduction of eco-driving in Latvia, raising awareness and getting commitments, were achieved.

2.2 Directive 2003/59/EC

This European Directive prescribes obligatory training for professional drivers transporting goods or passengers by road. It aims to improve the quality of the services offered by drivers, to make the driver's job more respected and more attractive, to increase road safety and to facilitate the free movement of workers. To date, only a very limited number of drivers benefit from professional training which provides the necessary knowledge and skills to confront the challenges of working in the field of transport. Only in France and the Netherlands is vocational training for professional drivers prescribed by law.

The topics of environment and health have been included in this directive: “..*The minimum requirements to be met for the initial qualification and the periodic training concern the safety rules to be observed when driving and while the vehicle is stopped. The development of defensive driving – anticipating danger, making allowance for other road users – which goes hand in hand with rational fuel consumption, will have a positive impact both on society and on the road transport sector itself*”.

This directive has to be implemented by all EU members as well as by new members. It goes without saying that the application of this directive can have an important impact on the reduction of CO₂ emissions.

In Article 7 of this directive, which governs periodic training, the following item is underlined: “*Periodic training shall consist of training to enable holders of a CPC as referred to in Article 6 and the drivers referred to in Article 4 to update the knowledge which is essential for their work, with specific emphasis on road safety and the rationalisation of fuel consumption*”.

In line with what has been done in previous years, it is expected that VTL will give technical assistance at the implementation of this directive in Latvia.

3. THE DEMONSTRATION PROJECT

3.1 Approach

This project has to be considered as a demonstration and pilot project. It was carried out in Riga, Latvia, in co-operation with the Ministry of Transport and the transport industry.

Aims of the project:

- Promoting the application of eco-driving methods in regular training schemes for the training of professional drivers;
- Raising awareness of possibilities for the transport industry of contributing to the reduction of CO₂ emissions by implementing low-cost training methods;
- Demonstrating the use of on-board fuel consumption feedback devices.

Target groups:

- Policy makers in Latvia, Poland and Ukraine;
- Decision makers in transport industry (employers);
- Experts on training issues in the transport and logistics branch.

For the execution of the project, the expertise and experience of VTL, a training institute in the Netherlands developing and delivering programmes regarding eco-driving, and NOVEM, participant in the European network of eco-driving, were combined. This resulted in a programme that was divided into two main parts. The first day focused on eco-driving courses for trainers of advanced driver training, and the second day included a seminar with lectures from the governmental to the operational levels. The operational component was strengthened by the input from representatives of Lithuania and Estonia.

3.2 Contents

3.2.1 Eco-driving courses for trainers of advanced driver training

The first day can be divided into three parts:

- The real practical part: a ride by each (potential) trainer in a EDM (fuel consumption meter) equipped truck;
- Theoretical background of eco-driving;
- Communication skills.

Ad 1.

With the help of Latvijas Auto, a truck was arranged, and via contacts with Siemens VDO in Amsterdam, the fuel consumption meter was built in. The VTL expert made several trips with the trainers. The trainers were selected by Latvijas Auto, the Road Traffic Safety Directorate and transport companies. The general impression was as follows.

- Not enough anticipation of traffic situations;
- Using too much revs in too low gears;
- Brusque braking;
- Not using the momentum of the truck “keep them rolling”.

The participants faced some problems due to the semi-automatic gearbox of the Iveco truck. All but two participants were not experienced drivers. They received previous training for their driving licenses with smaller trucks. They needed more than average time to familiarize themselves with the truck, the trailer and the gearbox. The language abilities of the participants in English were low. Some only spoke German. Sometimes the training expert communicated by means of the other participants. He also had a list of common terms in Latvian, such as “right”, “left” or “brake”. Unfortunately the truck was not available the second day, so only one trainee was able to drive after being trained in the theoretical part.

Route for eco-driving:

A route was set out in Riga region. The route consists of roads in the built-up area of Riga with numerous traffic lights and roundabouts. A part of the route was in the hilly terrain outside Riga using country roads. Another part of the route was motorway, so all road types were covered. The length of the route was 40 km and took about 1 hour to cover. Two participants each drove a part of the route. They changed seats half way.

The route was as follows:

- = Start at Latvijas Auto training centre
- = Skaistkalnes iela
- = Bauskas iela
- = Ulmana Gatva
- = Krasta iela
- = Slavu iela
- = Darzciema iela
- = G. Astras iela
- = Lielvārdes iela

= Brivibas iela

LEAVING RIGA

= A4 to Salaspils

= P6 returning to Riga

IN RIGA VIA

= Maskavas iela,

= Krasta iela,

= Ulmana Gatva

= Bauskas iela

= returning to Latvijas Auto training center

Ad. 2 and Ad. 3

The theoretical part and the communication skills were delivered via traditional lecturing (PP Presentations) and role playing. The red thread of the expert's lecture were in line with the so-called golden rules of the eco-drive style:

- Travel at low resolutions;
- Rapid acceleration;
- Correct change of gear;
- Anticipating the road.

Besides these golden rules, the programme is executed in conformity with the mission of eco-driving in Europe, according to which eco-driving:

- Promotes an energy efficient driving style adapted to modern engine technology as one pillar of a sustainable transport system;
- Aims at the diffusion of eco-driving techniques among European drivers;
- Strives towards the integration of eco-driving techniques with the driving licence curricula of European countries.

The communication skills programme focused on the following. It is important to remember that experienced professional drivers could be suspicious of any training programme which they think will be:

- A waste of time because they already know it all;
- A threat to their job because company managers will be assessing their performance and may be intending to make staff cuts;

- An attempt to someone who has never been a professional driver to teach them how to do their job.

This part therefore focused on teaching the trainers how to establish credibility at the start of an eco-driving programme.

3.2.2 Seminar

It turned out to be very useful to have input from Lithuania and Estonia. These countries lie a few months ahead, and were able to point out possible pitfalls during the introduction of eco-driving. At the end of the seminar, National Television requested interviews with some of the experts, which certainly strengthened the impact of the seminar.

3.3 Results

The initial goals were achieved. Seven trainers were trained in eco-driving. In addition, awareness was raised of the possibilities for the transport industry to contribute to the reduction of CO₂ emissions. The observers from Poland and Ukraine declared in writing their interest to undertake further steps. They would like to have a kind of pilot project in their respective countries as well, in order to include the eco-driving programme into the regular drivers training education.

This pilot project was carried out according to the log-frame matrix approach.

Recruiting enough (potential) trainers turned out to be a real challenge. Instead of 12 trainees, seven participated, which had no impact on the overall results.

4. DISSEMINATION

This pilot project was carried out in Latvia for practical reasons. The transport and training infrastructure of Latvia is well-known at VTL. Latvia is located in the middle of the Baltic States, and is easily accessible for Belarus/Ukraine/Russian Federation. The sustainability of the project results will be ensured by including the eco-driving programme in the training programme of truck drivers in Latvia and by including it in the programmes of the examiners of the examining body.

Representatives of the training centres of Latvijas Auto, the employers' organization in Latvia, participated in the working group of the IRU on professional training in the transport branch. The results of this project will be disseminated during their annual meeting. All the CEE countries are

members of this working group. VTL is member of the steering committee of this working group of the IRU.

In addition, many CEE countries are member of EuroTra, the European Transport Training Association. EuroTra represents 20 leading transport training centres in 15 countries. EuroTra was created to meet the growing needs of transport and logistics training organizations to mount training programmes on an international scale. Since then, EuroTra succeeded in building up a network of transport training organizations and co-operated in various European programmes aimed at jointly developing and exchanging training programmes. VTL is holder of the presidency of EuroTra.

GLOSSARY OF ABBREVIATIONS

CBR = The Central Driving Test Organisation (the Netherlands)

The CBR is a Dutch expertise centre for traffic safety. It offers services in the field of transport and road safety throughout Europe and far beyond.

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CCV = A division of CBR. CCV is the expertise centre for traffic safety, providing this expertise through organizational and training advice, e.g. the organizational structure of testing systems.

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NEA = Transport research and training

NEA is an independent international institute, working in the field of traffic, transport,

logistics, mobility and road safety. Its activities are focused on research, analyses, project management, consultancy and training at home and abroad. Services are based on unique experience, networks and detailed knowledge and data relating to various markets.

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Senter = A Dutch Government agency which implements Government schemes and programmes in the areas of export promotion, foreign investment and international economic and environmental collaboration.

www.senter.nl

VTL

VTL is the specialized training institute in the Netherlands for the transport and logistics sector. It provides professional and vocational training for employees, managers and entrepreneurs. In close consultation and co-operation with the business community, VTL develops a range of training courses which is geared to the demand of the market. Optimum functioning of the labour market, in the interest of business and employers, is the first matter of importance. As National Centre of Expertise on Vocation Education, Training and Labour market for the transport and logistics sector, VTL bears the responsibility for supervised on-the-job training (former apprentice system) for various jobs in the branch (for example warehouse assistant, lorry driver). VTL is a leading partner of the European Transport Training Association, EuroTra, a network of European transport training organizations.

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LOG-FRAME MATRIX

SUMMARY OBJECTIVE	VERIFIABLE INDICATOR	IMPLEMENTATION STRATEGY	IMPORTANT ASSUMPTIONS RISK ANALYSIS
Dissemination of eco-driving concept	<ul style="list-style-type: none"> - Results training: less fuel consumption and less CO₂ emission; - Trained trainers in eco-driving; - Raised awareness at governmental level; - Checklist trainers; - Leaflet; - Manual eco-driving. 	<ul style="list-style-type: none"> - Analyses and assessments; - Workshop; - Training event; - Informal and formal meetings; - Tailor made consultancy. 	<ul style="list-style-type: none"> - Full participation of stakeholders involved - Acceptable turnover of staff trained or to be trained; - Acceptance of essential principles of eco-driving; - Sufficient national resources to guarantee sustainability; - Efficient co-operation between Ministry and industry.