OVERVIEW ON THE STATUS OF ECODRIVING INTEGRATION IN THE DRIVER EDUCATION AND TESTING

WP2. Investigation and Preparations
Deliverable D2.1

<table>
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<th>Version</th>
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<tbody>
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<tr>
<td>Czech Republic (CZ)</td>
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<tr>
<td>Finland (FI)</td>
<td>Motiva Ltd</td>
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<td>Germany (DE)</td>
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<td>Greece (EL)</td>
<td>Centre for Renewable Energy Sources</td>
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<td>Hungary (HU)</td>
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<td>Italy (IT)</td>
<td>Consortium for RTD on innovative transport</td>
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<td>Lithuania (LT)</td>
<td>CSC “COWI Lietuva”</td>
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<tr>
<td>Netherlands (NL)</td>
<td>VVCR Europe B.V.</td>
</tr>
<tr>
<td>Poland (PL)</td>
<td>Krajowa Agencja Poszanowania Energii S.A.</td>
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<tr>
<td>Spain (ES)</td>
<td>Fundación RACC de foment y desarrollo del automovilista</td>
</tr>
<tr>
<td>United Kingdom (UK)</td>
<td>The Energy Saving Trust Ltd</td>
</tr>
<tr>
<td></td>
<td>European Driving Schools Association (EFA)</td>
</tr>
<tr>
<td></td>
<td>International Commission for Driver Testing Authorities (CIECA)</td>
</tr>
</tbody>
</table>

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Contents

Summary

1. Ecodriving integration into driving school curricula / learner driver education 11
   1.1. Integration of Ecodriving in Driving School Curricula and Drivers License Testing 12
       1.1.1. General Questions 12
       1.1.2. Specified Ecodriving contents of the written driving school curriculum for practical lessons 20
       1.1.3. Summary of results: Practical contents 24
       1.1.4. Specified Ecodriving contents of the written driving school curriculum for theoretical lessons 26
       1.1.5. Summary of results: Theoretical contents 30
   1.2. Driving Instructors’ Education/Qualification 32
   1.3. Alternative term for Ecodriving 37

2. Ecodriving integration into learner driver examination 38
   2.1. General access conditions for examiners 38
   2.2. Examiners education 40
   2.3. Ecodriving in the practical examination 41
   2.4. Ecodriving in the theoretical examination 43
   2.5. Column charts 45

3. Ecodriving integration into licensed drivers’ training and driver assessment 48
   3.1. Austria 48
       3.1.1. Ecodriving training for licensed drivers 48
       3.1.2. Policy activities, governmental programmes 50
       3.1.3. Ecodriving competitions and events 51
       3.1.4. Assessment 52
       3.1.5. Other relevant information 52
   3.2. Czech Republic 53
       3.2.1. Ecodriving training for licensed drivers 53
       3.2.2. Policy activities, governmental programmes 53
       3.2.3. Ecodriving competitions and events 53
       3.2.4. Non-governmental campaigns 54
       3.2.5. Other relevant information 54
   3.3. Croatia 55
       3.3.1. Ecodriving training for licensed drivers 55
       3.3.2. Non-governmental campaigns 56
   3.4. Finland 57
       3.4.1. Ecodriving training for licensed drivers 57
       3.4.2. Policy activities, governmental programmes 58
3.4.3. Ecodriving competitions and events
3.4.4. Non-governmental campaigns
3.4.5. Assessment

3.5. Germany
3.5.1. Ecodriving training for licensed drivers
3.5.2. Ecodriving for learner drivers
3.5.3. Campaigns

3.6. Greece
3.6.1. Ecodriving training for licensed drivers
3.6.2. Policy activities, governmental programmes
3.6.3. Ecodriving competitions and events
3.6.4. Non-governmental campaigns
3.6.5. Other relevant information

3.7. Hungary
3.7.1. Ecodriving training for licensed drivers
3.7.2. Ecodriving competitions and events
3.7.3. Non-governmental campaigns
3.7.4. Assessment

3.8. Italy
3.8.1. Ecodriving training for licensed drivers
3.8.2. Policy activities, governmental programmes
3.8.3. Ecodriving competitions and events
3.8.4. Non-governmental campaigns
3.8.5. Assessment

3.9. Lithuania
3.9.1. Ecodriving training for licensed drivers
3.9.2. Ecodriving competitions and events

3.10. Netherlands
3.10.1. Ecodriving training for licensed drivers
3.10.2. Policy activities, governmental programmes/Ecodriving competitions and events/non-governmental campaigns
3.10.3. Assessment

3.11. Poland
3.11.1. Ecodriving training for licensed drivers
3.11.2. Ecodriving competitions and events
3.11.3. Non-governmental campaigns
3.11.4. Assessment

3.12. Spain
3.12.1. Ecodriving training for licensed drivers
3.12.2. Policy activities, governmental programmes
3.12.3. Ecodriving competitions and events 99
3.12.4. Non-governmental campaigns 100
3.12.5. Assessment 100
3.12.6. Other relevant information 101
3.13. United Kingdom 102
  3.13.1. Ecodriving training for licensed drivers 102
  3.13.2. Policy activities, governmental programmes 104
  3.13.3. Ecodriving competitions and events 104
  3.13.4. Non-governmental campaigns 105
  3.13.5. Other relevant information 105
4. **Ecodriving integration into quality control and certification** 106
  4.1. Austria 106
  4.2. Finland 106
  4.3. Germany 107
  4.4. Netherlands 107
Annex 109
Summary

The goal of this report is to give an overview of the status quo of ecodriving integration in driving school curricula / learner driver education and examination, licensed drivers' training and assessment, as well as quality control and certification of drivers in 13 European countries.

The status quo of ecodriving integration in driving school curricula / learner driver education is presented in Section 1 of this report. The survey conducted by the European Driving Schools Association (EFA) revealed the availability of at least a partial integration of ecodriving in theoretical education of learner drivers at driving schools in 12 of the 13 countries. Moreover, integration of ecodriving in practical education of learner drivers in 8 of the 13 countries has been observed.

The status quo of ecodriving integration in learner driver examination is contained in Section 2 of this report. In September 2010 a survey of ecodriving integration into learner driver examination was conducted by the International Commission for Driver Testing Authorities (CIECA) amongst the CIECA members Austria, Croatia, Czech Republic, Finland, Germany, Great Britain, Hungary, Lithuania, the Netherlands, Poland, Spain and Italy which though is not a CIECA member. All the information concerning the state of play of ecodriving in Italy was made available by the European Driving Schools Association (EFA). The survey revealed at least some extent of ecodriving integration into the learner drivers' examination in 10 abovementioned countries while Czech Republic and Lithuania reported the ecodriving to be outside the scope of their learner drivers' examination.

Summary of the results of ecodriving integration into the learner drivers' education and examination is presented in the table below.

<table>
<thead>
<tr>
<th>Country</th>
<th>Ecodriving integrated into learner drivers' education in driving schools</th>
<th>Ecodriving integrated into learner drivers' examination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theoretical</td>
<td>Practical</td>
</tr>
<tr>
<td>1. AT</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>2. CZ</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>3. HR</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>4. FI</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>5. DE</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>6. EL</td>
<td>YES</td>
<td>NO/YES</td>
</tr>
<tr>
<td>7. HU</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>8. IT</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>9. LT</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>10. NL</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>11. PL</td>
<td>NO¹</td>
<td>NO²</td>
</tr>
<tr>
<td>12. ES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>13. UK</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>

However, some inconsistencies have been revealed as an outcome of comparison of the EFA and CIECA surveys results. Though the analyses of EFA concentrated on ecodriving integration into the learner drivers' education at driving schools, they have also inquired the driving schools representatives whether Ecodriving is part of theoretical and practical driver license examination. The

¹ Only marginally. Ecodriving plays a much more important part in the post-licence training.
² Partially.
³ Ecodriving is one of three main goals for education and examinations beside safety driving and social skills.
⁴ Yes, however, only partly. Ecodriving aspects are regarded (motor rev, due shifting etc.).
⁵ At least not compulsory.
⁶ At least not compulsory.
⁷ There are a limited number of questions about eco-driving in the theory tests.
answers collected from driver testing authorities by CIECA and those received from driving schools by EFA on ecodriving integration into the learner drivers' examination are presented in the table above.

In 5 countries the answers provided by the stakeholders are contradictory:

- In Austria and Finland driver testing authorities indicated that Ecodriving is integrated into theoretical learner drivers' examination. Driving schools informed the opposite. However ecodriving is integrated into learner drivers' theoretical education.
- In Italy and Spain it was indicated that Ecodriving is integrated into practical learner drivers' examination. However driving schools informed the opposite. In addition to that driving schools informed that ecodriving is not integrated into practical education of learner drivers at driving schools.
- In Poland driver testing authorities indicated that Ecodriving is integrated into both theoretical and practical learner drivers’ examination. However driving schools informed about the opposite. In addition to that driving schools informed that ecodriving is not integrated into neither theoretical nor practical education of learner drivers at driving schools.

The said results reveal a contradictory situation in the countries (Italy, Spain and Poland in particular), when learner drivers are tested the knowledge and skills of ecodriving though they are not taught that at driving schools. This contradiction can be explained by different reasons:

- Inconsistency of legal regulation of learner drivers' education and examination. This is either due to the lack of harmonisation between the learner drivers’ education and examination systems or due to ambiguity or insufficiency of legal regulation. Therefore the stakeholders might make their own interpretations in application of the above;
- Misinterpretation of the "Ecodriving" concept by driving instructors and examiners. Although if ecodriving is not officially integrated into education or examination systems, some of the ecodriving tips are included into conventional driving education and examination systems. Therefore it is possible that driver testing authorities could consider integration of some ecodriving tips as full integration of Ecodriving into examination system.

These contradictions will be further analysed in the work package WP7 “Harmonisation of the driving school curriculum and driver test”.

Ecodriving activities (except for learner drivers’ education and examination) in the project partner countries are found in Section 3 of this report. Ecodriving activities, except for those covering a very short time period, were investigated and described there. Those include regular trainings of licensed drivers, ecodriving competitions and events, policy activities, governmental programmes, non-governmental campaigns, etc.

A diverse situation in the project partner countries is witnessed. As minimum, ecodriving trainings are provided / have been provided in all partner countries. Furthermore, there are also some other different related activities taking place in the said countries irrespective of differing scope of these activities.

Summary of the types of activities taking place in the partner countries is given in the table below.
Some of the activities taking place in the countries in question can be identified as the good practice examples. Those are summarised in the table below.

<table>
<thead>
<tr>
<th>Name of the activity</th>
<th>Description of the activity</th>
<th>Country of implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TRAININGS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Smarter Driving Training Programme <em>(see section 3.13.1)</em></td>
<td>The Energy Saving Trust’s Smarter Driving Training programme is funded by the Department for Transport (DfT) and provides short-duration ecodriving training for the companies’ employees. The training is available in cars or vans and is considered appropriate for drivers of vehicles up to 3.5 tonnes. The programme is available for private sector and public sector organisations but is only available for these organisation’s employees. Training lasts just 50 minutes per person and includes each driver completing a ‘baseline’ lap of a circuit in their normal driving style before training as well as a post-training lap of the same circuit. Fuel consumption and speed are compared over these ‘before’ and ‘after’ laps and to date the average improvement has been a 14.9% reduction in fuel consumption. The programme has been running since December 2008 and has so far trained just over 15,000 drivers.</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>2. Ecopatente <em>(see section 3.8.1)</em></td>
<td>Ecopatente project is aimed at young prospective drivers, but also to those who are already licensed, with the following objectives: a) Create awareness on the environmental and energy conservation; b) Disseminate information about intelligent, fair and environmentally friendly use of car; c) Involve the institutions in a high-profile project. In this project two target groups of users are involved: students and coach. Participants receive a certification for the evaluation of credits in schools of upper second degree. For each participant a teaching kit is sent to educate young people on basic rules related to the respect of the environment. At the end of the</td>
<td>Italy</td>
</tr>
</tbody>
</table>
course young future drivers respond to a questionnaire to get the EcoPatente. Project foresees, for young people participating in the project on time, some benefit related to the purchase of a new car. www.ecopatente.it

3. **Activation plan 2008–2012 & Ecodriving training (IDAE) (see section 3.12.1)**

In order to raise the awareness of the citizens relative to ecodriving and some political projects in order to include the ecodriving as a part of the car driving license training system, Activation Plan was created. The tasks of the Activation Plan are as follows:

- Laying down an administrative regulation to allow for the inclusion of ecodriving in the car driving license training system within a maximum term of 2 years.
- Setting-up of an assessment procedure for ecodriving.

The National Energy Agency (IDEA) gives a subsidy to all the regions within Spain. At this time, each Regional Energy Agency deploys the subsidy to companies that can carry out the courses with a minimum quality level across a public tender.

### CAMPAIGNS

4. **National Ecodriving campaign through the European project ECODRIVEN (see section 3.6.4)**

The campaign was organized by CRES during the ECODRIVEN project and in conjunction with another one, organized by CRES and the Ministry of Transport right after the ECODRIVEN campaign.

These two campaigns had a significant effect on public awareness in regard to ecodriving in Greece, since they involved well coordinated efforts from many stakeholders and a lot of promotional material (including TV and radio spots, leaflets, posters, give-aways etc).

The most important outcome of these two campaigns has been the official integration of ecodriving in the official procedure for training and testing learner drivers in Greece.

### COMPETITIONS

5. **EcoTriathlon (see section 3.1.3)**

EcoTriathlon is an ecodriving competition. Competitors have to travel through Austria in 2 days with as little CO₂ emissions as possible. For the journey, cars, rail and electric bikes are used.

In 2010 a number of participants made 222 individuals.

www.ecotriathlon.at

6. **Ecodriving marathon (see section 3.6.3)**

Ecodriving marathon is a competition organized by CRES, Future Promotions and Toyota. The competition offered as the first prize, one passenger car (Toyota Aygo).

This competition took place within the framework of a fair called Athens Tuning Show. This is a fair that is appealing mainly to young people who like to increase the horsepower of their vehicles and are eager about driving at high speeds, therefore an attitude totally opposite to ecodriving. However the incentive (vehicle as first prize) worked so well that more than 900 visitors had the patience to drive slow enough with the aid of an ecodriving simulator and then drive the same way at a dedicated track.

The most important conclusion from this competition has been the great importance of suitable incentives in order to promote the ecodriving effectively.

http://www.ecodrive.org/Greece.265.0.html

7. **MPG Marathon**

By far the biggest and most influential ecodriving competition in the UK is the annual “MPG Marathon” which has recently completed its eighth year.
| (see section 3.13.3) | The aim of the MPG Marathon is to remind fleet managers of the importance of ecodriving and driver training since this aspect of fleet management is still frequently overlooked in the UK. The event is a 400 miles (640 km) two-day challenge in which 100 competitors drive 50 standards production cars and vans to compete in two categories: absolute fuel consumption and fuel consumption relative to their vehicle’s official NEDC figures. The MPG Marathon has strong commercial sponsors that give the MPG Marathon a uniquely influential status within the fleet industry. [www.mpgmarathon.com](http://www.mpgmarathon.com) |

The situation with ecodriving quality control and certification is presented in Section 4 of this report. Quality control and certification systems exist only in 4 project partner countries – Austria, Finland, Germany and the Netherlands.
1. Ecodriving integration into driving school curricula / learner driver education

The intention of this survey in the ECOWILL partner countries was, to provide a detailed overview on the status quo of the integration of Ecodriving in the education and testing procedures for learner drivers. Therefore a set of questions was developed by experts from EFA, CIECA and DVR which should provide insight on:

1. Integration depth of Ecodriving into initial learner driver education in driving schools and into driver testing (both theoretically & practically)
2. Ecodriving qualification profile of driving instructors & examiners
3. Ecodriving Dissemination to learner drivers within the respective country

The information provides a basis for grouping countries according to their level of experience on Ecodriving education of learner drivers within the ECOWILL project.

Cooperating institutions

<table>
<thead>
<tr>
<th>Participating Country</th>
<th>Cooperating institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>WKO</td>
</tr>
<tr>
<td>Croatia</td>
<td>EIHP²</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>SEVEEn</td>
</tr>
<tr>
<td>Finland</td>
<td>Autokouuliitto</td>
</tr>
<tr>
<td>Germany</td>
<td>BVF</td>
</tr>
<tr>
<td>Greece⁹</td>
<td>P.A.D.I</td>
</tr>
<tr>
<td>Hungary</td>
<td>Jazkoe/ MAISZ</td>
</tr>
<tr>
<td>Italy</td>
<td>UNASCA</td>
</tr>
<tr>
<td>Lithuania</td>
<td>COWI Lithuania and Lithuanian Association of Driver Training and Upgrading Schools</td>
</tr>
<tr>
<td>Netherlands</td>
<td>BOVAG</td>
</tr>
<tr>
<td>Poland</td>
<td>OIGOSK</td>
</tr>
<tr>
<td>Spain</td>
<td>CNAE</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>MSA</td>
</tr>
</tbody>
</table>

² 15 driving instructors were interviewed and answers were aggregated by EIHP.
⁹ Information about Greece is under revision.
1.1. Integration of Ecodriving in Driving School Curricula and Drivers License Testing

1.1.1. General Questions

<table>
<thead>
<tr>
<th>Country</th>
<th>1a. Is theoretical novice driver pre-licence training compulsory?</th>
<th>1b. Is practical novice driver pre-licence training compulsory?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Croatia</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Finland</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Germany</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Greece</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Hungary</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Italy</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Lithuania</td>
<td>Yes</td>
<td>Yes(^{10})</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Poland</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Spain</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

10 countries participating in ECOWILL (77%) have compulsory pre-licence training for learner drivers. Only in Italy and the United Kingdom is there no obligation to attend theoretical or practical training before applying for driver license examination. In Spain only the theoretical education is compulsory.

\(^{10}\) But people seeking to qualify to drive B category vehicle are allowed to learn independently if: they have at least secondary or higher education; or they have T category license; or the have AM, A1, A or B1 category license, have 2 years driving experience and do not have penalties. These people start practical lessons only after they pass theory examination in the examination institution.
<table>
<thead>
<tr>
<th>Country</th>
<th>Countries participating in „ECOWILL“</th>
<th>1c. What is the minimum number of theoretical training hours?</th>
<th>1d. What is the minimum number of practical training hours?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td></td>
<td>32</td>
<td>13</td>
</tr>
<tr>
<td>Croatia</td>
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<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Czech Republic</td>
<td></td>
<td>36</td>
<td>34</td>
</tr>
<tr>
<td>Finland</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Germany</td>
<td></td>
<td>No separate number of hours</td>
<td>No separate number of hours</td>
</tr>
<tr>
<td>Greece</td>
<td></td>
<td>20</td>
<td>20</td>
</tr>
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<tr>
<td>Italy</td>
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</tr>
<tr>
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<td></td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>Netherlands</td>
<td></td>
<td>No minimum</td>
<td>No minimum</td>
</tr>
<tr>
<td>Poland</td>
<td></td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Spain</td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>United Kingdom</td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Countries participating in „ECOWILL“</th>
<th>1e. Is Ecodriving part of the theoretical education of learner drivers in driving schools?</th>
<th>1f. Is Ecodriving part of the practical education of learner drivers in driving schools?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Croatia</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Czech Republic</td>
<td></td>
<td>Yes⁵¹</td>
<td>No</td>
</tr>
<tr>
<td>Finland</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Germany</td>
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<td>Yes</td>
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<tr>
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<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Hungary</td>
<td></td>
<td>Yes / Yes</td>
<td>No / Yes</td>
</tr>
<tr>
<td>Italy</td>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Lithuania</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Netherlands</td>
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<tr>
<td>Poland</td>
<td></td>
<td>No⁵²</td>
<td>No⁵³</td>
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<tr>
<td>Spain</td>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>United Kingdom</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
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</tbody>
</table>

¹¹ Partially.
¹² At least not compulsory.
¹³ At least not compulsory.
In 12 countries Ecodriving is at least part of the theoretical education of learner drivers in driving schools, only in Poland there is no Ecodriving education.

8 countries have also integrated Ecodriving in the practical education of learner drivers, Italy, Poland, Spain and Czech Republic have no practical Ecodriving education. The answers in Hungary are not consistent.
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<td>No</td>
<td>No</td>
<td>No(^{15})</td>
<td>No(^{16})</td>
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<td>Yes</td>
<td>Yes</td>
<td>No(^{17})</td>
<td>No(^{18})</td>
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<td>Yes(^{22})</td>
<td>No</td>
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\(^{14}\) Partially.
\(^{15}\) There are only offers from private institutions/ driving schools which are not mandatory.
\(^{16}\) There are only offers from private institutions/ driving schools which are not mandatory.
\(^{17}\) Answers were not consistent.
\(^{18}\) Answers were not consistent.
\(^{19}\) Each driving school is free to choose own principles.
\(^{20}\) DGT(*) IS WORKING ON IT.
\(^{21}\) Sometimes.
\(^{22}\) Mainly.
Germany, Netherlands, Spain, the UK and Czech Republic (with some exceptions) implemented Ecodriving with an integrated approach, where Ecodriving is taught as an overall principal in the theoretical education of learner drivers. Italy and Croatia integrated a single module Ecodriving in the theoretical education. In Finland, Greece and Lithuania both approaches are practised. The answers from Austria and Hungary are not consistent. Although Ecodriving is part of the theoretical education (see answer 1e) of learners there is no indication whether it is taught in a single module, or as an overall principal. Poland has not integrated Ecodriving in the theoretical education.

The picture is even more varied in the practical education. Germany, Netherlands, Croatia and the UK implemented an integrated approach; Austria integrated Ecodriving as a single module in the practical education of the second stage. Learner drivers only get their final driver license after they went through a second education phase in which they are taught Ecodriving. Italy, Poland, Spain and Czech Republic have not integrated Ecodriving in the practical education. Lithuania, Greece and Finland have both approaches. The answers from Hungary are not identical/consistent.
<table>
<thead>
<tr>
<th>Country</th>
<th>Countries participating in „ECOWILL“</th>
<th>1m. Is Ecodriving explicitly addressed as “Ecodriving” during driving lessons (theoretical/ practical)?</th>
<th>1n. What is the alternative term/ description?</th>
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<tbody>
<tr>
<td>Austria</td>
<td>Yes</td>
<td>Modern Driving - Spritsparen</td>
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<td>Yes</td>
<td>Ekovožnja</td>
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<td>No</td>
<td>ECODrive - Safely and economically on the roads (<a href="http://www.ecodrive.cz">www.ecodrive.cz</a>)</td>
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<td>Finland</td>
<td>No</td>
<td>Car condition; eco-friendly driving</td>
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<td>No</td>
<td>Yes, see Annex 1</td>
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<td>Hungary</td>
<td>No</td>
<td>Fuel saving driving</td>
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<td>No</td>
<td>Limiting consumption</td>
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<td>No</td>
<td>Economical driving</td>
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<td>Spain</td>
<td>Yes</td>
<td>Efficient Driving</td>
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<td>United Kingdom</td>
<td>Yes</td>
<td>Eco-Safe Driving</td>
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</table>

Croatia, Greece, UK, Spain and Austria refer directly to the term Ecodriving in the education of learner drivers. In all other countries different descriptions are being used.

<table>
<thead>
<tr>
<th>Country</th>
<th>Countries participating in „ECOWILL“</th>
<th>1o. Does a written Ecodriving curriculum exist to define approaches and modules for driver education in driving schools and/or multi stage education?</th>
<th>1p. Is there any support by media materials (slides, films, etc.) available to teach Ecodriving?</th>
</tr>
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<tbody>
<tr>
<td>Austria</td>
<td>No</td>
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<td>Yes</td>
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<tr>
<td>Czech Republic</td>
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<td>Yes</td>
<td>Yes&lt;sup&gt;24&lt;/sup&gt;</td>
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</table>

<sup>23</sup> Only in private institutions/ driving schools.

<sup>24</sup> Only in private institutions/ driving schools.
Although Ecodriving is part of the education of learner drivers in most countries, only in Finland, Croatia, Greece and Germany written Ecodriving curricula exist, which specifies how to convey Ecodriving contents to learner drivers in theory and practise. In Spain there is also a written curriculum although Ecodriving is not part of the practical education.

24 But very little.
Ecodriving part of the theoretical driver license examination

- Yes: 54%
- No: 38%
- No consistent answer: 8%

In the UK, Croatia, Italy, Germany, Spain, Netherlands and Greece Ecodriving is part of the theoretical examination. In Austria, Czech Republic, Poland Lithuania and Finland it is not part of the examination procedures. The answers from Hungary are not consistent.

Ecodriving part of the practical driver license examination

- Yes: 54%
- No: 38%
- Not consistent: 8%

In the UK, Croatia, Germany, Netherlands and Finland Ecodriving is part of the practical examination, Italy, Hungary, Austria, Spain, Poland, Czech Republic and Lithuania have not integrated it in practical testing procedures. The answers from Greece are not consistent and have to be verified. Only in Germany and Netherlands will the examinee fail the examination if he does not show correct Ecodriving behaviour. Austria incorporated a second phase in which Ecodriving is a mandatory part.

The answers 1t and 1u are not answered in accordance with answers 1k and 1l in Lithuania and Finland.
### 1.1.2. Specified Ecodriving contents of the written driving school curriculum for practical lessons

<table>
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<tr>
<td>Checking correct tyre pressure</td>
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<td>☒</td>
<td>☒</td>
<td>☐</td>
<td>☒</td>
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<tr>
<td>Driving at the highest possible gear (with constant speed)</td>
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<tr>
<td>Anticipate traffic flow</td>
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<tr>
<td>Early gear shifting (between 2000 and 2500 rpm) and driving at low engine speed</td>
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<td>☐</td>
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<tr>
<td>Decelerate smoothly (Remove foot from the accelerator, if it is identified that a stop must be made)</td>
<td>☒</td>
<td>☐</td>
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<tr>
<td>Removing ballast and avoiding aerodynamic drag</td>
<td>☐</td>
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<tr>
<td>Avoiding over-use of A/C or window heaters</td>
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<td>Switch off engine when appropriate</td>
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<td>Swift acceleration (with early gear shifting or skipping gears) to cruising speed</td>
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<td>Maintaining a safe following distance between vehicles and anticipating traffic conditions to allow time to brake and accelerate smoothly</td>
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<tr>
<td>Using built-up momentum (rolling/ decelerate)</td>
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<td>Driving calmly (avoid unnecessary braking)</td>
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<td>Ecodriving in dense traffic</td>
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<tr>
<td>Ecodriving on gradients/ a slope</td>
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<td>Ecodriving on motorway/ highway</td>
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<td>Ecodriving while overtaking</td>
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<td>Special teaching methods/didactical approaches to be applied for Ecodriving</td>
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<td>Special Ecodriving driving techniques</td>
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### 1.1.3. Summary of results: Practical contents

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<td>Anticipate traffic flow</td>
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<tr>
<td>Decelerate smoothly (Remove foot from the accelerator, if it is identified that a stop must be made)</td>
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<td>Maintaining a safe following distance between vehicles and anticipating traffic conditions to allow time to brake and accelerate smoothly</td>
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<td>Checking the safety and technical requirements of the car</td>
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<td>Driving calmly (avoid unnecessary braking)</td>
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<td>Early gear shifting (between 2000 and 2500 rpm) and driving at low engine speed</td>
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<td>Switch off engine when appropriate</td>
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<td>Checking correct tyre pressure</td>
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<td>Driving at the highest possible gear (with constant speed)</td>
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<td>Ecodriving on motorway/ highway</td>
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<td>Social Ecodriving components (guidelines like: my passengers should always feel comfortable)</td>
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<tr>
<td>Using built-up momentum (rolling/ decelerate)</td>
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<td>Swift acceleration (with early gear shifting or skipping gears) to cruising speed</td>
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<td>Special Ecodriving techniques</td>
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<td>Special technical devices used to demonstrate Ecodriving effects (econometer, onboard computer, etc.)</td>
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<td>Ecodriving in crossings</td>
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<td>Ecodriving while overtaking</td>
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<td>Ecodriving for automatic gear boxes</td>
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<td>Special teaching methods/didactical approaches to be applied for Ecodriving</td>
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1.1.4. Specified Ecodriving contents of the written driving school curriculum for theoretical lessons

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### 1.1.5. Summary of results: Theoretical contents

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<tr>
<th>Part of the theoretical lessons</th>
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<tbody>
<tr>
<td>Maintaining a safe following distance between vehicles and anticipating traffic conditions to allow time to brake and accelerate smoothly</td>
<td>12</td>
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<tr>
<td>Checking the safety and technical requirements of the car</td>
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<tr>
<td>Driving calmly (avoid unnecessary braking)</td>
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<tr>
<td>Anticipate traffic flow</td>
<td>11</td>
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<tr>
<td>Removing ballast and avoiding aerodynamic drag</td>
<td>11</td>
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<tr>
<td>Driving at the highest possible gear (with constant speed)</td>
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<tr>
<td>Early gear shifting (between 2000 and 2500 rpm) and driving at low engine speed</td>
<td>10</td>
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<tr>
<td>Decelerate smoothly (Remove foot from the accelerator, if it is identified that a stop must be made)</td>
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<tr>
<td>Checking correct tyre pressure</td>
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<tr>
<td>Ecodriving on motorway/ highway</td>
<td>10</td>
</tr>
<tr>
<td>Using built-up momentum (rolling/ decelerate)</td>
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<tr>
<td>Are the effects on noise reduction and maintenance costs explicitly addressed?</td>
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<tr>
<td>Is there a reference to use sustainable transport modes (cycling, walking, public transport)?</td>
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<tr>
<td>Switch off engine when appropriate</td>
<td>9</td>
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<tr>
<td>Ecodriving on gradients/ a slope</td>
<td>9</td>
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<tr>
<td>Ecodriving while overtaking</td>
<td>8</td>
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<tr>
<td>Ecodriving in crossings</td>
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<td>Is the correlation/context of safety issues and Ecodriving techniques explicitly addressed?</td>
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<td>Is the issue “Ecodriving and green purchase” addressed (buy low CO2 cars)?</td>
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<tr>
<td>Avoiding over-use of A/C or window heaters</td>
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<td>Ecodriving in dense traffic</td>
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<tr>
<td>Swift acceleration (with early gear shifting or skipping gears) to cruising speed</td>
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<td>Ecodriving specifics of gasoline vs. diesel cars</td>
<td>7</td>
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<tr>
<td>Social Ecodriving components (guidelines like: my passengers should always feel comfortable)</td>
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<td>Special Ecodriving driving techniques</td>
<td>6</td>
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<td>Special technical devices used to demonstrate Ecodriving effects (econometer, onboard computer, etc.)</td>
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<td>Ecodriving for automatic gear boxes</td>
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<tr>
<td>Special teaching methods/didactical approaches to be applied for Ecodriving</td>
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### 1.2. Driving Instructors' Education/Qualification

<table>
<thead>
<tr>
<th>Country</th>
<th>2a. Are there legal requirements for initial education/ training of driving instructors?</th>
<th>2b. Is there an official (state-) approval mandatory to be an authorised/accredited driving instructor?</th>
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<td>United Kingdom</td>
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</table>

In all countries that answered the questionnaire there are legal requirements for the initial education of driving instructors and an official state approval is mandatory except for Greece. Since 2009 an official state approval is not mandatory anymore. The answers from Hungary are not consistent.

<table>
<thead>
<tr>
<th>Country</th>
<th>2c. Is there a theoretical education for the profession of a driving instructor?</th>
<th>2d. Is there a practical education for the profession of a driving instructor?</th>
<th>2e. Is there a legal minimum duration for the education of driving instructors (hours/month)?</th>
<th>2f. Is there a written examination in order to become a driving instructor?</th>
<th>2g. Is there a practical examination in order to become a driving instructor?</th>
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<sup>25</sup> It was mandatory until 2009; now it is not mandatory anymore.

<sup>26</sup> Driving instructor has to have at least higher (non-university, post-secondary or specialized secondary, acquired before 1995) education, certificate of completion of special courses, driving license of the required category and a 3 years driving experience (with the required category of vehicles).

<sup>27</sup> Not mandatory.
<table>
<thead>
<tr>
<th>Country</th>
<th>Countries participating in „ECOWILL“</th>
<th>2c.</th>
<th>Is there a theoretical education for the profession of a driving instructor?</th>
<th>2d.</th>
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<th>Are special teaching methods for Ecodriving part of the theoretical education of driving instructors?</th>
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</tbody>
</table>

<sup>26</sup>Special initial course last at least 160 hours (92 hours for theory and 68 hours for practice). Afterwards within 5 years teachers and driving instructors have to train (in special periodical courses or otherwise) not less than 30 hours.<br><sup>29</sup> Not consisten with the answers in figure 1. To be verified.<br><sup>30</sup> It is not explicitly required in the legislation. However transport environment questions are included into education programmes.<br><sup>31</sup> It is not explicitly required in the legislation. However transport environment questions are included into education programmes.<br><sup>32</sup> It is not explicitly required in the legislation. However transport environment questions are included into education programmes.
In the UK, Spain, Croatia, Netherlands, Germany, Greece, Finland, Italy and Lithuania Ecodriving is part of the education of driving instructors. In Austria, Poland, Czech Republic, Greece and Hungary it is not a subject.

**In the theoretical examination** to become a driving instructor Ecodriving contents are included in the UK, Spain, Greece Netherlands, Croatia, Germany, Lithuania and Italy. Although Ecodriving is part of the theoretical driving instructor education in Finland it is not a part in the examination!

In the UK, Croatia, Spain, Netherlands, Germany and Finland Ecodriving is additionally part of the practical education of driving instructors. **In Croatia, Spain, Netherlands and Germany is it also part of the practical examination** to become a driving instructor. Italy and Greece mentioned it is part of the practical examination, but this does not seem to be consistent since it is not part of the education. UK did not specify.
<table>
<thead>
<tr>
<th>Country</th>
<th>Countries participating in „ECOWILL“</th>
<th>2n. Are demonstration lessons with learners included in the theoretical part of driving instructors’ education?</th>
<th>2o. Are demonstration lessons with learners included in the practical part of driving instructors’ education?</th>
<th>2p. Are Ecodriving-contents parts of these lessons with learners?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Croatia</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Czech Republic</td>
<td>No</td>
<td>No</td>
<td>NO</td>
<td></td>
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<tr>
<td>Finland</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Germany</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Hungary</td>
<td>No/ Yes</td>
<td>No/ Yes</td>
<td>No/ No</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td>Yes</td>
<td>-</td>
<td>No&lt;sup&gt;33&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Countries participating in „ECOWILL“</th>
<th>2q. Is there a legal requirement that the GDE Matrix is to be included in driving school education (theoretical and practical), especially Level 3 and 4?</th>
<th>2r. Is the Ecodriving education of driving instructors in accordance/harmonised with a written driving school curriculum?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Croatia</td>
<td>-</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Finland</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Germany</td>
<td>Yes, partly</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Greece</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Hungary</td>
<td>No</td>
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</tr>
<tr>
<td>Italy</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Lithuania</td>
<td>Yes&lt;sup&gt;34&lt;/sup&gt;</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Poland</td>
<td>Yes</td>
<td>Yes</td>
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<td>Spain</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<sup>33</sup> There is no explicit requirement on the content of the lesson.

<sup>34</sup> Goals of education are defined in the programmes.
In Germany, Spain, Croatia, Netherlands, Finland, Greece and Austria the Ecodriving education of driving instructors is harmonised with the contents of the written driving school curriculum.

<table>
<thead>
<tr>
<th>Country</th>
<th>2s. Is there a mandatory insurance for driving instructors?</th>
<th>2t. Is further education of driving instructors mandatory?</th>
<th>2u. Is Ecodriving part of further education of driving instructors?</th>
<th>2v. Are there officially acknowledged certification procedures on Ecodriving by advanced institutions?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>No, it is part of the car insurance</td>
<td>Yes</td>
<td>Yes, but not mandatory</td>
<td>Yes</td>
</tr>
<tr>
<td>Croatia</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Finland</td>
<td>Yes</td>
<td>No</td>
<td>Yes, but not mandatory</td>
<td>No</td>
</tr>
<tr>
<td>Germany</td>
<td>No, it is part of the car insurance</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Greece</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Hungary</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Italy</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Lithuania</td>
<td>Yes&lt;sup&gt;35&lt;/sup&gt;</td>
<td>Yes</td>
<td>Not explicitly</td>
<td>No</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Poland</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Spain</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<sup>35</sup> Civil liability insurance for all owners of vehicles.

In Germany, Croatia, Austria, Netherlands, Hungary and Lithuania the further education of driving instructors is mandatory, but only in Germany, Netherlands and Croatia is Ecodriving a mandatory part of those procedures.

In Germany, Netherlands, Spain and Austria there are officially acknowledged certification procedures for driving instructors by advanced institutions.
1.3. Alternative term for Ecodriving

GERMANY:
Verantwortung für Leben und Gesundheit, Umwelt und Eigentum, Wahl umweltschonender Geschwindigkeiten, umweltbewusstes Befahren von Kreuzungen und Einmündungen, sicherheits- und umweltbewusstes Verhalten an Bahnübergängen, Kenntnis der Zusammenhänge zwischen Geschwindigkeit und Schadstoffemissionen, Lärmschutz, umweltbewusstes Angleichen der Fahrgeschwindigkeit an Straßen, Verkehrs-, Sicht- und Wetterverhältnissen,

CURRICULUM: Schwung nutzen, umweltschonend und energiesparend fahren, gleichmäßig rollen, Vermeiden von fortwährendem Bremsen und Beschleunigen, niedertourig aber nicht untertourig fahren, weit vorausschauend fahren, rollen im Leerlauf, austarieren, Sicherheitsabstand + Reserveabstand = Fahrabstand u.v.a. m.
2. Ecodriving integration into learner driver examination

In this section the results of an online survey are presented. The survey was split up in 4 sub-questionnaires. The responses are displayed below each section.

2.1. General access conditions for examiners

<table>
<thead>
<tr>
<th>General access conditions for examiners</th>
<th>Austria</th>
<th>Croatia</th>
<th>(the) Czech Republic</th>
<th>Finland</th>
<th>Germany</th>
<th>Great Britain</th>
<th>Hungary</th>
<th>Italy</th>
<th>Lithuania</th>
<th>(the) Netherlands</th>
<th>Poland</th>
<th>Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there a minimum age for applicants wishing to become driving examiners?</td>
<td>27</td>
<td>27</td>
<td>25</td>
<td>23,5</td>
<td>24</td>
<td>21</td>
<td>25</td>
<td>24</td>
<td>28</td>
<td>24</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Is there a maximum age required for becoming an examiner?</td>
<td>N</td>
<td>-</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>63</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>Must the applicant prove the absence of (recent) traffic offences?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Must the applicant prove his/her ‘good reputation’ (e.g. no criminal record)</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
</tbody>
</table>

**Austria**

In Austria the minimum age for applicants wishing to become a driving examiner is 27. He/ she has to have a minimum of three years’ experience in the field of road safety and needs additional professional qualifications in the fields of traffic education and examination in general. In addition, the applicant has to be able to provide a well-founded expertise on the practical examination. Applicants are also required to have held a category B driving licence for at least 5 years. If the applicant is wishing to act as an examiner for other categories he/ she must have held the driving licence of this category for at least 3 years. The applicant must prove that he/ she has not committed serious traffic offences in the last 3 years. Whereas the applicant must not prove his/ her good reputation.

**Croatia**

In Croatia the minimum age for applicants wishing to become a driving examiner is 27. The applicant is required to hold a university degree and driving licences for the following categories: category A, B, C, C+E. In addition, the applicant must have a minimum of three years’ experience as an driving instructor and has to pass an exam for driving examiners. He/ she has to prove that he/ she has not committed serious traffic offences in the past. Whereas the applicant must not prove his/ her good reputation. The applicant should have good skills to assess competency and excellent communication skills.

**(the) Czech Republic**

In the Czech Republic the minimum age for applicants wishing to become a driving examiner is 25. If the applicant wants to assess a certain licence category he/ she must prove that he/ she holds a driving licence for this category or subcategory for at least 5 years. In addition the applicant must prove the absence of traffic offences.

**Finland**

In Finland the minimum age for applicants wishing to become a driving examiner is (de facto) 23,5, since applicants must be in possession of a driving license for at least 5,5 years. The applicants are

---

36 No, up to 3 penalty points can be evident on the licence and yet the application will still be considered as part of the recruitment exercise.
required to hold category A, B and C driving licences. Holding licences for these three categories is a prerequisite for the driving instructor training which is the minimum initial training for examiners. The applicant has to prove the absence of recent traffic offences and provide a prove for his/her trustworthiness (absence of a criminal record). In addition, the applicant has to have excellent communication, social and evaluation skills and a good judgement.

**Germany**

In Germany the minimum age for applicants wishing to become a driving examiner is 24. The applicants must hold category A, B and CE licences. If he/she would like to test category D as well, he/she must hold also a category D licence. In addition the applicant has to prove the absence of traffic offences providing a certificate of the Central Register of Traffic Offenders and is also required to prove his/her trustworthiness providing a certificate of good conduct. An applicant should have profound technical knowledge, good social skills and experience in the fields of traffic and examination.

**Great Britain**

In Great Britain the minimum age for applicants wishing to become a driving examiner is 21. Examiners must pass a four week DSA training course. The potential examiner must have been in possession of a category B driving license continually for 4 years. Up to 3 penalty points can be evident on the applicant’s licence, yet the traffic offences will still be considered. A criminal record check is conducted as well to control the trustworthiness of the applicant. Applicants having a conviction which would make the examiner unsuitable are not considered. In addition applicants should have good assessment skills and interpersonal communication skills.

**Hungary**

In Hungary the minimum age for applicants wishing to become a driving examiner is 25. Hungary has no maximum age for driving examiners. Applicants are required to have at least a secondary school-leaving certificate and a minimum of 5 years’ experience as an driving instructor. However an university degree is preferred, in this case a minimum of 2 years’ experience as an instructor would be sufficient. In addition, the potential examiner has to hold a category C driving licence for at least 2 years. He/she has to prove the absence of recent traffic offences as well as his/her trustworthiness. In regards to interpersonal skills applicants should demonstrate exceptional communication and social skills. He/she should also be determined and resolute.

**Italy**

To have a driving licence and to have done an internal course.

**Lithuania**

Lithuania has neither a minimum nor a maximum age for applicants wishing to become a driving examiner. The applicant has to hold a university degree and category B and C driving licences. He/she must have held a category B driving licence for at least 5 years. If the applicant is wishing to act as an examiner for other categories he/she must have held the driving licence of this category for at least 3 years, so the de facto age is 24 years. In addition, the applicant has to prove the absence of traffic offences and has to declare that he/she has no criminal record.

**(the) Netherlands**

The minimum age for applicants wishing to become a driving examiner is 28, because applicants are required to have held a category B licence for at least 10 years. There is no maximum age. Applicants have to hold a university degree. He/she has to prove the absence of traffic offences. In regards to interpersonal skills examiners should have strong social and communication skills.

**Poland**

Poland has neither a minimum nor a maximum age for applicants wishing to become a driving examiner. However an applicant must have held a category B licence for at least 6 years, so the de facto age is 24 years. If the applicant is wishing to act as an examiner for other categories he/she must have held the driving licence of this category for at least 1 year. In addition, applicants have to
hold a university degree. He/ she has to prove the absence of traffic offences as well as his/ her trustworthiness.

Spain

The minimum age for applicants wishing to become a driving examiner is 21, the maximum age however is 65. The applicants are required to have held a category B licence for at least 2 years. He/ she has to follow a training programme and to pass an exam for driving examiners.

2.2. Examiners education

<table>
<thead>
<tr>
<th>Examiners education</th>
<th>Austria</th>
<th>Croatia</th>
<th>(the) Czech Republic</th>
<th>Finland</th>
<th>Germany</th>
<th>Great Britain</th>
<th>Hungary</th>
<th>Italy</th>
<th>Lithuania</th>
<th>(the) Netherlands</th>
<th>Poland</th>
<th>Spain</th>
<th>x out of y countries answered in the affirmative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is ecodriving part of the theoretical education of examiners in your country?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y(^{37})</td>
<td>Y(^{38})</td>
<td>Y(^{39})</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>8/12</td>
<td></td>
</tr>
<tr>
<td>2. Is ecodriving part of the practical education of examiners in your country?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y(^{40})</td>
<td>Y(^{41})</td>
<td>Y(^{42})</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>7/12</td>
<td></td>
</tr>
<tr>
<td>3. Is ecodriving part of the examination to become an examiner?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N(^{43})</td>
<td>Y(^{44})</td>
<td>Y(^{45})</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>6/12</td>
<td></td>
</tr>
<tr>
<td>4. Are eco-driving demonstration lessons with learners in the practical part included in your country?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N(^{46})</td>
<td>N(^{47})</td>
<td>Y(^{48})</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>4/12</td>
<td></td>
</tr>
<tr>
<td>5. Are ecodriving contents part of these lessons with learners in your country?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N(^{49})</td>
<td>N(^{50})</td>
<td>Y(^{51})</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>4/12</td>
<td></td>
</tr>
<tr>
<td>6. Have regulations concerning periodic training for examiners, as required by the Directive 2006/126/EC, already been put in place in your country?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y(^{52})</td>
<td>N(^{53})</td>
<td>Y(^{54})</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>6/12</td>
<td></td>
</tr>
<tr>
<td>7. Is ecodriving part of the periodic training of examiners?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N(^{55})</td>
<td>Y(^{56})</td>
<td>Y(^{57})</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>6/12</td>
<td></td>
</tr>
</tbody>
</table>

Country answered in the affirmative x out of y questions

| 0/7 | 7/7 | 0/7 | 2/7 | 7/7 | 4/7 | 7/7 | 1/7 | 0/7 | 7/7 | 3/7 | 3/7 |

The survey showed that in some countries ecodriving is already a part of the theoretical and the practical education and the periodic training of driving examiners. To get a better overview, please see chart 1 in section 2.5.

---

37 Yes, but as part of the education for driving instructors.
38 Yes, but as part of further training.
39 Yes, but as part of the education for driving instructors.
40 Yes, but as part of the education for driving instructors.
41 Yes, but in regards to the driving instructor’s examination.
42 However, it is not mentioned directly in legislation. It is part of the practical driving skills which have to be demonstrated.
43 Eco-driving is not a pass/fail criterion but may be assessed and feedback given as part of the post-test debrief.
44 Yes, but in regards to the driving instructor’s examination.
45 Yes, but in regards to the driving instructor’s examination.
46 Yes, but in regards to the driving instructor’s examination.
47 No but Finland already follows the requirements. Regulations will be implemented in national legislation at the beginning of 2011.
48 Yes, this exists for decades though.
### 2.3. Ecodriving in the practical examination

<table>
<thead>
<tr>
<th>Ecodriving in the practical examination</th>
<th>Austria</th>
<th>Croatia</th>
<th>(the) Czech Republic</th>
<th>Finland</th>
<th>Germany</th>
<th>Great Britain</th>
<th>Hungary</th>
<th>Italy</th>
<th>Latvia</th>
<th>(the) Netherlands</th>
<th>Poland</th>
<th>Spain</th>
<th>x out of y countries answered in the affirmative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is ecodriving part of the practical driver licence testing/ examination?</td>
<td>N⁴⁹</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>9/12</td>
</tr>
<tr>
<td>2. Is checking the correct tyre pressure part of the p. e.?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>6/11</td>
</tr>
<tr>
<td>3. Is driving in the highest gear (with constant speed) part of the p. e.?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>10/12</td>
</tr>
<tr>
<td>4. Is anticipating traffic flow part of the p. e.?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>10/12</td>
</tr>
<tr>
<td>5. Is early gear shifting (between 2000 and 2500 rpm) and driving at low engine speed part of the p. e.?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>11/12</td>
</tr>
<tr>
<td>6. Is decelerating smoothly part of the p. e.?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>11/11</td>
</tr>
<tr>
<td>7. Is removing ballast and avoiding aerodynamic drag part of the p. e.?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>5/12</td>
</tr>
<tr>
<td>8. Is avoiding over-use of A/C or window heaters part of the p. e.?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>5/12</td>
</tr>
<tr>
<td>9. Is checking the safety and technical requirements of the car part of the p. e.?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>12/12</td>
</tr>
<tr>
<td>10. Is switching off the engine when appropriate part of the p. e.?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>6⁰</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y⁶¹</td>
<td>Y</td>
<td>Y</td>
<td>7/11</td>
</tr>
<tr>
<td>11. Is swift acceleration (with early gear shifting or skipping gears) to cruising speed part of the p. e.?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>7/12</td>
</tr>
<tr>
<td>12. Is maintaining a safe following distance between vehicles and anticipating traffic conditions to have time to brake and accelerate smoothly part of the p. e.?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>11/11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Is using built-up momentum (rolling/coasting) part of the p. e.?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>7/10</td>
<td></td>
</tr>
<tr>
<td>14. Is driving calmly (avoiding unnecessary braking) part of the p. e.?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>7/10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Is ecodriving in dense traffic part of the p. e.?</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>8/12</td>
<td></td>
</tr>
</tbody>
</table>

---

⁴⁹ Only marginally. Ecodriving plays a much more important part in the post-licence training.

⁵⁰ Ecodriving is one of three main goals for education and examinations beside safety driving and social skills.

⁵¹ Yes, however, only partly. Ecodriving aspects are regarded (motor rev. due shifting etc.).

⁵² Random technical checks.

⁵³ In form of an explanation as part of the safety-check.

⁵⁴ Checking tyre pressure is covered during the vehicle safety questions - though not every candidate will be asked about this particular issue.

⁵⁵ It is not a requirement to pass the test. Candidate can use/ show his/ her competence and examiner can use it as a criterion when giving a feedback.

⁵⁶ Part of the eco-assessment.

⁵⁷ Partly, if it is not possible to drive outside of inhabited areas, a gear by one lower is also accepted.

⁵⁸ Partly, not necessarily.

⁵⁹ It is not a requirement to pass the test. Candidate can use/ show his/ her competence and examiner can use it as a criterion when giving a feedback.

⁶⁰ Part of the eco-assessment. Only appropriate, if vehicle is stationary for more than 1 minute.

⁶¹ If vehicle is stationary for more than 1 minute.
<table>
<thead>
<tr>
<th>Questions</th>
<th>Austria</th>
<th>Croatia</th>
<th>Czech Republic</th>
<th>Finland</th>
<th>Germany</th>
<th>Great Britain</th>
<th>Hungary</th>
<th>Italy</th>
<th>Lithuania</th>
<th>Luxembourg</th>
<th>Netherlands</th>
<th>Poland</th>
<th>Spain</th>
<th>x out of y countries answered in the affirmative</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Is ecodriving on gradients/ a slope part of the p. e.?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>62</td>
<td>63</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>4/10</td>
</tr>
<tr>
<td>17. Is ecodriving on motorways/ highways part of the p. e.?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>59</td>
<td>Y</td>
<td>N</td>
<td>58</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>4/10</td>
<td></td>
</tr>
<tr>
<td>18. Is ecodriving while overtaking part of the p. e.?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>64</td>
<td>Y</td>
<td>65</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>4/10</td>
<td></td>
</tr>
<tr>
<td>19. Is ecodriving in crossings part of the p. e.?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>59</td>
<td>Y</td>
<td>66</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>5/10</td>
<td></td>
</tr>
<tr>
<td>20. Are special teaching methods/ didactic approaches applied for ecodriving?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>4/12</td>
<td></td>
</tr>
<tr>
<td>21. Are special ecodriving techniques part of the p. e.?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>59</td>
<td>Y</td>
<td>N</td>
<td>57</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>3/11</td>
<td></td>
</tr>
<tr>
<td>22. Are special technical devices used to demonstrate ecodriving effects (econometer, onboard computer etc.) employed?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>1/12</td>
<td></td>
</tr>
<tr>
<td>23. Is ecodriving specifics gasoline vs. diesel cars part of the p. e.?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>2/12</td>
<td></td>
</tr>
<tr>
<td>24. Is ecodriving for automatic gear boxes part of the p. e.?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>70</td>
<td>Y</td>
<td>71</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>1/11</td>
<td></td>
</tr>
<tr>
<td>25. Is the correlation/ context of safety issues and ecodriving techniques explicitly addressed?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>50</td>
<td>N</td>
<td>N</td>
<td>72</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>3/10</td>
<td></td>
</tr>
<tr>
<td>26. Does the candidate fail the examination if not systematically showing ecodriving behaviour during practical driver testing?</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>73</td>
<td>Y</td>
<td>N</td>
<td>74</td>
<td>72</td>
<td>N</td>
<td>N</td>
<td>75</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

Country answered in the affirmative x out of y questions:

|---------|-------|-------|------|------|-------|-------|-------|-------|------|-------|-------|-------|

62 Only if the test route permits.  
63 Only by chance.  
64 It is not a requirement to pass the test. Candidate can use/ show his/her competence and examiner can use it as a criterion when giving feedback.  
65 Not specifically assessed - it is not common for test candidates to overtake except slow moving vehicles or on dual-carriageways.  
66 Difficult to comment - could be part of the general assessment of ecodriving style. This might include switching off the engine, if candidate stops at traffic lights.  
67 Not specifically tested.  
68 Not in examinations.  
69 Not as part of the practical test.  
70 No, if candidate drives a manual gearbox. Yes, if candidate uses an automatic transmission.  
71 Only if candidate uses an automatic transmission.  
72 CPC only.  
73 Economical driving plays a role in the practical driving test although candidates cannot fail the test as a result of poor ecodriving. Ecodriving is one of 7 criteria on which the test candidate must evaluate him/her in a self-assessment (on the driving test assessment form) which should be filled out before the candidate starts the test (rating 1-5, with 1 = poor and 5 = excellent) and discussed with the examiner after the test.  
74 Not on eco-driving specifically.  
75 Energy-conscious driving is one of 13 criteria which can be used in reaching a pass-fail decision in the practical driving test. The current stance with regard to the relative weight of energy-conscious driving in reaching such a decision is that candidates will not fail on the basis of poor eco-driving as long as his/her safe driving behaviour is otherwise excellent. However, poor eco-driving can contribute to a fail decision if other (safe driving) aspects of the candidate's performance are found to be lacking. Eco-driving has thus become an important assessment criterion because in practice very few people drive otherwise excellently.
In 9 of 12 countries ecodriving is assessed at the practical examination. In Germany candidates do fail, if they do not systematically show ecodriving behaviour during the practical examination. In Finland, in Great Britain and in the Netherlands ecodriving is one of several criteria which can be used in reaching a pass-fail decision in the practical examination: candidates will not fail on the basis of poor eco-driving as long as his/her safe driving behaviour is otherwise excellent. However, poor ecodriving can contribute to failure if other (safe driving) aspects of the candidate's performance are found to be lacking.

The ecodriving skills which are assessed most frequently are:

- Vehicle safety checks (12 times),
- Decelerating smoothly (11 times),
- Maintaining a safe following position and anticipating traffic flow (11 times),
- Early gear shifting (11 times)
- Driving in the highest gear (10 times),
- Anticipating traffic flow (10 times),
- Ecodriving in dense traffic (8 times).

To get a better overview, please check also column chart 2a and 2b in section 2.5.

### 2.4. Ecodriving in the theoretical examination

<table>
<thead>
<tr>
<th>Ecodriving in the theoretical examination</th>
<th>Austria</th>
<th>Croatia</th>
<th>Czech Republic</th>
<th>Finland</th>
<th>Germany</th>
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<th>Lithuania</th>
<th>Netherlands</th>
<th>Poland</th>
<th>Spain</th>
<th>x out of y countries answered in the affirmative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is ecodriving part of the theoretical driver licence testing/examination?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>10/12</td>
<td></td>
</tr>
<tr>
<td>2. Is checking the correct tyre pressure part of the t. e.?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>10/12</td>
</tr>
<tr>
<td>3. Is driving at highest possible gear (with constant speed) part of the t. e.?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>10/12</td>
<td></td>
</tr>
<tr>
<td>4. Is anticipating traffic flow part of the t. e.?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>8/12</td>
<td></td>
</tr>
<tr>
<td>5. Is early gear shifting (between 2000 and 2500 rpm) and driving at low engine speed part of the t. e.?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>9/12</td>
<td></td>
</tr>
<tr>
<td>6. Is decelerating smoothly part of the t. e.?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>8/11</td>
<td></td>
</tr>
<tr>
<td>7. Is removing ballast and avoiding aerodynamic drag part of the t. e.?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>10/12</td>
<td></td>
</tr>
<tr>
<td>8. Is avoiding over-use of A/C or window heaters part of the t. e.?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>7/12</td>
<td></td>
</tr>
<tr>
<td>9. Is checking the safety and technical requirements of the car part of the t.e.?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>10/12</td>
</tr>
<tr>
<td>10. Is switching off the engine when</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>5/12</td>
</tr>
</tbody>
</table>

76 There are a limited number of questions about eco-driving in the theory tests.  
77 Test also includes questions on uneven tyre wear.  
78 Reference is made to gears and hills, but not specifically to using highest gear possible.  
79 Reference is also made to driving with courtesy.  
80 Reference to slowing down, but no mention of removing foot from accelerator.  
81 Also questions on stability and towing.  
82 Questions about visibility, but not about use of heaters.
## Ecodriving in the theoretical examination

<table>
<thead>
<tr>
<th>Question</th>
<th>Austria</th>
<th>Croatia</th>
<th>(the) Czech Republic</th>
<th>Finland</th>
<th>Germany</th>
<th>Great Britain</th>
<th>Hungary</th>
<th>Italy</th>
<th>Lithuania</th>
<th>(the) Netherlands</th>
<th>Poland</th>
<th>Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Is swift acceleration (with early gear shifting or skipping gears) to cruising speed part of the t. e.?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>12. Is maintaining a safe following distance between vehicles and anticipating traffic conditions to have time to brake and accelerate smoothly part of the t. e.?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
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<td>N</td>
</tr>
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<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
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<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
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<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>15. Is ecodriving in dense traffic part of the theoretical examination?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
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<td>N</td>
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<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
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<td>Y</td>
</tr>
<tr>
<td>17. Is ecodriving on motorways/highways part of the t. e.?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
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<td>N</td>
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<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>19. Is ecodriving in crossings part of the t. e.?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
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</tr>
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<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>21. Are special ecodriving techniques part of the t. e.?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>22. Are special technical devices used to demonstrate ecodriving effects (econometer, onboard computer etc.) employed?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>23. Is ecodriving specifics gasoline vs. diesel cars part of the t. e.?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>24. Is ecodriving for automatic gear boxes part of the t. e.?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>25. Is the correlation/context of safety issues and ecodriving techniques explicitly addressed?</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>26. Does the candidate fail the examination if not systematically showing ecodriving behaviour during theoretical driver testing?</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country answered in the affirmative x out of y questions</th>
<th>15/26</th>
<th>25/25</th>
<th>3/26</th>
<th>10/26</th>
<th>24/25</th>
<th>8/23</th>
<th>15/24</th>
<th>21/26</th>
<th>6/26</th>
<th>7/25</th>
<th>17/26</th>
<th>14/26</th>
</tr>
</thead>
</table>

83 Not currently included.
84 Together with stopping distances in wet conditions or icy roads.
85 But coasting (clutch pedal engaged) is actively discouraged as being dangerous as it reduces vehicle control.
86 Addressed in questions about anticipation and attitude to other road users - courtesy.
87 Practical training issue not relevant to theory test.
88 To some extent.
89 Practical training issue not relevant to theory test.
90 Theory test covers both manual and automatic licence acquisition with no specific questions about automatic transmissions.
91 If the candidate fails to answer properly, he gets negative points.
92 No, if all other questions of the test are answered correctly.
93 Theory test result is based on overall score for all questions not separate sections.
94 Every theoretical exam has one or two question about ecodriving.
In 10 of 12 countries ecodriving is part of the theoretical examination. Only in Italy candidates fail, if they do not have sufficient knowledge about ecodriving. The ecodriving skills which are assessed most frequently are:

- Maintaining a safe following distance and anticipating traffic flow (11 times),
- Driving calmly and avoiding unnecessary breaking (11 times),
- Checking the correct tyre pressure (10 times),
- Driving at highest possible gear (10 times),
- Removing ballast and avoiding aerodynamic drag (10 times),
- Checking the safety and technical requirements (10 times),
- Early gear shifting (9 times),
- Anticipating traffic flow (8 times),
- Decelerating smoothly (8 times).

To get a better overview, please see also the column chart 3a and 3b in section 2.5.

### 2.5. Column charts

- Chart 1: Examiners Education
- Chart 2a: Ecocdriving in the practical examination
- Chart 2b: Ecocdriving in the practical examination
- Chart 3a: Ecocdriving in the theoretical examination
- Chart 3b: Ecocdriving in the theoretical examination

#### Chart 1: Examiners Education
Chart 2a: Ecodriving in the practical examination

Chart 2b: Ecodriving in the practical examination
Chart 3a: Ecodriving in the theoretical examination

Chart 3b: Ecodriving in the theoretical examination
3. Ecodriving integration into licensed drivers' training and driver assessment

Overview of ecodriving integration into licensed drivers' training and driver assessment in all project partner countries is presented in this section.

3.1. Austria

3.1.1. Ecodriving training for licensed drivers

The following Ecodriving trainings directed at licensed drivers are offered in Austria:

- **Name under which the training is offered (national language and literal translation into English):**
  - Spritspar-Training (Ecodriving Training);
  - Spritsparen – Modern Driving Training (Ecodriving – Modern Driving Training);
  - Economy Training (Economy Training);
  - Wirtschaftliches Fahren (Economical Driving).

- **Name of the training institution and other relevant stakeholders involved:**
  - The following institutions provide Ecodriving-training in Austria:
    - Driving Schools (www.fahrschulen.co.at);
    - ÖAMTC (Austrian automobile club, www.oeamtc.at);
    - ARBÖ (Austrian automobile club, www.arboe.at);
    - Driving Camp Pachfurt (www.drivingcamp.at);
    - WIFI – Institute for Economic Promotion of the Austrian Federal Economic Chamber (www.wifi.at)

Organisations, which employ trainers who are certified by klima:aktiv mobil are shown on the map below (see also http://www.maps.klimaaktiv.at/index.php?id=188):

- **Place of the training courses:**

  Ecodriving trainings in Austria are usually conducted on public roads. The training institutions have defined suitable round-trips – customarily a course of about 10–20 km starting and ending at the facility of the institution.
Ecodriving Trainings can also take place at the facility of a company. In this case an appropriate roundtrip has to be explored by the trainer.

- **Costs of the training courses:**
  - 1 day group training with passenger cars: about € 100,- p.p. + tax;
  - 1 day group training with trucks: about € 200,- p.p. + tax;
  - ½ day group training with tractors: about € 200,- p.p. + tax;
  - ½ day group training with passenger cars: about € 75,- p.p. + tax;
  - 1h 1:1 training with passenger cars: about € 50,- + tax.

- **Applicability of subsidies:**
  - Ministry for Environment;
  - ÖkoBusinessPlan Vienna;
  - Province of Upper Austria.

- **Information since when the courses have been offered:**
  In summer 2004, the Mobility Department of the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management ("Lebensministerium"), in cooperation with the Austrian Energy Agency (AEA) and the Federal Branch Association of Driving Schools started to reinforce the establishment of Ecodriving in Austria. Results all over Europe prove that car-, truck- and bus-drivers can easily reach a fuel reduction of 5–15% by exercising an energy efficient driving style. The Ecodriving programme is called “Spritspar-Initiative” and part of the “klima:aktiv mobil” initiative of the government aiming to reduce greenhouse gas emissions. klima:aktiv mobil offers subsidies and arranges Ecodriving trainings given by it’s cooperating partners since 2005.

- **General content of the activity:**
  1. Intelligent use of cars;
  2. Make your car fit;
  3. How to use a cars technique;
  4. Driving style: economical, safe and relaxed.

- **Total number of participants:**
  - 17,000 participants at trainings within klima:aktiv mobil;
  - 180,000 novice drivers within the second phase education.

- **Duration of the training courses offered:**
  - klima:aktiv mobil offers full day trainings;
  - ÖAMTC: full day and half day trainings (passenger cars only).

- **Structure of the training courses offered:**
  - Truck training: 1:4 (1 trainer for every 4 participants;
  - Passenger car training: 1:6;
  - 40% theory, 60% practical.

- **Information whether the practical training takes place on public roads:**
  All practical trainings take place on public roads.
Use of monitoring instruments:
- Training day monitoring for fuel consumption and average speed;
- klima:aktiv mobil agreements with fleet company concerning long term effects;
- Feedback from fleet companies about effects;
- Postbus training for 2,500 bus drivers was evaluated externally.

Advertisements for the training courses:
- Leaflets;
- Brochures;
- Advertisement within the ecodriving championship;
- Website.

(Estimated) public awareness of the offer:
- Fleet owners in the truck business are aware of the offer;
- Low awareness in the field of passenger car fleets.

Possibilities of cooperation with ECOWILL:
- Development and roll-out of short trainings;
- Re-certification of trainers;
- Supporting materials for Ecodriving (best practices, films etc.).

3.1.2. Policy activities, governmental programmes

Name of the activity/programme (national language and literal translation into English):

Name and role of the activity provider and other relevant stakeholders involved:
- Ministry for environment – initiator of the program;
- Austrian Driving School Association – education of trainers;
- Driving Schools – Ecodriving trainings;
- ÖAMTC – Ecodriving trainings;
- ARBÖ – Ecodriving trainings;
- General Motors – Ecodriving Championship;
- BLT Wieselburg – education of tractor trainers;
- Schools for Agriculture – Ecodriving trainings for tractors.

Overall target of the programme:
CO₂ reduction.

General content and duration of the activity:
- Ecodriving trainings, Ecodriving competitions, information about alternative vehicles.

Total number of participants:
See Section 1 "Ecodriving training for licensed drivers"
- Functioning of subsidy schemes:
  A certain amount is paid for every participant of an one day high quality training.

- Media exposure:
  Newspaper articles, TV (spots and reports).

- Possibilities of cooperation with ECOWILL:
  - Development and roll-out of short trainings.
  - Re-certification of trainers.
  - Supporting materials for Ecodriving (best practices, films etc.).

### 3.1.3. Ecodriving competitions and events

- Name of the competition/event (national language and literal translation into English):
  Since the very beginning of the Ecodriving initiative in Austria also Ecodriving competitions were launched. In 2004 and 2005 a competition in one province of Austria was organised, followed by nationwide competitions from 2006-2008. In 2010 the competition was held in cooperation with General Motors. In the finals (EcoTriathlon, www.ecotriathlon.at), competitors had to travel through Austria in two days with as little CO₂ emissions as possible. For the journey also rail and electric bikes were used.

  **EcoTriathlon 2010**

- Name and role of the activity provider and other relevant stakeholders involved:
  - General Motors (concept, provision of cars, www.gm.com);
  - klima:aktiv mobil (ecodriving trainings, www.klimaaktivmobil.at);
  - Austrian Railway (www.oebb.at);
  - KTM (E-Bikes, www.ktm.at); Ministry of Agriculture, Forestry, Environment and Water Management (www.lebensministerium.at)
  - Ministry for Transport, Innovation and Technology (www.bmvit.at).

- General content and duration of the competition/event:
  Driving as energy efficient as possible in two days through Austria, using rail, e-bike and car.

- Total number of participants:
  222.
Advertisements for the competition/event:
Website www.ecotriathlon.at.

Media exposure:
Newspapers, life style magazines, TV

Possibilities of cooperation with ECOWILL:
Low, as there are no plans in detail for 2011.

3.1.4. Assessment

Leaseplan Austria offers detailed driver assessment for fleet managers, stating the fuel consumption of individual vehicles of the leased fleet in comparison to standard consumption in reports. Leaseplan also assists in finding Ecodriving trainings (see www.leaseplan.at/leaseplan/umwelt).

Cooperation with ECOWILL is likely, negotiations have already been started by AEA.

3.1.5. Other relevant information

ECO-DRIVING Austria 2010

In summer 2004, the Mobility Department of the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (“Lebensministerium”), in cooperation with the Austrian Energy Agency (AEA) and the Federal Branch Association of Driving Schools started to reinforce the establishment of ECO-DRIVING in Austria. Results all over Europe proof that car-, truck- and bus-drivers can easily reach a fuel reduction of 5-15% by exercising an energy efficient driving style. The programme is part of the “klima:aktiv mobil” initiative of the government aiming to reduce greenhouse gas emissions. The initiative consists of the following elements:

ECO-DRIVING Championship for drivers

In order to spread the idea of ECO-DRIVING among drivers and also driving schools an ECO-DRIVING Championship takes place every year. In 2010, 222 drivers were picked to compete in the championship. The winner proofed that a significant fuel reduction through ECO-DRIVING is possible.

ECO-DRIVING Certificate for driver trainers

In seminars 650 trainers for passenger cars, trucks & buses and tractors have been educated and certified to ECO-DRIVING-trainers (“Spritspar-Trainer”). The trainers teach regarding to the content and guidelines of the ECO-DRIVING handbook to guarantee a certain quality standard.

Co-operation with fleet operators

Professional drivers in fleets are invited to take part in an ECO-DRIVING training. In pilot seminars 2.600 bus drivers and 4.600 train drivers participated in ECO-DRIVING-trainings. In terms of CO2-emissions this means an expected reduction of about 7.600 tons per year. In total about 17.000 drivers participated in an ECO-DRIVING-training.

Co-operation with driving schools

Since 2008 novice drivers get an ECO-DRIVING lesson at the driving school (90.000 learner drivers per year). Driving schools that make a special effort for climate protection can get a special certificate (klima:aktiv mobil driving school).

Awareness raising, marketing and public relations

The “Spritspar-Initiative” is accompanied by a media campaign, including radio spots, print media coverage, leaflets with tips how to save fuel etc. On European level the programme is connected with the IEE-Project ECODRIVEN, which started a European wide campaign for ECO-DRIVING in 2007.
3.2. Czech Republic

3.2.1. Ecodriving training for licensed drivers

Special courses which would focus on ecodriving for licensed drivers of passenger cars are currently on the Czech market offered only on a commercial basis. They are being provided by one private company named CE Solutions under the product name “ECODRIVE” (www.ecodrive.cz).

The individual rules of ecodriving are educated and tested in a several-hour-long lesson composed of both the theoretical as well as practical part.

The theoretical part is composed of the presentation of a series of well-known tips how to drive more economically with a commentary from the side of lecturers.

As for the practical part, it is being held on public roads and the company’s lecturers to assess the given driver’s style utilize a sophisticated monitoring and evaluation tool which is being connected to the OBD port in a car with data being recorded are stored externally into a PC and further analyzed after the test drive.

The total length of a course may be flexibly adjusted (shortened or extended) according to the wishes and needs of a client. The costs are currently fully born by the clients and ranges typically from 50 to 200 EUR per attendee according to the number of participants and duration length of the course.

The courses are organized usually within the premises of clients on a predefined date. The clients primarily come from the private sector and include mostly large car fleet operators which proves to have a higher sensitivity towards the importance and potential of ecodriving (as a way toward lower fuel costs, reduced car aging and higher safety).

Similar targeted education focused on ecodriving is then also organized for professional drivers of VANs and heavy-duty vehicles (i.e. holding the driving permits C and D category) where the effects in the form of improved fuel economy may be much higher. Here, the courses are being offered also by the Association of Hauliers. The common practice is that some companies prefer to have their personnel trained by internal trainer which is given initially an in-depth education by an external qualified lecturer.

3.2.2. Policy activities, governmental programmes

There is currently no any specific policy instrument which would prescribe or give financial support to ecodriving-related education.

The responsible state authorities (Ministry for Transportation of CR) pay the primary attention towards safety (mostly via subsidizing a long-term program for promotion of road safety which is named “BESIP”).

The only policy instrument which nowadays obliges to educate the licensed drivers on (specific) rules of ecodriving implements the stipulations of the relevant EU legislation (Directive No. 2003/59/EC) which targets professional drivers of HD vehicles and buses.

3.2.3. Ecodriving competitions and events

Economy Run

The traditional competition organized by the “Skoda Car” automotive club only for the owners of passenger cars of this brand.

The competition is being held annually and takes form of a two-day-long trip on a defined route on public roads before and after which fuel consumption is being checked. The contestants are divided into several categories and the results are published on the internet (www.economyrun.cz).
3.2.4. Non-governmental campaigns

*Hledáme řidiče třídy A (Looking for A-class driver)*

The campaign was organized in 2006-2008 within the framework of the former ECODRIVEN project. It was aimed at raising awareness about ecodriving and related effects among drivers of passenger cars (generally) and took form of different information activities (printed materials, website, press conferences, conference speeches) as well as snack-type short ecodriving courses held along with the automotive-related events. The campaign was concluded by a special contest organized for drivers which competed in a long-term competition motivating drivers to practising ecodriving in daily traffic (for further information, please, see [www.uspornajizda.cz](http://www.uspornajizda.cz)).

*Hledáme dopravní společnost třídy A (Looking for A-class haulier)*

As a subsequent activity of the above mentioned campaign, there was also initiated a special programme focused on fuel economy in goods transportation. It took form of a voluntary certification programme for haulier companies which have had, among other, their personnel (professional drivers of trucks and trailers) educated specifically on practising ecodriving. In the first year a total of 8 hauliers ware certified in 2008 and thanks to the positive feedback from the target group, throughout 2010 there is being organized 2. year already with some further improvements in the evaluation criteria (for more information, see [www.dopravcetridyA.cz](http://www.dopravcetridyA.cz)). The certificates (to be) awarded to the successful applicants shall be valid till the end of 2012. By that date, the 3rd year will be hopefully organized.

3.2.5. Other relevant information

Thanks to the ECODRIVEN project, there was established in the country a valuable network of persons and institutions which somehow promote the idea of ecodriving and try to adhere to it or implement it in their lives / business activities.

The primary goal of the ECOWILL is to build up on this and “institutionalize” the rules of “modern driving style (which is typical for the increased attention towards safety and fuel economy) and its education within the target group (learner as well as licensed drivers of passenger cars).

The implementation of (EU common) standard for education of ecodriving and certification of lecturers to be able to educate according to which properly seem thus as a necessary step further.
3.3. Croatia

3.3.1. Ecodriving training for licensed drivers

- **Name under which the training is offered (national language and literal translation into English):**
  Ecodriving training in Croatia is included into programme for learner driver’s education since 2008. Each and every candidate has an obligation to pass the training on ecodriving at least for two hours in theoretical part and two hours for practical part additional. The name of the obligatory training for all candidate drivers is Educational programme for candidate drivers (in Croatian: **Program vozačkog ispita**).

As for the ecodriving for licensed drivers, there haven’t been offered many trainings in Croatia so far. Actually, there was the only one ecodriving campaign in Croatia organized in September of 2010. The name of the campaign was “Travel Smarter – Live Better” (in Croatian: **Putuj pametnije – živi kvalitetnije**).

- **Name of the training institution and other relevant stakeholders involved:**
  Croatian Car Club organized the ecodriving campaign. The club also provided instructors which were additionally educated in terms of getting know-how in order to execute an education of the short term course.

- **Place of the training courses:**
  Training course on ecodriving was held at the sports and recreation Lake Jarun, located in the narrow region of Zagreb’s city centre.

- **Costs of the training courses:**
  Ecodriving course was offered free of charge for the attendees.

- **Information since when the courses have been offered:**
  The course was offered on two-day basis, on 17 and 20 September 2010.

- **General content and duration of the activity:**
  Provision of information on campaign goal, rules, benefits. The course was conducted on a voluntary base. Initially, drivers were asked to drive free style on given route, afterwards driver took short course on ecodriving and ultimately, driver was asked to drive in ecodriving style. The measurements on savings were provided and ultimately drivers were familiarized with their achieved driving performance.

- **Total number of participants:**
  40 participants in total.

- **Duration of the training courses offered:**
  Duration of the course took around 40 min by the candidate.

- **Structure of the training courses offered:**
  Training course consisted of theoretical and practical part.

- **Main topics (contents) of the training course:**
  Ecodriving effects, rules, explanation on how to save with ecodriving, economic fuel consumption.

- **Information whether the practical training takes place on public roads:**
  The training was conducted off the public roads.
Use of monitoring instruments:
RPM counter, on board computer.

Advertisements for the training courses:
Press conference, media.

(Estimated) Public awareness of the offer:
Leaflets, panels, announcement in media, web sites.

Possibilities of cooperation with ECOWILL:
Common standards and best practice examples could be certainly shared with ECOWILL.

3.3.2. Non-governmental campaigns

Name of the campaign (national language and literal translation into English):
Make Cars Green (in Croatian: Učinimo aute zelenima).

Name and role of the activity provider and other relevant stakeholders involved:
Croatian Car Club in cooperation with FIA.

General content and duration of the competition/event:
Campaign was conveyed in order to facilitate current European and World wide efforts in establishing regulatory constraints for CO₂ emissions. On the other hand, campaign intended to sensitise public opinion and furthermore to change the way people think on their responsibilities toward environment protection and greenhouse gases reduction which directly affects air quality enhancement. Duration of the campaign was one year.

Representatives of the various national institutions and organizations marked the World Environmental Protection Day by their presence on the workshop “Greenhouse Gases Reduction in Road Transport”, that took a place on 5th June 2008 in Croatian Car Club.

Workshop attendees were Energy Institute Hrvoje Pozar, Vehicle Centre of Croatia, Ekonerg, Regional Energy Agency, OMV, Zagrebački Holding, UNDP Croatia, Croatian LPG Association, PROplin, Vega and other representatives of the institutions, associations and companies.

Total number of participants:
Campaign was organized by the three participants: Ministry of Environmental Protection, Spatial Planning and Building, Rational Energy Use and Environmental Protection Fund and Croatian Car Club.

Advertisements for the competition/event:
Leaflet – Make Cars Green.

Media exposure:
During the campaign, mostly printed media tracked the activities and provided public information.

Possibilities of cooperation with ECOWILL:
During the ECOWILL project, some of the activities could be further conducted.
3.4. Finland

3.4.1. Ecodriving training for licensed drivers

In Finland the Ecodriving training of licensed drivers (excl. heavy vehicle drivers) is offered by five training networks, one of them (Eco Driving Centre) having the licence of using the brand ‘Ecodriving’. These five networks are: Eco Driving Centre (www.ecodriving.com), Avainkouluttajat (www.avainkouluttaja.fi), CAP-Koulutus (http://www.capkoulutus.fi/), Ring Road International (www.ringroad.fi), and Ajotapakouluttajat (www.ajotapa.eu). Their contact addresses are on Motiva’s website (http://www.motiva.fi/liikenne/taloudellinen_ajotapa/taloudellisen_ajan_koulutus/kouluttajien_yhteystiedot). Each network has member companies, who implement the training.

These networks have committed to provide Ecodriving training in accordance to Motiva’s Quality Classifications (described below), but they offer training services under the umbrella of each network (brand). This quite large variety of different brands offering training according to the same quality classifications makes it somewhat unclear for the customer to find out, whether there are significant differences between companies of separate networks or not. Naturally, the same applies to examiners of different networks. These networks cover ca. 90 per cent of Ecodriving training for licensed drivers in Finland.

Approximately 500–600 drivers are trained annually, but if the driver is performing the second phase of the driver examination (1½ year after driver examination), and these learner drivers are included in the figures, too, the number is around 3,000 drivers per year.

In addition to these networks, there are a number of ‘independent’ small companies that provide training using training concepts of their own (= the emphasis may lay either on traffic safety or on fuel saving depending on the service provider or on the customer needs, etc.).

The Quality Classification of Motiva (available only in Finnish) sets the minimum requirements for the training courses. The courses are divided in four categories: A) HV driver training (based on the directive 2003/59/EY), B) Basic course (two hours), C) Demo training (more or less the same as snack training, but a little shorter) and D) lectures. In the following, only the type B is addressed.

The practising is normally arranged near the customer. Very often the instructor pick’s up the trainee from his/her working place or home in order to make it easier for the trainee to attend as well as to lower the threshold of the decision of ordering the course. The cost of training (type B) is around 200 Euros depending on both of the service provider and the vehicle that is used for training (company’s own / the driver’s own). For the moment, Ecodriving training is not subsidised in Finland.

The training contains both theory and practise. The theory part may be arranged in either classroom or in the vehicle. The minimum duration of driving practise is 2 x 20 minutes, and it has to be arranged in normal traffic (not on any ‘off-road’ track). The vehicle must be equipped with a reliable computer in order to monitor the fuel consumption (no detailed specification yet). The theory part should contain the following:

i. Basic knowledge (emissions of road transport, car selection, influence of technology on fuel consumption, Ecodriving techniques);

ii. Basic Ecodriving tips;

iii. Transport environment, routing, park & ride, benefits of navigators.

Feedback of the driver contains normally reduction of fuel consumption and usually analysis of traffic safety, too.

The training networks are the core co-operating partners in ECOWILL project.

Many people know that Motiva has been dealing with the driver training for a number of years now, but there is still need for proper marketing.
3.4.2. Policy activities, governmental programmes

In the governments Decision of Principle on Sustainable Procurement (9th of April, 2009) Ecodriving training is recommended for all drivers or state administration (e.g. defence forces, police, customs, border guards, agencies and other public bodies). As a result of this, call for bids was launched, and Ecodriving Centre was chosen as the service provider. So far the only a few trainings have been organised.

3.4.3. Ecodriving competitions and events

There are few ecodriving competitions for light vehicles in Finland.

The most known is ECOTOUR organised by Autoliitto (the Finnish FIA member), http://www.autoliitto.fi/liitto_ia_osallistuminen/ecotour/. ECOTOUR is a part of the world-wide Make Cars Green campaign (www.makecarsgreen.org/).

This year ECOTOUR took place on 7th - 8th of May 2010. The goal was to drive a 630 km long route according to a schedule as well as traffic regulation with lowest possible fuel consumption. In total 36 teams (cars) took part in the competition.

3.4.4. Non-governmental campaigns

No Ecodriving campaigns are going on for the moment. The oil companies for the second time had a one-week long tyre pressure campaign in June 2010 with a scope of reducing fuel consumption. In the campaign tyre pressure has been measured at a number of service stations all over the country. Information on the influence of tyre pressure has been shared to drivers as well.

The campaign was mentioned mostly in local media. In 2009 ca. 2000 tyres were measured in 30 localities. The 2010 figures are not available.

This campaign will very likely continue in the future as it is a part of the measures included in the annual working plan of the Energy Efficiency Agreement of Oil and Gas Business sector. Also, according to the law oil companies are obliged to share Ecodriving information to the customers. More information of the 2011 campaign will be available early next year.

There might be a possibility of marketing training through communication channels of oil companies as soon as a certified network of trainers is ready.

3.4.5. Assessment

Quite many of the trainers use the Finnish ECONEN computer (Paetronics ECONEN measures fuel consumption, time, average speed as well as a number of other parameters).

There are also other systems available such as DRIVECO (www.ectools.fi), but it is quite new and therefore not yet very wide-spread.

In addition to this, the trend seems to be to use more and more computers of the car as nowadays these integrated devices provide reliable and versatile information.

It may be possible to cooperate with these companies in the framework of ECOWILL.
3.5. Germany

Economical and Safe
Programs for economical driving
Reducing fuel consumption, traffic accidents, costs for wear and tear - unachievable goals? Not necessarily! With economical driving skills financial and environmental resources can be spared, and more safety in traffic is added on top.

Since 1990 the DVR is engaged in the field of economical and more relaxed driving behaviour and has therefore developed a broad variety of training concepts in cooperation with experienced partners.

3.5.1. Ecodriving training for licensed drivers

➢ Fahr und spar mit Sicherheit (http://www.fahrspartraining.de)

The program „Fahr und spar mit Sicherheit – sicher, wirtschaftlich und umweltschonend fahren“ is dedicated to companies with own car pools or fleets. Sustainable reduction of costs for vehicle fleets is not easy to achieve for many companies. The training program "Fahr und spar mit Sicherheit - Sicher, wirtschaftlich und umweltschonend fahren“ conveys the information and training how to reduce costs, protect the environment and additionally increase the safety of company drivers. „Fahr und spar mit Sicherheit“ is offered in various versions adjusted to the specifics of the company.

Full day training for 4-6 participants.

In the theoretical part at the beginning the participants are prepared for the new driving techniques and get to know the seven driving tips. They learn to apply the tips within the practical training block which directly follows the theoretical introduction. The drivers split up on two vehicles. Every participant drives 45 minutes. The trainer accompanies both groups and changes the vehicles at planned regular stops. The training courses can also be carried out as single courses with constant trainer’s company. The single course also lasts 45 minutes per participant. After the practical training the whole group meets for the final exchange of views.

Half day training for up to 3 participants. This training program is designed for only 3 participants lasting half a day. After a short theoretical introduction the 3 participants and the trainer will start the practical training in one car on public roads. Every participant drives for 45 minutes. After the practical training the participants exchange their experiences within a final group discussion.

Additional training varieties of "Fahr und spar mit Sicherheit" were developed to meet the special needs of companies. E.g.

- For delivery companies: The practical training courses were planned and conducted as radial tours. Every driver could train the new driving style on the job on his daily delivery route.
- For company vehicles with only two seats a 1:1 training was designed.
- Depending on the number of participants the practical training was conducted in small groups on one, two or three vehicles.

Before the practical exercises the trainer gives valuable driving tips and evaluates the training journey afterwards with the participants. The programme can be carried out for vehicles up to 3.5 t.

➢ Die Spritsparstunde (www.spritsparstunde.de)

Within the „Spritsparstunde“ the driving instructor conveys the basics of an economical and environmental driving style.

The concept of 1 hour training is highly efficient.

Safe fuel without abandoning driving fun – within 1 hour you will learn how this works!

- 59 -
• Under professional supervision you will train safe and economic driving techniques on public roads.
• Safe fuel and reduces wear and tear off your engine.
• You will be astonished how modern engine technologies make this new driving style possible.
• You will experience that it is possible to cruise in traffic as safe and quickly as always. Applying the tips makes it much more relaxed.
• You will drive like a pro!

The „Spritsparstunde“ is an offer of the DVR, commercial insurance companies and the German Driving School Association BVF e.V.

The program is part of the campaign: “Neues-Fahren”.

➢ **Eco-Driving** ([www.eco-driving.de](http://www.eco-driving.de))

The “Eco-Driving” training concept lasts several hours and is designed for single participants as well as for company and professional drivers.

Eco-Driving: Clever driving style- economical, relaxed and safe

How to achieve a lot with minimum effort, following the principal: “Shifting early means getting further”. Save up to 25% fuel on the same route arriving in the same time. Many participants have proven the effects in praxis. Additionally to the cost savings Eco-Driving driving style is more relaxed, is good for the environment and is safer driving free on top.

Eco-Driving is offered in 4 different versions all over Germany:

- Eco-Driving for single participants → Duration: 4 hours;
- Eco-Driving for fleet and professional drivers → Duration: 5-8 hours;
- Eco-Driving for driving instructors ("Train-the-Trainer-Seminars") → Duration: 2 days;
- NEW Eco-Driving compact, 3 x 1-Training: 1 Participant, 1 Trainer, 1 hour.

➢ „Fahren wie ein Profi – Sicheres Fahren in Beruf und Freizeit“

„Fahren wie ein Profi – Defensive Driving“ was a research project together with Exxon Mobil (EMPG GmbH) and the Mining employer's liability insurance association combining climate protective driving behaviour with other prevention elements ensuring safer driving during working time.

The didactical approach was designed like DVR program „Fahr und spar mit Sicherheit“ and combined theoretical teaching modules with exchange of experiences with individual practical training modules. The modules were adjusted to the specific needs of the company. During the 1-day event 6 participants go through 7 training modules.

This model was successfully transferred to other companies like Unilever, Gasunique and eon Hanse. The preliminary results of the accompanying evaluations confirmed the insights gained in the research project with Exxon Mobil and show the significant effects which can be achieved within the professional driving context.

➢ **Transporter-Coaching / Pkw-Coaching**

DVR developed two new programs „Transporter-Coaching“ and „Pkw-Coaching“ combining elements of safety-trainings and economical trainings in the professional driving context.

The main goal is to implement safety and climate protection in the corporate identity of companies. It became obvious that it was not sufficient to put the different training concepts together in a 1 day training event but to combine them with a special didactical concept The two times evaluated program is offered since 2007 by DVR members.
3.5.2. Ecodriving for learner drivers


"Cool fahren - Sprit sparen" (2006 till 2008) is a perfect example how education contents for driver licence category B have started their triumph from 1993 to the present day. The integration into the mandatory further education according to the driving instructor legislation as a one day seminar with a separate curriculum is a sign for the importance. More than 4000 driving instructors and 650 examiners of driving instructors have been educated in the safe and economic driving behaviour by DVR and were trained to convey these skills to learner drivers from their first lesson on.

3.5.3. Campaigns

- Spritsparwochen

Within this initiative platform of DVR and its partners Ecodriving events are announced and promoted and training vouchers are raffled. Visitors of the website can calculate their personal saving potentials, find training facilities and give feedback on their training.

- Neues Fahren (www.neuesfahren.de)

The main goal of the initiative „Neues Fahren – clever, sicher, weiter“ is to convey an economic and safe driving style without abandoning driving fun and comfort. The initiative is under the sponsorship of the Federal Ministry of Traffic, Building and Housing.

Clever mobility: 25% less fuel consumption with equal comfort and driving fun on cars or lorries.

Easy to adopt tips guaranty an immediate success and bring you safely further. Practical training concepts offer a great variety on a high quality standard. Getting further with modern engines! This is the way for more efficient driving. Experience it yourself and profit from clever driving tips.

Links to various offers:

- Pkw-Trainings
- Lkw/Bus-Trainings
- Angebote für Pkw-Flotten

- Greener Driving (www.greener-driving.net)

Tips for a „green driving style“ are also offered under the keyword „Greener Driving“ on the website of the environmental organisations of the United Nations (UNEP).

"Greener Driving“ is an important step towards a sustainable mobility. This modern, clever and efficient driving style helps to increase the quality of live: Benefiting the single individuals as well as the environment.

The elaborated but easy to adapt greener driving tips allow a new driving experience. The implementation of tips helps to save fuel and reduce costs. This increases also traffic safety and air quality.

UNEP conducted this campaign together with sponsors from the automotive industry. The goal was to promote sustainable mobility and convey environmental-friendlier driving.

- Driving Skills for life

Ford Driving Skills for Life (DSFL) was established in 2003 by Ford Motor Company Fund, the Governors Highway Safety Association, and a panel of safety experts to teach newly licensed teens the necessary skills for safe driving beyond what they learn in standard driver education programs. With the support of DVR an Ecodriving module could be integrated in the Driving Skills for Live program. Additionally DVR educated and qualified trainers in Asia, South Africa, Australia and the USA to convey the new driving style in an efficient way.
Spritsparstunde AMI 2003 bis 2010

In cooperation with the VDIK the "Spritsparstunde DVR/VDIK" with participation of 14 car manufacturers could be carried out in 2010 for the eighth time. More than 2,000 fair visitors used the offer and tested the contemporary driving style with support of a highly qualified trainer on the streets of Leipzig. The Evaluation also carried out for eight years in a row confirmed the knowledge from the years before. It gave interesting insights into the experience dimensions and effects of participants in the last eight years. Unfortunately the suppliers do not use the knowledge of the time row investigation in a way it could be done.

For more detailed evaluation, quality standards and monitoring results see Annex “To the point 3”.
3.6. Greece

3.6.1. Ecodriving training for licensed drivers

- **Name under which the training is offered (national language and literal translation into English):**
  
  SAFE DRIVE® - Ecodriving Training.

- **Name of the training institution and other relevant stakeholders involved:**
  
  Driving school ZOGRAFOS – Other stakeholders including DVR which supported the creation of the concept & content of SAFE DRIVE®.

- **Place of the training courses:**
  
  All over Greece.

- **Costs of the training courses:**
  
  The cost per trainee is 380€ + VAT. For large fleets the cost per trainee is 320-360 € (for 100 to 800 trainees) while for 800 trainees and up, price is under negotiation.

- **Applicability of subsidies:**
  
  Private and public companies and organisations in Greece are given the opportunity by law to reserve a small and specific part of their salaries expenses (0.45%) for training purposes. This expenditure is then returned to companies by the managing organisation OAED. Part of this amount could probably be used for covering ecodriving trainings expenses.

- **Information since when the courses have been offered:**
  
  Probably prior to year 2005. This year is a milestone for the SAFE DRIVE methodology as it was presented in a paper produced by ZOGRAFOS driving school, the University of Patras and ATS Ltd.

- **General content and duration of the activity:**
  
  Usually this training is a 2 days workshop. The training seminar involves 12 steps:

  1. Exchange of experiences – Driving culture in Greece and in Europe;
  2. Benchmarking of theoretical background of trainees using dedicated software;
  3. Determination of driving qualities of trainees (peripheral visibility, reaction time etc) using simulator;
  4. Practical driving test using simulator or diagnostic equipment (Dash-Dyno SPD, Performance – Diagnostic Scan Tool). In this step various parameters are measured such as instant and average CO₂ emissions, average speed, distance, instant and average RPM, fuel consumption, acceleration/deceleration, use of gears, use of GPS and real power and torque of the vehicle;
  5. Driving style analysis;
  6. Theoretical training on ecodriving;
  7. Writing down theoretical knowledge for 2nd time and comparison with initial data;
  8. Writing down of driving quality parameters for the 2nd time and comparison;
  9. 2nd practical driving test;
  10. Comparison of data and driving style prior and after theory;
  11. Results, discussion and certification of attendance;
  12. Follow-up for free, for one year after the training.

- **Total number of participants:**
In total the driving school ZOGRAFOS has trained more than 400 licensed drivers, 90 courier drivers, 50 truck drivers and 80 bus drivers (numbers until June 2009).

- **Duration of the training courses offered:**
  Usually 2 days seminars.

- **Structure of the training courses offered:**
  May be groups of 20, 40 or 60 trainees.

- **Use of monitoring instruments:**
  Yes, already mentioned (Dash-Dyno SPD, Performance – Diagnostic Scan Tool).

- **Name under which the training is offered (national language and literal translation into English):**
  Οικονομική, Οικολογική και Ασφαλής Οδήγηση - ECODRIVING.

- **Name of the training institution and other relevant stakeholders involved:**
  KYRIAKAKIS DRIVING SCHOOL.

- **Place of the training courses:**
  At the premises of the trainees (companies).

- **Costs of the training courses:**
  About 50-150 € per training course.

- **Applicability of subsidies:**
  As already mentioned, companies take advantage of the LAEK account for training purposes (subsidy from the government to companies that provide trainings to their employees). However it still needs clarification, whether training costs other than theoretical seminars are eligible. To our knowledge some companies find it difficult to cover practical training expenses using this subsidy.

- **Information since when the courses have been offered:**
  Since 2005.

- **Duration of the training courses offered:**
  From several hours to 2 days.

- **Structure of the training courses offered (e.g. number of participants and trainers per course, share of theoretical/practical training):**
  15-30 trainees per course and 1 trainer. Only theoretical training.

- **Main topics (contents) of the training course:**
  Environmental, safety and financial benefits of ecodriving, techniques of ecodriving, monitoring of results.

- **Information whether the practical training takes place on public roads:**
  No practical training.

- **Use of monitoring instruments:**
  No, since there is no practical training.

- **Advertisements for the training courses:**
  Word of mouth.

- **(Estimated) public awareness of the offer (are drivers aware that the offer exists?):**
  Little or no public awareness.
Possibilities of cooperation with ECOWILL:
Yes.

Name under which the training is offered (national language and literal translation into English):
Ecodriving training for licensed drivers (not professional drivers).

Name of the training institution and other relevant stakeholders involved:
CRES.

Place of the training courses:
At the premises of the trainees’ company.

Costs of the training courses:
For free for employees of Leaseplan, Bristol Myers Squibb, Public Power Corporation. These trainings took place within the IEE project “FLEAT”. Also CRES is training for free its employees.

Applicability of subsidies:
In the case of the FLEAT project trainings, subsidies came from Intelligent Energy Europe.

Information since when the courses have been offered:
Since 2009 for the FLEAT project. Within 2010 for the CRES employees.

General content and duration of the activity:
Presentation of ecodriving and its techniques, national and European legislation/policies on energy saving, environmental, safety and financial issues, vehicle technologies, case studies.

Total number of participants:
12 for the companies of the FLEAT project trainings and about 70 for the CRES employees.

Duration of the training courses offered, structure of the training courses offered (e.g. number of participants and trainers per course, share of theoretical/practical training):
1 day training for 4 trainees and 1 trainer. About equal share of theory and practice.

Main topics (contents) of the training course:
The training involves theoretical and practical part.
Content:
Practice – assessment of the trainee’s current driving style and relative measurements (fuel consumption, average speed…).
Theory – presentation on ecodriving, techniques, practices in Europe, legislation, vehicles’ technologies, case studies.
Practice 2nd part – assessment of the driver’s performance after the theoretical training and comparison with the data of the first route.
Results, discussion, certification of attendance, detailed report on results and environmental footprint, recommendations.

Information whether the practical training takes place on public roads:
The practical training takes place on public roads. The selected route includes various traffic levels and is carefully selected in order to avoid differences in traffic conditions between first and second practice tests.

Use of monitoring instruments:
Trip computer, portable tyre pressure measurement device.

Advertisements for the training courses:
Not necessary as we talk about free courses. Results are communicated according to the needs of each project (i.e. FLEAT).

- **(Estimated) public awareness of the offer (are drivers aware that the offer exists?):**

  Not necessary, as these trainings are within the framework of a specific European project such as FLEAT. In general, public awareness is quite low in Greece.

- **Possibilities of cooperation with ECOWILL:**

  Yes.

- **Name under which the training is offered (national language and literal translation into English):**

  Ecodriving presentation

  - **Name of the training institution and other relevant stakeholders involved:**
    TOYOTA Hellas.

  - **Place of the training courses:**
    At the customer’s premises.

  - **Costs of the training courses:**
    For free (as part of the offer when a company purchases Toyota vehicles).

  - **General content and duration of the activity:**
    Theoretical presentation of ecodriving principles.

  - **Duration of the training courses offered:**
    About 2-3 hours duration per seminar.

  - **Structure of the training courses offered:**
    Totally theoretical.

- **Name under which the training is offered (national language and literal translation into English):**

  Ecodriving training.

  - **Name of the training institution and other relevant stakeholders involved:**
    QUALITY AND SAFETY LTD.

  - **Place of the training courses:**
    At the clients’ premises.

  - **Information since when the courses have been offered:**

  - **General content and duration of the activity:**
    Theoretical presentation of ecodriving and its benefits

    Practical part (implementation of theory)

    Assessment of results – reports.

    The duration of the seminar is 1 week for each group of 12 trainees.

  - **Total number of participants:**
    In total about 10,000 trainees.

  - **Duration of the training courses offered:**
1 week for 12 trainees.

- **Structure of the training courses offered:**
  12 trainees for 1 trainer, about equal share of theory/practice.

- **Information whether the practical training takes place on public roads:**
  The practical training takes place on public roads.

- **Use of monitoring instruments:**
  Use of the vehicles’ trip computer.

### 3.6.2. Policy activities, governmental programmes

- **Name of the activity/programme (national language and literal translation into English):**
  National Program “SAVE” (ΕΞΟΙΚΟΝΟΜΩ).

- **Name and role of the activity provider and other relevant stakeholders involved:**
  Program funded by the Ministry of Environment, Energy and Climate Change. It involves municipalities with population over 10,000 inhabitants that are willing to be co-funded for energy saving actions.

**Framework of the “EXOIKONOMO” program:**

- Energy Services Directive 2006/32/EC;
- National Energy Efficiency Action Plan;
- Covenant of Mayors;
- Framework Operational Program: Competitiveness;
- Framework Regional Programme.

Funding is provided for actions in 5 different axes:

- Existing municipal buildings;
- Public spaces;
- Municipal **transport**;
- Municipal installations;
- Publicity – awareness.

One of the major actions foreseen for funding municipal transport actions and raising public awareness is **ecodriving**. It is expected that ecodriving will lead through this program to an annual saving of 290 tonnes CO$_2$.

- **Overall target of the programme:**
  As already mentioned in the description of the framework of the program, the program aims at several targets such as climate protection, increase of energy efficiency, increase of publicity awareness, cost saving and of course traffic safety.

- **General content and duration of the activity:**
  The duration of the program is scheduled in total to be approx. 4 years.

- **Costs of the activity/programme (if known):**
  The program is co-financed by the EU in the framework of the National Strategic Reference Framework. The program provides a 70% subsidy for energy investments at local level in three different pillars (municipal buildings, transportation and mobility plans, outdoor lighting and infrastructure) of an overall 60M € budget (45M € the foreseen grants).

- **Media exposure:**
Wide media exposure at the time of announcement of the program.

- **Possibilities of cooperation with ECOWILL:**

No cooperation expected as it is strictly prohibited to receive other funding during this program.

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- **Name of the activity/programme (national language and literal translation into English):**

**National Energy Efficiency Action Plan – NEEAP (ΣΔΕΑ),** with specific targets on energy efficiency improvement by 2016 and in accordance with 2006/32/EC Directive. Ecodriving is one of the major tools to achieve these targets regarding the transport sector.

- **Name and role of the activity provider and other relevant stakeholders involved:**

Ministry of Development, Ministry of Environment, Energy and Climate Change and Ministry of Transport. It is expected in measure M4, to proceed in **ecodriving** trainings for drivers of all road transport vehicles as well as for rail transport drivers. The main target groups are driving instructors, professional drivers, private vehicle drivers and vehicle fleet managers.

- **Overall target of the programme:**

Energy efficiency is directly affected and indirectly all the rest (climate protection, road safety etc).

- **General content and duration of the activity:**

Running until 2016. Program “EXOIKONOMO” mentioned above is to this direction regarding transport and ecodriving.

********

- **Name of the activity/programme (national language and literal translation into English):**

**Official campaign of the Ministry of Transport for the promotion of ecodriving and integration of ecodriving in the training and testing procedure for new drivers.**

- **Name and role of the activity provider and other relevant stakeholders involved:**

  i. Ministry of Transport - Project leader – political / legislative action – partial funding of the campaign;
  ii. CRES – technical support for the campaign;
  iii. Association of Motor Vehicles Importers – partial funding of the campaign;
  iv. Driving Instructors – affected by new curriculum;
  v. Driving Examiners - affected by new curriculum.

- **Overall target of the programme:**

To aid in accomplishing national objectives regarding climate protection (e.g. Kyoto Protocol), energy efficiency (Energy Services Directive), road safety and aid citizens in reducing fuel costs.

- **General content and duration of the activity:**

The campaign involved a major political decision regarding ecodriving; to integrate it into the official training and testing procedure for new drivers. Accordingly, directions were given to driving instructors and examiners. The campaign had mass media exposure (tv clips, radio spots, song dedicated to ecodriving by famous singer in Greece, distribution of brochures, posters etc, press releases in all major newspapers, magazines and websites. Duration: first half of 2009.

- **Media exposure:**

Wide media exposure using almost all available means (tv, radio, press, events…).

- **Possibilities of cooperation with ECOWILL:**

The campaign has ended.
3.6.3. Ecodriving competitions and events

- Name of the competition/event (national language and literal translation into English):
  2nd Mega Test Drive.

- Name and role of the activity provider and other relevant stakeholders involved:
  Prefecture of Thessaloniki, Autotriti magazine, Mediterranean Cosmos, DEKRA, Radio Thessaloniki.

- General content and duration of the competition/event:
  8 days event, Ecodriving competition (in parallel with other safe-driving activities during the event). Practice of ecodriving in 100 new vehicles.

- Media exposure:
  Wide, mainly through numerous press releases.

*****

- Name of the competition/event (national language and literal translation into English):
  Διαγωνισμός ecodriving – Ecodriving competition.

- Name and role of the activity provider and other relevant stakeholders involved:
  Daihatsu motors and magazine “4 Trohoi”.

- General content and duration of the competition/event:
  Competition. 100 readers of the magazine formed 50 groups and each of these groups drove a Daihatsu Cuore at the “Kartodromio” track. The winner would be the driver that would achieve the lowest fuel consumption. The driver that won the big prize (1 Daihatsu Cuore) achieved a fuel consumption of 4.5 l/100km at a track that was simulating partly driving within the urban cycle.

- Total number of participants:
  100.

- Media exposure:
  Press releases, internet and magazine (4 TROHOI).

*****

- Name of the competition/event (national language and literal translation into English):
  “ΜΑΘΕΤΕ ΓΙΑ ΤΗΝ ΟΙΚΟΛΟΓΙΚΗ ΟΔΗΓΗΣΗ» - “LEARN ABOUT ECODRIVING”.

- Name and role of the activity provider and other relevant stakeholders involved:
  ATTIKI ODOS highway.

- General content and duration of the competition/event:
  The competition involved an online questionnaire on ecodriving. The winner of the big prize (1 Honda Insight) was selected randomly from a ballot. In addition, ATTIKI ODOS distributed in total 530,000 copies of a 16-page brochure on ecodriving, gave more than a 1,000 reports in 18 radio stations and promoted the campaign through internet and 11 websites.

- Advertisements for the competition/event:
  Mass advertisement in radio, internet and through press releases and the distribution of brochures.

- Possibilities of cooperation with ECOWILL:
  Possibly.

*****

- Name of the competition/event (national language and literal translation into English):
ECO DRIVING MARATHON.

- Name and role of the activity provider and other relevant stakeholders involved:
  FUTURE PROMOTIONS company (CAR magazine), TOYOTA Hellas, CRES.

- General content and duration of the competition/event:

  The competition/event took place within the framework of “Athens Tuning Show” exhibition. More than 900 visitors participated to this competition which initially involved a competition on fuel consumption in an ecodriving simulator. At the second stage of the competition, the best candidates participated in a competition “on-the-road” and the driver that achieved the lowest fuel consumption won the big prize which was one Toyota Aygo.

  In addition, during the competition, several hundreds of leaflets on ecodriving were distributed to the visitors of the exhibition.

  - Total number of participants:
    More than 900.

  - Advertisements for the competition/event:
    Wide, mainly through the various magazines of the group (FUTURE PROMOTIONS) and various websites.

  - Possibilities of cooperation with ECOWILL:
    Possible.

******

- Name of the competition/event (national language and literal translation into English):
  Eco Cars @ The Mall Athens.

- Name and role of the activity provider and other relevant stakeholders involved:
  FUTURE PROMOTIONS, CRES.

- General content and duration of the competition/event:

  Visitors of one of the greatest malls in Athens, were given the opportunity to practice with the Ecodriving Simulator (provided by CRES). At the same time several hundreds of leaflets on ecodriving were distributed at the visitors of the mall. The event lasted about 1 month.

  - Advertisements for the competition/event:
    Wide, mainly through various magazines of the group (FUTURE PROMOTIONS) and various websites.

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- Name of the competition/event (national language and literal translation into English):
  Drive Me @ Golden Hall.

- Name and role of the activity provider and other relevant stakeholders involved:
  Golden Hall (mall), CRES.

- General content and duration of the competition/event:

  Visitors of one of the greatest malls in Athens, were given the opportunity to practice with the Ecodriving Simulator (provided by CRES). At the same time several hundreds of leaflets on ecodriving were distributed at the visitors of the mall. The event lasted about 1 month.

  - Advertisements for the competition/event:
    Wide, mainly through various websites.

******
Name of the competition/event (national language and literal translation into English): Economy Competition (ECORALLY).

Name and role of the activity provider and other relevant stakeholders involved:
Auteco (VTCC – Vehicle inspection company), EKO petroleum company, Alpha Radio Station.

General content and duration of the competition/event:
The event lasted 2 days. In the competition, 30 teams (driver and co-driver) took part with the objective the lowest possible fuel consumption.

Total number of participants:
60.

Advertisements for the competition/event:
Wide, mainly through various websites and press releases.

3.6.4. Non-governmental campaigns

Name of the campaign (national language and literal translation into English): ΟΙΚΟ – ΟΔΗΓΗΣΗ (ECODRIVING).

Name and role of the activity provider and other relevant stakeholders involved:
GEFIRA S.A. (Rion – Antirion Bridge), Ministry of Transport, Safety Institute IOAS, Centre of sustainability & Excellence (CSE), European Committee.

General content and duration of the competition/event:
The company distributed brochures on ecodriving to the drivers that were crossing the bridge. In addition it gave the chance to anyone to identify its environmental footprint through an ecodriving web tool available at the company’s website.

Media exposure:
Wide, through the company’s website, press releases and other press releases on the awards that the company had for this campaign.

Possibilities of cooperation with ECOWILL:
Possible.

Name of the campaign (national language and literal translation into English): ecoΔΗΓΩ! ΕΞecoΝΟΜΩ! (Ecodriving – Saving).

Name and role of the activity provider and other relevant stakeholders involved:
AIG Greece (insurance company), CRES.

General content and duration of the competition/event:
Distribution of 100,000 copies of a leaflet on ecodriving.

Name of the campaign (national language and literal translation into English):
National Ecodriving campaign through the European project ECODRIVEN.

Name and role of the activity provider and other relevant stakeholders involved:
CRES, Intelligent Energy Europe program.

General content and duration of the competition/event:
Various promotion activities on ecodriving, within the framework of the IEE project ECODRIVEN. The campaign involved distribution of several thousands of leaflets, posters etc, wide media exposure and resulted in raising public awareness on ecodriving and to the integration of ecodriving in the official procedure for training and testing new drivers. The duration of the campaign was 1 year.

- **Total number of participants:**
  
  About 500,000 is the estimation on the number of the affected citizens from the campaign.

- **Costs of the activity/programme:**
  
  About 60,000 €.

- **Advertisements for the competition/event:**
  
  Wide through the dedicated website (www.ecodriving.gr) and other websites of the supporting organisations. Also through the distribution of several thousands leaflets and posters, give-aways and 3 press releases, several articles in the newspapers and magazines, 3 interviews in radio stations, 3 interviews on TV as well special reference at the national TV channels regarding the kick-off event.

### 3.6.5. Other relevant information

On February 2009, the driving school ZOGRAFOS distributed a press release on an ecodriving e-learning program. Trainees and trainers from 3 European countries (Greece, Cyprus and Germany) participated in this program.
3.7. Hungary

3.7.1. Ecodriving training for licensed drivers

There are initiatives to educate eco-driving for licensed drivers in Hungary. These courses have a short period (from one to a few hours) and are based on the curriculum and materials developed by the organisers. There is no central regulation, guide on how to organise these kind of courses.

The Vezetéstechnikai Centrum Kft. (Driving Techniques Center Ltd.) has two courses aiming eco-driving since 2008. Both of them are organised at Hungaroring in Mogyorod, approximately 20 km from Budapest. The Eco course (Eco kurzus) duration is 180 minutes. It is organised on public roads and the price is ca. EUR 100 (25.000 Ft + 25% VAT). The duration of the Combined course (Kombi kurzus, safety and ecodriving techniques) is 450 minutes (9:00 – 16:30). It is organised on public roads and practice fields and the price is ca. EUR 200 (50.000 Ft + 25% VAT).

http://www.tanpalya.hu/index.php?cikk=12080821JYU82ZI

The Vezetéstechnikai Centrum Kft. is interested in taking part in the ECOWILL project activities. They are ready to share their experiences, taking part in the certification system development as well as in the education activities.

The Magyar Autóclub (Hungarian Autoclub, FIA member) organises approximately one hour theoretical ecodriving trainings with materials developed by them. The main customers are international organisations that combine the driving safety training with this theoretical course. The length of the whole training and the ratio between eco-driving and other driving techniques and/or theoretical and practical parts is based on the clients’ requests. However, the tendency is that the organisations are mainly interested in safety techniques rather than in eco-driving.

The Magyar Autoclub is opened for cooperation with ECOWILL, for instance, by organising the trainings on their practice fields in Budapest. They also organise short training opportunities in a one-week period for children and also for adults on safe transport in different cities in Hungary with a moving truck system where eco-driving courses for licensed drivers could be also integrated.

There are also eco-driving courses on simulators in Hungary. For instance the V. Sebesség Kft. driving school operates ecodriving simulator with a moving truck system. However, these courses targets currently not category B but mainly the other licence categories.

3.7.2. Ecodriving competitions and events

Currently there are no eco-driving related competitions or events in Hungary. All road shows or campaigns are focusing on road safety measures and safety driving techniques under which all Hungarian experts generally understand that ecodriving is part of it.

3.7.3. Non-governmental campaigns

There are many news, advertisements, campaigns concerning the environmental aspects of driving in Hungary, however, most of them are technology and not driving behaviour related. There are also several car presentations linked to sport and healthy lifestyle events and activities, however, these programmes also emphasise more the technological improvements (fuel alternatives, hybrid cars) than the behaviour of the drivers.

There are only online info sources on ecodriving in Hungarian at the moment, for instance, www.zoldjogsi.hu, www.savemorethanfuel.eu/hungary.
3.7.4. Assessment

In Hungary there is no official licensed drivers’ assessment. The driving exam is taken in Hungary only once without further assessment. The drivers do not have to repeat their exam or refresh their knowledge in any way unless they are professional drivers or collect too many penalty points.

Most interviewed stakeholders agree that it would be beneficial to develop and implement two- or multiple level assessments in Hungary.
3.8. Italy

3.8.1. Ecodriving training for licensed drivers

A part from strictly institutional initiatives, in Italy there are many project regarding eco drive. Some of them are addressed to companies and fleets, while others regards just licensed drivers.

1. Among the training courses for institutions and employees, there is a project of eco-driving led by **Euromobility**, which is an association that seeks to organize courses drivers interested in driving better and save resources. Euromobility organizes training courses on Mobility Management and has also launched the first **National School of Ecodrive**. As for the training course on mobility management, these courses are addressed to: Manager Mobility Area and Company, professionals and technicians sustainable mobility, business operators responsible for public transport services and professionals. The training courses were born in 2002, offer a high level of teaching staff. Participation are limited to a maximum of 15 people and are generally organized in Rome. After completing this course, participants will receive a certificate of participation compared with a minimum of 75% of hours attended.

The National School of Eco Guide (http://www.ecoguida.com) is the daughter of the Project made by **Euromobility** in 2008, the first Italian experience of driving practices environmentally and economically sustainable. The School offers training courses on techniques of eco guide for employees of companies and institutions that manage a corporate fleet, with the purpose of obtaining economic and energy savings.

Trainers: courses are taught by a team of qualified instructors trained in international schools leading Eco Guide.

The course: one day of training includes both classroom and practical tests with instrumented cars. The course will be paid directly by the applicant company or as one of the facilities provided by the National School of Eco Guide. The course topics focus not only on driving techniques but also on structural aspects and basic maintenance to get the desired savings in terms of consumption: engine start, speed, use of air conditioning, load management additional, periodic inspection of the tyres.

Advantages for the company: the courses respond to companies looking for specialized training. In considering the inclusion of their drivers in eco-driving course, the company should consider several factors:

- Money saving: Eco-driving can achieve fuel savings of up to 25% for petrol cars and 20% for diesel, amounting to a savings for mileage of 15,000 km / year of 200/300 € per year for petrol and 180/270 € for diesel. The savings obtained generates a return for the company so important to be well above the cost of the course;
- CO₂ reduction: in addition to economic advantages, Eco-driving contributes to the greenhouse effect by reducing CO₂ emissions equal to 15 grams per kilometre;
- The Corporate Social Responsibility: the company's commitment to adopt behaviours that go beyond mere compliance with legal obligations through a business model based on shared values of social and environmental, pay in terms of visibility and economic return.

2. Among other initiatives there is **GuidarePilotare** (http://www.guidarepilotare.com) which was born as safe driving school car in 1982, the first in Italy. From 1999, it began to provide safe driving courses for the motorcycle and, since 2005, also for industrial and commercial vehicles. Since 1985, it is the official school of BMW Group Italy. The experience of training and scope of action GuidarePilotare understand and develop the knowledge of all the elements that contribute to the security of man, of the vehicle and of environment.

The course aims to illustrate the main situations of risk for these vehicles, also a function of load, the effectiveness of electronic security systems through their practical test. During the course the driver receives information on the dynamics of the vehicle on defensive driving, situations of potential risk and the driving techniques to save fuel and vehicle. There are experiences also with
the vehicles with trailer, driving situations and risks typical of road, reproduced on the track with different types of charge thanks to special low grip asphalt and moving obstacles; there is also a guided tour with metering in relation to the style driving, thereby acquiring the correct automatic driving.

- **Track:** Autodromo Santamonica Misano A. (RN): “Trail of safe driving” with irrigation facilities, moving obstacles, asphalt and specialty paints.
- **Duration:** 1 day. 09.00 - 13.00 - 14:00 to 18:00.
- **Group:** 24 students divided into 4 groups.
- **Vehicles:** 3 / 4 vehicles, loaded with ½ tank.
- **Instructors:** four instructors.
- **For each student:** Pass Diploma and custom.
- **Staff:** a mechanic.

Alternatively, it is possible to arrange courses by the customer. Driving economically blends perfectly with the demands of safe driving because it is based on technical knowledge but also on the ability to predict the movement and anticipate situations typical of mobility roads and motorways. Eco Driving is also more respectful of mechanics, maintains a high level of attention and demonstrates the professionalism that is essential for them to perform the job of chauffeur.

- **Duration:** 1 day, the group only in theory and practice mode to 1 on a vehicle (2 hours).
- **Group:** 4 per day.
- **Theory:** Interactive and Multimedia CD Rom.
- **Instructors:** 1 instructor from 9.00 to 18.00.
- **Place:** at the client's place.

3. **Iveco** ([http://web.iveco.com/italy/Servizi/Pages/formazione-Iveco-driver-training.aspx](http://web.iveco.com/italy/Servizi/Pages/formazione-Iveco-driver-training.aspx)) is organizing the Driver Training, Eco driving courses aimed in particular at drivers of Iveco Stralis, with advanced training in the classroom and on the road that lets people know in detail the vehicle and improve the driving style to reduce fuel consumption and operating costs, respecting the environment. The courses were held with Iveco vehicles and structured on two different training sessions: classroom training and the "walkaround" static vehicle road test with demo driver on board.

The courses were held in companies with customer's vehicle ad hoc and structured according to different needs, from course structures on the place.

The training offer is on two types of study:

- **Vehicle Technology:** the course approach to the Iveco Stralis aims to achieve a good understanding of the medium and its main features, with a proper driving technique;
- **EcoDrive:** The advanced course, driving the Iveco Stralis, for optimum use of the vehicle and acquire a driving style really able to control its consumption.

4. There are other initiatives directed to privates, like that undertaken by **Master Driving** ([http://www.masterdriving.it](http://www.masterdriving.it)), dealing with, road safety and, in particular, theoretical and practical driving at all levels. It’s established successfully and directed by Maurizio Verini, Italian and European Rally Champion. It is not really an ecodrive course, but Master Driving has trained over 20,000 people and, above all, made the safe driving as a real specialization to the point of becoming the official structure of the Automobile Club of Italy, so it is possible that in the future they will organise also training course for ecodriving.

Master Driving produces events and training courses that you can frame such as training (path of the Law 81/2008 - formerly 626 – Incentive).

In particular:
- Safe driving;
- Training program on line;
- Economy drive for trucking.

With the help of special instruments of Siemens VDO for measuring consumption and driving style, the trainee can gain a technique that will allow driving comfortably and economically, without reducing the average speed without changing the journey times. The training course lasts for two days at the client’s place.

Through these courses, for example, a company that uses about 3,000,000 litres of diesel per year (approximately 20 vehicles) can easily save from 5 to 10% of fuel; in numerical terms, about 200,000 litres of fuel savings that can be worth at least 170,000 euro per year. As well it is worthy for the community in terms of reduction of carbon dioxide emissions.

5. **Ecopatente** [http://www.ecopatente.it](http://www.ecopatente.it) is another interesting project organized thanks to the collaboration between **Legambiente and Confarca**. Among this project’s partners there are: FIAT, Bosch, ENI, Magneti Marelli. Ecopatent is sponsored by Ministries of Youth and of Environment.

The project was conceived by CAA Group Ltd and is aimed at young prospective drivers, but also to those who are already licensed, with the following objectives:

a) Create awareness on the environmental and energy conservation;

b) Disseminate information about intelligent, fair and environmentally friendly use of car;

c) Involve the institutions in a high-profile project.

In this project two target groups of users are involved: both students and coach which want follow training courses.

After the success of the first edition – from October 2009 to February 2010 – which was attended by 700 driving schools and delivered 11,000 Ecopatenti, the project Ecopatente 2010 takes the next leap: from June 2010 to February 2011, all persons (17/18 years), who register for a course at Confarca participating in the initiative, will receive a certification for the evaluation of credits in schools upper second degree.

For each participant will be sent a teaching kit to educate young people on basic rules related to the respect of the environment.

The young future drivers, at the end of the course, will respond to a questionnaire to get the EcoPatente. The ecdrivers will receive a “You and Eni” card with 50 points and, if the answers to questions are correct, they will receive the EcoPatente and participate in a competition to extraction, where winners will be both the student and the Driving School. In support of this initiative is dedicated the website [www.ecopatente.it](http://www.ecopatente.it).

Furthermore, the project foresees, for young people participating in the project on time, some benefit related to the purchase of a new car. In fact, FIAT – partner of the project - will offer the following benefits:

- 300 Euros of discount,
- Free Rca for a year;
- No cash advance for the purchase of a car;
- discount on the cost of opening practice; discount on the price for obtaining loan capital
- subsidized rate. Easy-terms loan for the purchase of a car.

All the people who will take the Ecopatente project will be part of a competition which provides an award of a new Fiat 500 Lounge, offered by the Fiat brand.

Considering the features of this projects and its benefits for young people, Ecopatente can be identified as a best practice to spread in other countries.
3.8.2. Policy activities, governmental programmes

Italy lacks real guidelines or specific policies which aim to reduce pollution and emissions of greenhouse gases through increased awareness of citizens and businesses regarding the proper maintenance of vehicles and the adoption of a correct driving style. Moving from theory to practice is one of the most important steps to be taken into account when discussing private cars, trucks and vans business or vehicles used for public transport or utilities.

It is not enough to choose and use vehicles to transport in laboratory tests, as the theoretical performance may differ considerably than the daily practice. In fact, there can be strong negative deviations due, often, to a poor maintenance and to a wrong driving style. The problem, especially in Italy, is that practically all these lines of action are left to the free willingness of those involved. No program, directive, policy direction or field activities specifically pursue the goals of reducing consumption and emissions.

In terms of legislation or implementing special procedures to “force” drivers to virtuous behaviours such as reducing the speed limit on roads and highways or the practice of fees or incentives to reward those who use vehicles for fewer miles are not being applied today in Italy.

The institutional intervention is limited for now, to the publication of the “Annual guide on fuel savings and on carbon dioxide emissions of cars” drawn by the Ministry of the Economic Development, together with the Ministries of the Environment and of the Infrastructure and Transport. The document is provided by European Directive 1999/94, implemented in Italy by the President of the Republic (17 February 2003, n. 84).

The Guide gives to all consumers useful information related to a conscious purchase of new cars, aimed to contribute to reducing greenhouse gas emissions and energy saving.

Together with the usual advice to motorists for driving style eco, with important suggestion also in terms of road safety and economic efficiency, the edition 2009 gives details of consumption in different cycles (urban, suburban and mixed) and emissions related to all car models on sale at April 30, 2009. It also contains a list of models which emit less carbon dioxide, making the difference between the one with gasoline power and the diesel ones.

Special mention is reserved for certain models that achieve the same results through a “biofuel” power with use of LPG or CNG, or with the hybrid (gasoline engine and electric motor).

The document is just a part of the strategy oriented to reducing greenhouse gas emissions in line with the targets set at European level and the Kyoto Protocol. To fulfil agreements made in these international meetings, the Government has introduced incentives to purchase new cars, connected to low emissions.

The text also recalls - with the list of 10 rules for ecodriving - that a smart drive and a proper maintenance of the car can reduce fuel consumption and CO\textsubscript{2} emissions by 10-15 per cent, also favouring the road safety.

The following part is related to a brief summary of the main suggestions contained in the guide:

1. Accelerate gradually;
2. Enter as soon as possible the higher gear;
3. Maintain an uniform speed;
4. Drive in a soft and careful way to avoid sudden breaking and gear changes;
5. Decelerate gradually releasing the accelerator pedal and holding the gear;
6. Turn off the engine, as the vehicle stops;
7. Maintain the inflation pressure of tires within the recommended values;
8. Remove ski rack or luggage rack immediately after use and carry only essential items to keep the vehicle as far as possible in the original state;
9. Use electrical devices only for the time necessary;
10. Restrict the use of air conditioning.
The following part is related to the *vehicle conditions*:

1. Treating performing vehicle maintenance checks and the records provided by manufacturer. In particular, change the oil at the right time and properly dispose;
2. Periodically check the tyre pressure when tyres are cold, at least once a month and before long journeys. Pressures too low significantly increase fuel consumption. Under these conditions, also, the tyre is subject to wear faster and to a deterioration in performance;
3. Changes in size of tyres can affect the original performance;
4. Use winter tyres only in seasons when weather conditions will needed as they can cause an increase in fuel consumption as well as rolling noise;
5. Do not travel in heavy load conditions: the weight of the vehicle and its structure strongly influence consumption and vehicle stability. Remember that is forbidden to overcome maximum mass indicated on the overall vehicle registration document (vehicle overload);
6. Remove roof bars or roof racks by the end of their use. These accessories, in fact, as other modifications such as spoilers or flaps of the body, worse the aerodynamics negative influence on vehicle fuel consumption;
7. Avoid travelling with the windows open as this causes a negative effect aerodynamics of the vehicle and, consequently, fuel consumption.
8. Use electrical devices only for the time necessary. The heated rear window of the vehicle, the additional headlamps, wipers, fan of the heating absorb a considerable amount of power, thus leading to a greater consumption of fuel.
9. The use of air conditioning significantly increases fuel consumption, also of 25% at certain conditions. Therefore, when the outside temperature allows, avoid the use of air conditioning and use preferably aerators.

While, the next stage is related to the *driving style*:

1. After starting the engine it is advisable to leave immediately and slowly, avoiding bring the engine revs high. Do not heat the motor vehicle is stationary, either at the idle or at high speed: under these conditions the engine warms up more slowly, increasing consumption, emissions and wear of the mechanical parts.
2. Avoid unnecessary manoeuvres such hits accelerator when you stop at traffic lights or before turn off the engine. This type of manoeuvre, in fact, causes an increase in consumption and pollution;
3. Turn off the engine during stops;
4. Gear selection: as soon as possible to go in top gear (compatible the correct operation of the engine and traffic conditions) without pushing the engine at high regimes on interim reports. Use low gears with high regimes to achieve rapid acceleration leads to a significant increase in consumption, emissions pollutants and engine wear;
5. The vehicle fuel consumption increases exponentially with increasing speed. It becomes therefore necessary maintaining a moderate speed and more uniform as possible, avoiding unnecessary braking and shooting causing an increase of fuel consumption and emissions. It's important to maintain an appropriate distance security from others vehicles;
6. Acceleration: violently accelerate sharply penalizes consumption and significantly increases emissions. We suggest, therefore, if driving conditions so permit, to accelerate gradually;
7. Deceleration: decelerate, preferably by releasing the accelerator and taking gear, taking care to avoid damaging the engine (in this mode, the engine does not consume fuel, if equipped with the device cut-off ”).
driver training and development of new technologies for mobility. In particular, he suggested a European Road Code, as a single text that uniform behaviour of road users too often subject to different rules and inconsistent from country to country. After the free movement of people and goods, it is time to effectively regulate the movement of vehicles within the European Union with the intent to create a single culture of road safety. Obviously, this intervention concern road safety more than ecodrive, but probably, the creation of a unique code could help to introduce some rules also on ecdriving directed to all European Union Member States.

3.8.3. Ecodriving competitions and events

In Italy, people organize many local events regarding ecdriving but only a few are to be considered of national breathe.

- Among them, the seminar on Friday, July 2 2010(14.00 - 16:30), organised in the city of Pisa (Tuscany) where it was presented The Introductory seminar Eco Guide - a new driving style “energy efficient, environmentally and economically beneficial”, organised by the National School of Eco Guide sponsored by Euromobility & ClickUtility Ltd. The seminar, following a theoretical introduction, has provided practical tests with vehicles instrumented with on-board devices can store the monitored data and verify the actual savings achieved through the application of eco driving techniques.

Program:

- Eco-driving or environmental benefits and energy-Lorenzo Bertuccio - Scientific Director Euromobility;
- Eco driving techniques Fabio Celin - Andrea Zampieron instructor.

The practical ecodriving lessons were limited (after registration) and had no costs for participants (max 15 people). The practical tests were managed by a team of qualified instructors trained in international schools leading Eco Guide.

- Another very important initiative was held on Tuesday, June 22, 2010 at 11:30, in the city of Rome with press conference to present the second edition of the project EcoPatente. After the success of the previous year, in fact, it was organised the second time to try to disseminate as much as possible of these so important concepts.

3.8.4. Non-governmental campaigns

On February 17, 2010 it was officially introduced in the province of Cuneo, Eco Fleet Drive: Fiat's new software which, from March 26, helps companies manage their fleet of cars and economically sustainable. The event was presented to all mass media (tv, radio, newspapers and on line) and in the following part there is the link to the campaign: http://www.fiat.it/cgi-bin/pbrand.dll/FIAT_ITALIA/blueme/blueme.jsp?categoryOID=-1073819109.

Generally speaking all the events and campaigns regarding ecdriving have different way of communication: i.e. Ecopatente, to spread its initiative has used also Youtube, while, Legambiente was mainly directed to television. Many of them have also prepared a brochures or fliers.

In the following part, it is possible to find all the material used by Ecoguida to spread the concept of ecdriving: http://www.ecoguida.com/download/download.htm.

3.8.5. Assessment

One of the most important innovative systems created to spread the ecodrive culture was made by Fiat with Eco Drive. The project, regarding private and fleet, was born to solve the problem of the green for free: the consumers desiring environmentally friendly car, are not always willing to spend higher numbers. For new cars, Fiat has chosen to accompany the technical improvements also an application that incentives for motorists to adjust their driving style in eco-friendly way, without too much effort and so totally free. The way to use it is very simple: it is necessary to insert a USB key in
the door and start the car. Once the route is completed, the Eco Drive software (available free online) is able to process data, prepare a report card pilot and suggest some tricks to improve their performance under acceleration, deceleration, and speed changes.

Till now date, the first version of Eco Drive has about 100,000 registered users, of which one third has already become part of “Ecoville”, an interactive community in which drivers, animated by a spirit of healthy competition, challenge each other to reduce the carbon footprint of their car and improve their score Eco Index (performance index of the guide). The advantage of this system is not only for the environment but also for the portfolio: the Turin carmaker has decided to go a step further and offer companies an evolved version of the program that allows you to monitor fuel costs and more cars. With Eco Drive Fleet, companies will be able to keep constantly monitoring the efficiency of the entire fleet or individual groups, as well as make projections of the impact of the possible purchase of new cars.

The program will obviously increase efficiency and significant savings provided that the challenge has been collected from all employees and that they commit themselves seriously to improve their performance behind the wheel. In this regard, Fiat has, therefore, offered further assistance, by entering the Fleet in software Leaderboard Challenge, a table, in a real contest for sustainability, and shows the ranking of the best performing drivers.
3.9. **Lithuania**

In 2010 the first activities of ecodriving trainings for licensed drivers have started in Lithuania. Before that no major activities have been taking place except for eco-rally which was organised annually since 2003 and some occasional events organised by car dealers and other organisations.

### 3.9.1. Ecodriving training for licensed drivers

In Lithuania one organisation provides ecodriving trainings for licensed drivers. This is EcoDrive Academy (*in Lithuanian: eco:Drive akademija*).

Partners and the main sponsors of the EcoDrive Academy is JSC „Autobrava“ (FIAT representative in Lithuania) and magazine about cars „AutoBild“. Ecological movement „Eko Banga“ is the other partner of the EcoDrive Academy.

The EcoDrive Academy started its activity in April 2010. Academy provides trainings both for the private persons and for the companies. Trainings include theory and practical driving trainings. Training courses are divided into 4 levels. The first level is dedicated for teaching basics of ecodriving. Other levels include deeper theoretical knowledge and development of practical abilities. Trainings take place in the premises of JSC „Autobrava“.

Until September 2010 three courses of ecodriving basics (first training level) have been held. It is planned that until the end of this year total number of participants will reach 100.

The first level of trainings is provided free of charge. Course of ecodriving basics last for 3 academic hours. It is organised for groups of 20–30 persons. During course of ecodriving basics a lot of attention is paid on the main tips of ecodriving, technical state of a vehicle. Driving in different traffic and weather conditions is discussed. Environmental protection is emphasised. It is emphasised that any car can be driven in the environmentally friendly way. It is explained that ecodriving should become a life style and not just the way of driving. Ecodriving should be applied in all fields starting from walking on foot to new cars technologies.

For further courses one should apply individually. It is planned that deeper theoretical trainings will be organized for smaller groups. It is planned to go deeper into details of the subject taking into account types of the cars driven by participants and subjects having the biggest impact on driver's habits formation. Practical trainings will be provided individually. Price of the trainings is not defined yet.

Ecodriving trainings for companies are paid. They are prepared individually, taking into account company's fleet structure and type of activities.

Information about ecodriving courses is announced on the EcoDrive Academy website (*www.ecodriveakademija.lt*) and other popular news portals. The main recommendations and information about the EcoDrive Academy activities is announced in magazine AutoBild.

### 3.9.2. Ecodriving competitions and events

1. Annually economic road trip by cars – Eco-rally (*in Lithuanian: Eko žygis*) is organised in Lithuania.

   The first Eco-rally was organised in 2003 by public company „Saugus ratas“. Since 2006 it is organised on annual basis. In 2009 it took place twice. For the first time it was held in winter conditions.

   Supporters of the Eco-rally are LITBIOMA (Lithuanian Association of Biomass Energetics), JSC „Michelin padangos“ (tyres), Transeksta (Lithuanian Association of MOT Companies), Linava (Lithuanian National Road Carriers’ Association).

   Eco-rally lasts for 1 day. This winter it is planned to organise 3 days eco-rally. The longest rally took place in 2006 – 563.7 km. In 2008 – 152.53 km. That year the same route was also driven by bicycles.

   General rules of the rally. Teams are driving a defined route (which usually includes different types of roads – city roads, highways, gravel roads) at a set average speed (according the road rules). Teams
are driving their own cars, which have to be in good technical state, insured. Cars are divided into classes according to the engine volume. The main goal is to use the least amount of fuel to drive the defined route.

Participants of the rally are ordinary drivers (mostly members of journalists' auto club). In 2003 6 teams participated in the Eco-rally. During the last years interest grew sharply. In 2010 number of the teams reached 25 (actually it was limited to this number due to organisational difficulties with the higher number of participants).

Participation fee is app. 43 € (for one day rally).

Information about eco-rally is announced on the organiser's website www.saugusratas.lt. Press conferences are held before the competition starts. After the competition press releases are distributed.

2. On 23 October 2010 Eco:Drive Academy organised eco-rally. Participants of the theoretical lectures of the Academy and finalists of the competition of ecodrivers announced by magazine "Auto Bild" took part in this rally. 17 crews participated in the rally. They were divided into 5 classes and drove 230 km in 4 hours. (www.ecodriveakademija.lt).

3. On 23 October 2010 "Vilnius CO2 Green Drive" event took place in Vilnius (http://www.vilniusco2.lt). The international interactive art and climate event "CO2 Green Drive" (Danish initiative developed in 2008 by the Danish artist Jacob Fuglsang Mikkelsen and the Danish Cultural Institute) after success in Copenhagen, Roskilde, Milan and Riga was held in Vilnius.

During that event parade of the newest and most intriguing electric vehicles was held. During that parade environmentally friendly vehicles were equipped with colour coded GPS tracking devices and painted a huge "CO2" sign above Vilnius. There were also the eco-restaurant, the green design wagon, Eco:Drive academy, environment friendly games for kids and a special pimped trolleybus etc.

Organizers of the event: Nordic Council of Ministers Office in Lithuania, Vilnius City Municipality, Danish Cultural Institute, European Commission Representative to Lithuania, project "CO2 E-RACE". Guardian of the event – Ministry of Transport and Communication of the Republic of Lithuania.
3.10. Netherlands

3.10.1. Ecodriving training for licensed drivers

1. Ecodriving training for licensed drivers

Het Nieuwe Rijden (Ecodriving). This training you can educate all over the country, because it is a training on the road. The student makes two trips. The first trip they drive in driving style as they used to. Then during a theory session the methodology of Ecodriving is explained and the student makes a second round as the principles of Ecodriving. During both trips, the fuel is measured and recorded. Then there will be an evaluation. The costs are about € 100,00. This is a half-day training. The admission requirements are a valid driver's licence B. The maximum number of students is 10 persons accompanied by 1 trainer. This training is given by different drivers’ schools. Among other things: ANWB, Prodrive and VVCR Europe B.V. The advertisements you can find on the internet. Of course VVCR Europe B.V. is willing to cooperate with ECOWILL. VVCR did train about 5,000 drivers a year. Result of the training is an average fuel reduction between 5 and 15% in practice. Also a result of the training was a damage reduction of 1,8 damages which results in a lower cost of insurance police and reducing of hidden costs of € 1,260,= per car. Best practice: a 3,500 car fleet with an accident rate of 1,5 followed a three year training of Safe&Eco driving. They did an investment of € 679,000 and made the following savings: Accident rate -26%, fuel consumption -6% and insurance premium -20%, which resulted in a saving of € 3,432,000. So the return on investment was € 2,753,000!!

2. HNR Presentatie Unit (HNR presentation Unit)

These modern HNR stand can be used inside and outside to promote the new drive. This unit is an eye catcher at each and every kick-off event. In this mode, each visitor can make a virtual ride in 1 of the 2 virtual trainers. The costs are € 3800,00 a day. This Unit you can rent by VVCR Europe B.V.

3. Rijsimulator “Virtual Trainer” (Simulator “Virtual Trainer”)

Is ideal for visitors to get acquainted with Ecodriving. Besides a theoretical explanation of the benefits of Ecodriving the trainer explains details about how to apply Ecodriving in practice. The costs are € 995,00 for 6,5 hours a day. Including a trainer. This simulator you can rent by VVCR Europe B.V.

4. Rijsimulator “Het Nieuwe Rijden” (Simulator “Ecodriving”)

The driving simulator “Ecodriving” is ideal for staff/visitors to get acquainted with “Ecodriving”. Besides the tips and explanations about the benefits of “Ecodriving” and how these can be realized, the simulator can be actively trained in use of “Ecodriving”. During a ride through the city, countryside and mountains helps the instructor in applying the facets of “Ecodriving”. You can train 12 people per day by an instructor. The costs are €1,695,00 for 6,5 hours a day. This simulator you can rent by VVCR Europe B.V.

3.10.2. Policy activities, governmental programmes/Ecodriving competitions and events/non-governmental campaigns

Ecodriving is an adapted driving style, which best fits to modern engine technology. Since the 90-ties of the previous century, the engine technology and performances of passenger cars, lorries and busses have improved rapidly, while most drivers have not adapted their driving style. Ecodriving means smart, smooth and safe driving at lower engine speeds (2,000 - 2,500 RPM), which saves 10% fuel on average. Without increasing travel time. Ecodriving is a no-regret measure that can be implemented rather easily and leads to solid results rather quickly. Ecodriving programmes result in a very favourable cost-effectiveness (amount of money spent per ton CO₂ emission avoidance). By applying a few essential ecodriving tips drivers are able to optimise the performance of their vehicles so they can really reach the levels stipulated by the manufacturer. Several European countries have implemented a more or less successful ecodriving programme. One of these programmes is the Dutch national ecodriving programme 'Het Nieuwe Rijden'.
Dutch national ecodriving programme

The Dutch national ecodriving programme 'Het Nieuwe Rijden' results from the Kyoto agreement and from national policy documents targeting CO₂ emission reductions in traffic and transport. The programme concerns a long-term strategy for the period 1999 until 2010, involving about € 35 Million.

The programme has been implemented by the Agency NL (the former SenterNovem), the Dutch national energy agency, on behalf of the Dutch Ministry of Transport and in cooperation with the Ministry of Environment. It aims to motivate (professional) drivers and fleet owners to purchase and drive passenger cars, delivery vans, lorries, busses, coaches and even trains more energy-efficiently.

The programme creates conditions and organisational and logistical structures to achieve CO₂ emission reductions. The programme cooperates with over 40 consumer and retail organisations, mainly in the transport and car business. Among these organisations are the Royal Dutch Touring Club (ANWB), the Dutch Consumer Association (Consumentenbond), the Dutch Association of Car Importers (RAI-Vereniging) and Shell.

The Dutch national ecodriving programme addresses the following issues:

- Tyre pressures;
- Driving school curriculums;
- Purchasing behaviour (e.g. car labelling and CO₂ differentiation purchase tax);
- Re-educating licensed drivers.

Important elements of the programme are also international cooperation, communication and evaluation and monitoring.

Political, social and individual benefits

The Dutch ecodriving programme has been involved in several joint international projects and the number of international activities is growing, e.g. collaboration with new accession countries in Central and Eastern-Europe.

The Dutch ecodriving programme has proven to realise substantial reductions in CO₂ emissions and to contribute to Environmentally Sustainable Transport. In 2008 the programme activities resulted in a 0.4 Mton CO₂ emission avoidance. Cumulative from the start of the programme in 1999 on the programme resulted in a CO₂ emission avoidance of over 2 Mton. The programme has also shown to have positive effects on other important policy issues like road safety, traffic noise nuisance and air quality.

Ecodriving reduces:

- Fuel consumption (10% on average);
- Vehicle maintenance costs;
- Stress;
- Noise nuisance;
- Local air pollutants;
- Green house gasses.

Ecodriving improves:

- Traffic safety;
- Comfort.

Communication and marketing

The programme is supported by a corporate communication and marketing strategy, which stresses individual benefits and hedonistic elements, such as safety, comfort, fun of driving and cost reductions. Furthermore the programme positions and markets 'Het Nieuwe Rijden' as a product. Energy savings and CO₂ emission reductions come as a side effect with the individual benefits. In
communication and marketing ecodriving is presented as the driving style that best fits modern engine technology.

The Dutch ecodriving programme communicates the following main driving style tips:

- Shift up as soon as possible, between 2,000 and 2,500 RPM.
- Drive 50 in the 4th gear and 80 in the 5th gear.
- Look ahead as far as possible and anticipate to surrounding traffic.
- When you have to slow down or to stop, decelerate smoothly by releasing the accelerator in time, leaving the car in gear.
- Use fuel saving in-car devices

The programme promotes in-car devices like on-board computers, cruise controls, stop-start systems and automatic tyre pressure check systems, as means to support an ecodriving driving style.

Monitoring and cost effectiveness

The Dutch ecodriving programme is evaluated annually. The aim of the programme is to reduce CO2 emissions from traffic and transport. The calculations for the estimated CO2 emission avoidances are done with a specially developed monitoring methodology. The premises of this methodology have been approved by experts. The avoidance of 1 ton of CO2 emissions through the ecodriving programme turns out to cost less than € 10,-.

Achievements of the Dutch ecodriving programme

- More than 90% of the Dutch driving instructors and examiners (6,500) were trained in ecodriving
- Since 2008 ecodriving is incorporated in the diver test for buses, trucks and passenger cars.
- A large mass media campaign (e.g. TV, radio and print) started in 2004, mainly focussing on private car drivers. In 2009 82% of the Dutch licensed drivers are familiar with the ‘Het Nieuwe Rijden’ campaign and the contents of ecodriving. More then 1/3 of them also applies ecodriving.
- The programme cooperates with a large network of consumer and retail organisations (over 40), mainly in the transport and car business. These organisations actively promote ecodriving to the target groups.
- A (re-)certification system for ecodriving trainers has been set up.
- A great range of training possibilities has been established ranging from e-learning to training courses on the road.
- Due to its success and good results and having grown to maturity since 1999, the ecodriving product ‘Het Nieuwe Rijden’ will be transferred to the private sector mid 2010.
- A 0.4 Mton CO2 emission avoidance in 2008 and a cumulative CO2 emission avoidance of over 2 Mton since 1999.

More information on ecodriving programmes, activities and courses in various EU member countries can be found on www.ecodrive.org. Further fleet related ecodriving can moreover be found on www.fleat-eu.org.

The program “Het Nieuwe Rijden” will be handed over to the Institute for Sustainable Mobility on 01-10-2010.

3.10.3. Assessment

1. E-learning “Het Nieuwe Rijden” (E-learning “Ecodriving”)

With the e-learning “Ecodriving” the participants teach among other things eco-driving, fuel savings and the importance of proper tire pressure. The online e-learning can just be followed at the computer at work or at home. The e-learning consists the following 4 sections: General Information, Tips, Training and the Test. The test can be registered once. The e-learning can be viewed as often as desired. The e-learning module can be made online via a link and a unique code or through a cd-rom
and a unique code will be taken. The costs are € 10,00 per code. VVCR Europe B.V. sells this e-learning.

2. Virtuele Training: Virtual trainer (Virtual Training: virtual trainer)

This virtual trainer is a driving simulation program that simply can be installed on almost every personal computer. With a mouse, keyboard or game controller you can make an innovate drive through the city, the hills outside or on the highway. In the menu you can choose gasoline or diesel, long or short routes, control with a mouse, keyboard or game controller. The virtual instructor helps to apply the principles of “Ecodriving” in practice. You get feedback about how to safe time and fuel. This is graphically supported and you can immediately see how much money you can save. If they mastered “Ecodriving”, they get an opportunity to participate in a contest with colleagues about “Ecodriving”, by using a login code. The costs are € 30,00 per code. VVCR Europe B.V. sells this e-learning.
3.11. Poland

3.11.1. Ecodriving training for licensed drivers

Ecodriving for company employees

Name under which the training is offered:
Training programs of the Polish Motor Association PRO ECO PSM is a theoretical and practical training designed for company employees using company cars. They received positive opinion and approval of the Motor Transport Institute in Warsaw in April 2009. Among them there are also Ecodriving trainings.

Name of the training institution and other relevant stakeholders involved:
The trainings are conducted by licensed instructors and trainers of the Academy of Excellence Driving Techniques associated in PSM. The theoretical part takes place either in a traditional classroom or is delivered via e-learning platform www.ekoflota.pl for self-study.

Place of the training courses:
The place of the training is identified by the company.
The theoretical part takes place either in a traditional classroom or is delivered via e-learning platform www.ekoflota.pl for self-study.

General content:
The general objective of the trainings is to teach workers ecological and economically justified behaviours in traffic, normal operation of a company car and the promotion of safe driving. The theoretical part consists of:
- ecological part,
- section on economic efficiency of transport,
- road safety in the context of Ecodriving,
- issues related to the driving techniques and Ecodriving style.

Practical training with Ecodriving instructors are in traffic conditions

Advertisements for the training courses:
Mainly via internet site: http://www.ekokierowcy.pl/.

Ecodriving for private drivers

Name under which the training is offered (national language and literal translation into English):
Ekojazda dla każdego - EKOJAZDA i EKOKIEROWCA (Ecodriving for everyone – ECODRIVING and ECODRIVER)

Name of the training institution and other relevant stakeholders involved:
Psychological Laboratory of Road Safety (BRD) in cooperation with ECO Section of the Polish Motor Association (PSM) and Opel Academy of Driving.

Place of the training courses:
Training takes place on Saturday in Warsaw from 9:00 to 13:00 in the group of minimum six people. Reservation required for participation.

Costs of the training courses:
Participation fee: 150 PLN (~ 40 euro) per person.

General content and duration of the activity:
The program includes: lectures, workshops, practical classes in urban traffic. Each participant arrives with his car (training distance is 10 km approximately).

- **Advertisements for the training courses:**


### 3.11.2. Ecodriving competitions and events

- **Name of the competition/event (national language and literal translation into English):**

Eco Fleet Manager

- **Name and role of the activity provider and other relevant stakeholders involved:**

Competition is organised by General Motors and GM Manufacturing Poland in Gliwice with following partners: portal Ekoflota.pl, Opel Driving Academy, Meetings Fleet Ltd.

- **General content and duration of the competition/event:**

The main objective of the competition is to find the persons (Fleet Managers) who are able to use the company vehicle in the most ecological, economic and safe way.

The competition consists of 3 parts:

1. **Selection**

In the first phase the managers take part in a short course on the internet platform www.ekoflota.pl covering the topics like Ecodriving, ecology in transport and road safety.

The course ends with an examination. On the basis of its results the group of 30 Fleet Managers is created.

2. **Semi-final**

Semi-finalists meet at the Opel factory in Gliwice to take part in Ecodriving practical training. During this training and as a result of the tests of the technique of driving, the group of 15 finalists is chosen.

3. **Final**

The winners of the semi-final round meet in Warsaw to participate in the final competition.

### 3.11.3. Non-governmental campaigns

There are many news, advertisements, campaigns concerning road safety aspects of driving in Poland, most of them are related to high speed. There are some behavioural aspects but they are more related to being courteous driver then Ecodriving style.

### 3.11.4. Assessment

In Poland there is no licensed drivers’ assessment. Generally the driving exam is taken once only. However if driver commits an offense too many times (collects 24 or more of penalty points), he will have to pass the driving exam once again.
3.12. Spain

3.12.1. Ecodriving training for licensed drivers

- **Name under which the training is offered (national language and literal translation into English):**
  Cursos de Conducción Eficiente / Ecodriving course

- **Name of the training institution and other relevant stakeholders involved:**
  There are several companies offering courses. The companies are selected by means of public tenders announced by each autonomous region.
  - RACC – Royal Automobile Club of Catalonia (www.racc.es keyword: Conducción eficiente.)
  - CEA – European Car Commission (http://www.cea-online.es/eco_conduccion.asp)
  - FORMASTER – Driving Schools Network (http://www.formaster.org/cursos/conduccion-eficiente)
  - and a variety of local driving schools.

- **Place of the training courses:**
  At the customers’ facilities.

- **Costs of the training courses:**
  Approx. 80€ per person for cars and approx. 240€ per person for heavy vehicles. Please have a look on **Duration of the training courses offered** in this section to see the time spend in each type of course.

- **Applicability of subsidies:**
  Companies dealing with driver training, which fulfil the requirements established by each autonomous region. Please have a look in section 2.1 of the present document to know more about providers, scopes and other interesting information.

- **Information since when the courses have been offered:**
  In June 2004, IDAE notified the RACC that they had an agreement with the DGT (Spanish Traffic Authority) aimed at introducing and promoting ecodriving.

Among the planned activities, and as a support to the creation of a market for ecodriving training courses, IDAE had the initiative of promoting the "IDAE ecodriving courses" for car drivers.

IDAE asked the RACC to submit a proposal for the development of such courses. Once received and validated together with other proposals which had been received by IDAE, the RACC was chosen in 2004 as the main organization to impart the Ecodriving courses in Spain according to the methodology established by IDAE.

IDAE would take over 36€ for each course imparted and gave the RACC the option of charging an additional 24€ either directly to the customer or by means of other financing sources, such as sponsors or companies.
In October 2005, IDAE published an Ecodriving Manual, which was drawn up by IDAE for the TEATRISE project of the European Commission. This manual was adapted from the “Ecodriving: Smart, efficient driving techniques” manual of SenterNovem.

The “TEATRISE” project forms part of the Intelligent Energy – Europe (EIE) programme – STEER subprogramme - of the European Union and was in force from January 2005 to June 2007, providing free information on sustainable transport to energy agencies and other local agents.

Seven countries from the EU took part in the TEATRISE project, through their respective national energy agencies, namely:

- EST (Energy Saving Trust) from the United Kingdom;
- SENTER NOVEM, from The Netherlands;
- VITO (vlaamse intelling loor Technologisch Onderzoek), from Belgium;
- CRES (Center for Renewables Energy Sources), from Greece
- MOTIVA (Motiva Oy), from Finland;
- EVA (Energieverwertungsagentur), from Austria;
- IDAE (Instituto para la Diversificación y Ahorro de la Energía), from Spain.

In 2006 IDAE launched the Plan called PAE+. Through the respective agents, each of the Autonomous Regions would be responsible for:

- Requesting the subsidies from IDAE according to the number of people they wish to train.
- Announcing a public tender to distribute the subsidies among interested parties or announcing a public tender to award a contract to a company.
- Subvention: a total amount is distributed among several companies.
- Contract: one company receives the total amount for the service.
- Managing courses in compliance with the methodology established by IDAE.

**ACTIVATION PLAN 2008 - 2012**

Continuing with the ecodriving implantation in Spain, there are some task to be done in order to raise the awareness of the citizens relative the ecodriving and some political projects in order to include the ecodriving as a part of the car driving license training system.

That's why it was created this Activation Plan to deploy all this information inside the different entities responsible of traffic and the tasks are as follows:

- Laying down an administrative regulation to allow for the inclusion of ecodriving in the car driving license training system in a maximum term of 2 years.
- Setting-up of an assessment procedure for ecodriving. Pending.
ACTIONS:

- Speeches for companies and automobile related bodies (RACC, RACE, FEDAE, CETM, TUSSAM, UPM, Tráfico and Autopista Magazines, BP, TUSSAM)
- Drawing-up of the Training Procedure.
- Drawing-up of Ecodriving Manuals.
- Dissemination material:
  - ISMV DVD by Fundación Mapfre.
  - Dissemination leaflet with ANFAC.
- Interesting websites:
  - www.idae.es
  - www.ecodrive.org
  - www.treatise.org
- Publications and reports in the media (magazines, press, newspapers, TV)
- Implementation of sales services and technical assistance for consumption measuring devices: Siemens VDO Automotive (EDM-Eco)
- Collaboration of IDAE in the training of driver fleets: fleet of official cars, RACC, Spanish Post Office, TUSSAM and EMT.

General content and duration of the activity:

Structure and contents of the course

Presentation and introduction to the course (5 – 10 minutes).
Presentation of the team imparting the course, and brief explanation of the development of the course. Participants fill out a form with their personal data.

Practical session of usual driving by the participant (20 minutes car – 30 minutes industrial vehicles).
Participants have to cover an urban layout that has previously been chosen by the trainers, driving in their usual way.
Once the route has been covered, the trainers note down the data on average consumption and average speed which they will use at the end of the course to compare the results.
Groups of not more than 3 participants per car and 5 participants per industrial vehicle are created. In both cases, each group has one trainer.

Sometimes, the entities managing the courses request to see the route before it is carried out.

Theory session (1 hour for cars and 2 hours for industrial vehicles)
All participants of the course attend (all together) a theory class in which the techniques and benefits of Ecodriving are explained.

Demonstration session (20 minutes)
Sometimes the trainer carries out a demonstration session of the techniques that have been explained.
Ecodriving by the participant

In the second driving session participants practice all they have learned in the theory class and watched during the demonstration by the trainer. The average speed and consumption of each participant are noted down again.

Comparison of the results and final conclusions (10 - 15 minutes for car drivers and approx. 30 minutes for heavy vehicle drivers.)

Once the second driving session has finished, participants gather again in the room in which the theory class was imparted. The consumptions and speeds of the participants in each of the driving sessions are compared and the training experiences are shared.

Finally, participants receive a brief questionnaire to assess the course, a diploma certifying their participation in the course and an ecodriving manual.

➢ Total number of participants:

![Eco-driving courses (Light Car) chart]

- The courses have a duration of 4 hours for car drivers, 5 hours for driving school instructors (cars) and 8 hours for drivers of heavy vehicles (busses and lorries) as well as for instructors at heavy vehicle driving schools.

➢ Structure of the offered training courses (for example, number of participants and trainers per course, theory/praxis rate):

The number of participants per trainer is 3 in the case of cars and 5 for heavy vehicle drivers.

The groups are made-up by a maximum of 12 participants for cars and 10 for industrial vehicles.

The methodology is explained in the aside “General content and duration of the activity”

➢ Main topics (contents) of the training course:

Power Point presentations are used for the theory part of the course. Each provider has his own presentations, meaning that they differ depending on the entity providing the courses. Below we describe the content of the presentations used by the RACC for the courses based on the IDAE manual.

- Energy consumption in Spain
- What is Ecodriving?
- Objectives of ecodriving
- Advantages of this type of driving
- The concept of consumption
- Consumption, power, energy and speed.
- Travelling resistance
- Factors with a larger influence on consumption
- Ecodriving rules

➢ Information whether the practical training takes place on public roads:
The practical training takes place on an urban circuit including ascents, descents, traffic lights, roundabouts, main roads and ring roads, intersections, etc. recreating the usual traffic situations.

➢ Use of monitoring instruments:
Registration of course data

Personal data: At the beginning of the courses, participants fill-in a form with their personal data and sign it as a certification of their attendance to an Ecodriving course.

<table>
<thead>
<tr>
<th>Requested data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Name and surname</td>
</tr>
<tr>
<td>- ID</td>
</tr>
<tr>
<td>- Telephone</td>
</tr>
<tr>
<td>- Gender</td>
</tr>
<tr>
<td>- Province</td>
</tr>
<tr>
<td>- Signature</td>
</tr>
</tbody>
</table>

Results for each participant.

<table>
<thead>
<tr>
<th>Registered data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance travelled</td>
</tr>
<tr>
<td>Average speed</td>
</tr>
<tr>
<td>Average consumption</td>
</tr>
<tr>
<td>Time</td>
</tr>
</tbody>
</table>

Results ecodriving
Survey on the course: Participants fill in a questionnaire giving their opinion on the course.

Table to show the results to the participants: During the conclusions section of the course, participants are shown the following table, where they can see the individual and general results.

Data:
Usual driving: average speed and average consumption
Ecodriving: average speed and average consumption.
Tables recording all data of the course: All data recorded on the course forms are transferred to the following tables to serve as a base for the reports requested by the Autonomous Regions. As an improvement for all companies requesting it, the RACC draws up a report with the format shown below.

The data recorded are:
- Name, gender, telephone, ID.
- Company they pertain to, date on which the course was held and place.
- Results of the driving sessions.
- Type of vehicle used.
- Trainer.
With this data, dynamic tables and charts are generated for the follow-up and control reports of the courses.

- **Advertisements for the training courses:**
  The companies awarded with the tender to carry out the courses must sometimes commit themselves to developing advertising materials for the courses. These are usually leaflets and posters.

- **Possibilities of cooperation with ECOWILL:**
  The possibilities of cooperation with ECOWILL are total. The companies participating in the realization of this kind of courses are open to any type of help for the project.

### 3.12.2. Policy activities, governmental programmes

#### 1. IDAE

The ecodriving courses for any licensed drivers are promoted Spain-wide by IDAE and are those described in section 3.9.1 of this document.

- **Name of the activity/programme (national language and literal translation into English):**
  Cursos de conducción eficiente / Ecodriving training (www.idae.es)

- **Name and role of the activity provider and other relevant stakeholders involved:**
  IDAE (Institute for Energy Diversification and Saving), transferred the subventions to the different autonomous regions and they manage the subventions with the following entities:

<table>
<thead>
<tr>
<th>Autonomous Region</th>
<th>Entity announcing the public tender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asturias</td>
<td>GD of Mining and Energy. Department of Industry and Labour</td>
</tr>
<tr>
<td>Balearic Islands</td>
<td>Balearic Government – Ministry of Energy</td>
</tr>
<tr>
<td>Canary Islands</td>
<td>Technological Institute of the Canary Islands (ITC)</td>
</tr>
<tr>
<td>Cantabria</td>
<td>GENERCAN (Energy Agency)</td>
</tr>
<tr>
<td>Castile and León</td>
<td>Regional Energy Body (EREN)</td>
</tr>
<tr>
<td>Castile La Mancha</td>
<td>Energy Agency of Castile La Mancha (AGECAM)</td>
</tr>
<tr>
<td>Catalonia</td>
<td>Catalan Energy Institute (ICAEN)</td>
</tr>
<tr>
<td>C. of Valencia</td>
<td>Valencia Energy Agency (AVEN)</td>
</tr>
<tr>
<td>Extremadura</td>
<td>Extremadura Energy Agency (AGENEX)</td>
</tr>
<tr>
<td>Galicia</td>
<td>Galician Energy Institute (INEGA)</td>
</tr>
<tr>
<td>Madrid</td>
<td>Gedesma (Community of Madrid)</td>
</tr>
<tr>
<td>Murcia</td>
<td>Energy Management Agency of Murcia (ARGEM)</td>
</tr>
<tr>
<td>Navarra</td>
<td>Centre of Environmental Resources of Navarra (CRANA)</td>
</tr>
<tr>
<td>Basque Country</td>
<td>Basque Energy Body (EVE)</td>
</tr>
<tr>
<td>La Rioja</td>
<td>General Directorate for Industry and Energy of La Rioja</td>
</tr>
<tr>
<td>Aragon</td>
<td>General Directorate for Industry and the Environment of Aragon</td>
</tr>
</tbody>
</table>

- **Overall target of the programme:**
  The target of this program is to reduce the impact of human behaviour on the environment and increase road safety on the national roads of the country.
Also, some advantages can be available by the time this is implemented: less fuel consumption, fewer fatalities and serious accidents and others derived from the main objectives.

- Functioning of subsidy schemes:
  The National Energy Agency gives a subsidy to all the regions within Spain. At this time, each Regional Energy Agency deploys the subsidy to companies that can carry out the courses with a minimum quality level across a public tender.

- Possibilities of cooperation with ECOWILL:
  It is possible to have cooperation with ECOWILL.

2. Spanish Traffic Authority (DGT)

- Name of the activity/programme (national language and literal translation into English):
  Curso de Formación de Examinadores / Examiner’s ecodriving course

- Name and role of the activity provider and other relevant stakeholders involved:
  The Spanish Traffic Authority (Dirección General de Tráfico, DGT) as the competent body in charge of the exams to be carried out by all those who want to get a driving license.

- Overall target of the programme:
  Training examiners so that they will be able to carry out their tasks correctly and adequately, with the benefits this represents for road safety.

- General content and duration of the activity:
  **Theory:**
  i. Road safety (including several general aspects, study of road accidents and driving techniques such as ecodriving and driving under adverse weather conditions);
  ii. Traffic regulations and signs;
  iii. Rating criteria of the tests;
  iv. Mechanics;
  v. Psychology;
  vi. Other rules and regulations.

  **Practise:**
  i. Driving techniques (including ecodriving);
  ii. Test techniques.

  The whole programme activity has a duration of ten weeks. The ecodriving techniques (theory and practice) has the same period of time than the courses made by IDEA.

- Total number of participants:
  30 participants per course.

- Costs of the activity/programme:
  Differs according to the origin of the participants. Average costs approx. 160€

- Functioning of subsidy schemes:
  Corresponds totally to the budget of the Spanish Traffic Authority (DGT)

- Media exposure:
Non-existing due it is an internal course for DGT’s examiners.

- **Possibilities of cooperation with ECOWILL:**

The Spanish Traffic Authority (DGT) is considering the possibility to cooperate depending on the characteristics and the availability of staff to carry it out.

### 3.12.3. Ecodriving competitions and events

- **Name of the competition/event (national language and literal translation into English):**

  ECOTOUR / ECOTOUR

- **Name and role of the activity provider and other relevant stakeholders involved:**

  The RACC, together with the FIA and the main European automobile clubs took part in the Ecotour 2008 competition. The 42 most efficient vehicles of the market took part in this tour, which started in Barcelona on 12 September and finished in The Hague on 19 September. During 7 days, the tour travelled along Spain, France, Switzerland, Italy, Austria, Germany, Luxemburg, Belgium and the Netherlands. The Dutch Automobile Club (ANWB) was in charge of the organization of the Ecotour with the support of the main European automobile clubs. The company Arval and the FIA Foundation were the sponsors.

  Through competition, the Ecotour wanted to raise the awareness about saving energy while driving, awarding a prize to the most environment-friendly drivers and the most fuel-efficient and environment-friendly cars.

  The tour started from Barcelona (RACC headquarters) on 13 September (9.00 a.m.) heading for Avignon. On 12 September participants warmed up the engines with an off-competition tour around the Barcelona city centre, visiting emblematic places such as the Sagrada Familia, Plaza Cataluña, Parque de la Ciudadela, etc.

  **Objectives:**

  - Making known the most efficient models on the market and all those which can be bought in each country.
  - Offering consumers information on the vehicles’ emission of polluting gases.
  - Encouraging the automobile industry to develop more efficient vehicles.
  - Showing ecodriving techniques and demonstrating how this type of driving can contribute to the preservation of the environment without hindering peoples’ mobility.

  **Informing users**

  One of the main aims of the Ecotour is informing users about their decision power regarding environmental aspects when buying a vehicle. Therefore, and following this line, the RACC promoted the environmental assessment of different vehicle models on their website, by means of the EcoTest results. At www.fundacionracc.es motorists can see the results of the different vehicles available in the Spanish market (classified by vehicle class, make, EcoTest stars and type of fuel).

- **General content and duration of the competition/event:**

  The event had a duration of 7 days.

- **Total number of participants:**

  42 teams with 84 drivers from 14 different countries, such as France, Belgium, Germany, the Netherlands and Spain took part in the EcoTour 2008.

  There was a large group of professionals among the participants (ecodriving instructors, rally experts) as well as amateurs who put their knowledge about ecodriving to the test.

  The efficient vehicles that took part in the Ecotour 2008 correspond to 20 different car makes and were distributed into three groups: small (mini and super-mini), medium (small family cars) and large...
(family cars). Within each group a distinction was made between petrol and diesel powered models, thus making up 6 different vehicle classes.

- **Advertisements for the competition/event:**
  
  This initiative (www.ecotour2008.eu) was included in the campaign launched by the FIA called “Make Cars Green” (www.makecarsgreen.com), which is promoted by the FIA with the aim of contributing to reduce the impact of vehicles on the environment and helping motorists to think before driving.

- **Possibilities of cooperation with ECOWILL:**
  
  No cooperation possible as this event already finished.

### 3.12.4. Non-governmental campaigns

- **Name of the campaign (national language and literal translation into English):**
  
  Econducción: Por un uso más racional del coche / Econducción. For a more rational use of the car.

- **Name and role of the activity provider and other relevant stakeholders involved:**
  
  - Royal automobile Club of Catalonia (RACC);
  - All the governments where the campaign was/ will be carried out.

- **General content and duration of the competition/event:**
  
  In the context of this campaign there have been various actions, including the launch of the web http://www.econduccion.es with performances of the season, tips on buying environment-friendly vehicles, information about cars and environment and interactive spaces to promote more sustainable mobility among users.

- **Total number of participants:**
  
  Not known. The target is citizens in general.

- **Advertisements for the competition/event:**
  
  See website: www.econduccion.es.

- **Media exposure:**
  
  The campaign is covered by newspapers, TV news and other different media.

- **Possibilities of cooperation with ECOWILL:**
  
  The cooperation is total.

### 3.12.5. Assessment

- **Short description of the provider and content of licensed drivers’ assessment systems and instruments:**
  
  Please have a look in *Use of monitoring instruments* in section 3.9.1 about the follow-up and control reports of the courses.

  Besides that, there isn’t assessment yet. The table below shows a summary of the learning phases of participants and ecodriving, at the point in which we are in Spain.
From that moment, the regulations to be applied to pupils and the assessment of the application of ecodriving techniques will have to be harmonised.

- **Possibilities of cooperation with ECOWILL:**

Depending on the Spanish Traffic Authority (DGT) as the competent body in charge of the exams to be carried out by all those who want to get a driving license.

This means that if ECOWILL recognizes the way the courses were made until now to their examiners and driving instructors, then, the DGT is completely open to work in cooperation with ECOWILL and implement as much as possible the directives included inside the project in order to get the most of it.

### 3.12.6. Other relevant information

Inside the ECOWILL project, Spain is considered as a medium developed country in terms of ecodriving. Regarding this, some stakeholders as the National Energy Agency (IDAE) and the Spanish Traffic Authority (DGT) believe that we actually have some experience (more/less 6 years) in which they are acting in several levels to promote and develop the ecodriving courses.

Taking in consideration this, they want to include the next notes:

- The National Energy Agency (IDAE) had participated in the two previous projects (teatrise and ecodrive) and had implemented all the objectives included in both of them in order to create an ecodriving training course following the directives that the EC considered important for this proposed. So, Spain has a lot to say by the time specific contents and decisions are made.

- The actual ecodriving training course which actually is carried out by IDAE was developed with the help of some experts from Finland, Sweden, Germany and Netherlands in accordance to the national needs.

- Actually there are a lot of instructors of driving schools and a lot more of licensed drivers with the course created some time ago. For the first group, will be difficult to reach them if the content for certificate the ECOWILL training course is different from the actual one.

- Because the plan for the next 2 years of the Spanish Traffic Authority (DGT) is implement the ecodriving training into the curricula and tests of the learner drivers, they started to make courses to their examiners and will finish with all of them by October 31 of 2010 with a lot of money already spend in this task. Please be advised that these people are the only one that can examine the learner drivers in order to get the driver’s license in Spain.
3.13. United Kingdom

3.13.1. Ecodriving training for licensed drivers

Smarter Driving Training Programme
The Energy Saving Trust’s Smarter Driving Training programme is funded by the Department for Transport (DfT) and provides short-duration ecodriving training for companies’ employees. The programme has been running since December 2008 and has so far trained just over 15,000 drivers. The training is available in cars or vans and is considered appropriate for drivers of vehicles up to 3.5 tonnes. This DfT-subsidised programme is only available in England (not Scotland, Wales or Northern Ireland).

The programme is available for private sector and public sector organisations but is only available for these organisation’s employees. Organisations pay £15 plus VAT (sales tax) per person, which is approximately half the true cost of the training. The other half of the cost is subsidised by DfT. The training takes place on public roads, usually starting and finishing from the organisation’s car park or similarly convenient location.

Training lasts just 50 minutes per person and includes each driver completing a ‘baseline’ lap of a circuit in their normal driving style before training as well as a post-training lap of the same circuit. Instructors can train up to nine drivers per day. Fuel consumption and speed are compared over these ‘before’ and ‘after’ laps and to date the average improvement has been a 14.9% reduction in fuel consumption. Fuel consumption is measured using the vehicles’ own onboard computers.

Due to short nature the training, the instructors focus on just a few key techniques, specifically the use of gears (shifting at low revs and block shifting) and improving skills of anticipation in order to avoid unnecessary acceleration and braking and maintain to maintain the vehicle’s momentum.

The aim of the programme is to reduce road transport CO₂ emissions.

Since the Energy Saving Trust runs this programme, cooperation with ECOWILL will not be difficult!

Safe and Fuel Efficient Driving (SAFED)
The Dept for Transport began funding its Safe and Fuel Efficient Driving (SAFED) programme in 2002. This programme was originally only available for drivers of heavy goods vehicles and was later extended to buses. The programme is based on ‘off-site’ theoretical and practical training with courses lasting a minimum of one day. ([www.businesslink.gov.uk/cpc](http://www.businesslink.gov.uk/cpc))

In 2006 the “SAFED for Vans” programme was launched. This programme followed a similar format to the original SAFED programme (off site theoretical and practical training lasting one day) but was specifically designed for the light commercial vehicles (LCVs). SAFED for Vans trained more than 13,000 van drivers between 2006 and early 2010. ([http://vanbestpractice.businesslink.gov.uk/cms/new-drivingholder](http://vanbestpractice.businesslink.gov.uk/cms/new-drivingholder))

Until 31 March 2010 the cost of SAFED training was subsidised by the Department for Transport. However, on 1 April 2010 this funding ended. SAFED training is still available at its full cost price, but since the Government funding was withdrawn the demand for the training has dropped dramatically.

SAFED aims to promote safety and reduce fuel consumption for environmental and cost reasons. However it is widely considered that the training has greater emphasis on safety than fuel consumption.

The Energy Saving Trust has contacts at SAFED and believes cooperation with ECOWILL will be possible.

IAM Drive & Survive “Ecolution” Training
“IAM Drive & Survive” launched its “Ecolution” ecodriving training course in 2009. The course is based on a similar format to the Smarter Driving Training Programme described above and includes normally delivered as a one day course, or in half a day if paired with a different half day course. The course
involves two participants each completing three fifteen-minute driving routes with a qualified IAM Commercial trainer. A total of eight participants can be trained in a day per trainer.

The course commences with an overview of things a driver can do to their vehicle to improve fuel consumption, such as ensuring tyres are at the correct pressure and unnecessary excess weight is removed. The on-road training then includes:

- Lap 1: A designated route is driven in driver’s usual style and individual average speed and MPG for this journey are recorded
- Lap 2: The route is repeated with an IAM Commercial trainer offering advice to promote ecolution driving techniques
- Lap 3: A final lap of the route is completed where the driver implements the ecolution driving techniques and average speed and MPG for this journey recorded.

The course costs approximately £50-60 per person depending on the volume of training booked.

The numbers of drivers trained under the Ecolution programme are not known but are thought to be low (less than 1000).

Drivesense

Drivesense, a trading name of Osbourne Purdie Limited, offers short-duration ecodriving training similar training to that delivered under the Energy Saving Trust Smarter Driving programme but as an un-subsidised fully commercial proposition for situation in which the DfT-subsidised training is not available. This includes training for organisations in Scotland, Wales and Northern Ireland (as the subsidised programme is only available in England) and also training for drivers other than for organisations' employees.

The Drivesense course is usually based on snack training of 50 minutes per person, with each instructor training up to nine drivers per day. However the offer from Drivesense if flexible, so organisations may choose to train fewer people per day with longer sessions.

Fuel consumption is measured before and after training using the vehicles' own trip computers.

Training costs approximately £270 per day (for a maximum of nine people).

Drivesense has indicated that it would be happy to cooperate with ECOWILL.

AA Ecodriving Training

The AA Driving School offers ecodriving training that it describes as “specific on-road driver tuition to help you improve fuel efficiency”. The training is usually offered as part of a broader programme called “Practical Driver Assessment” but it can also be undertaken in isolation. The length and format of this training is highly flexible.

The AA states that the training “uses techniques that are endorsed by the Driving Standards Agency) http://www.theaa.com/businessservices/risk_management/eco_driver_training.html.

We do not know the number of drivers trained by the AA with specific ecodriving training, but we believe the numbers to be low.

The Energy Saving Trust has contacts at the AA Driving School and believes the AA would be keen to cooperate with ECOWILL.

The AA Charitable Trust

The AA Charitable Trust (AACT) is a new charity set up by the AA that provides initiatives to promote road safety and protect the environment. AACT is currently offering free “Drive Smart” training for drivers that have passed their driving test within the last 12 months. The course is focused on improving driving safety and helping encouraging more fuel-efficient driving

Drive Smart consists of two one-hour sessions with a fully-qualified AA driving instructor. A supporting workbook will take you through home study before your in-car sessions, and you’ll be asked to practise between sessions to get the most from your training.
Drive Smart was limited to a maximum of approximately 2,000 courses when it was set up, but we have been unable to ascertain how many drivers have been trained to date.

### 3.13.2. Policy activities, governmental programmes

**Government Funding for Ecodriving Training**

The UK’s Department for Transport (DfT) funds the Smarter Driving programme described above and has recently (October 2010) stated that it intends to continue funding this programme in 2010/11 despite the wide-ranging cuts in Government spending that the UK is currently experiencing.

The DfT also used to provide funding for the SAFED programmes, but funding for SAFED ended on 31 March 2010 and will not be reinstated.

**Media Campaigns**

From 2007 until early 2010 DfT ran a national media campaign aimed at private individuals called “Act on CO₂”. This campaign encompassed a wide variety of environmental messages but included a strong emphasis on ecodriving, including ecodriving adverts on TV, billboard and national newspapers. The programme focused on gears, turning engines off when stationary, tyre inflation pressure, and avoiding carrying unnecessary weight in the vehicles.

As the name implies, Act on CO₂’s goal was to help and encourage private individuals to reduce their CO₂ emissions.

**Continuous Professional Development**

In October 2010 the British Government published its response to a consultation on the future of regulations concerning Continuous Professional Development (CPC) for drivers of heavy duty vehicle. To the disappointment of many, the Government has decided that ecodriving will not become a mandatory part of the CPC.

### 3.13.3. Ecodriving competitions and events

**MPG Marathon**

By far the biggest and most influential ecodriving competition in the UK is the annual “MPG Marathon” [http://www.mpgmarathon.com/](http://www.mpgmarathon.com/) which has recently completed its eighth year. The event is a 400 miles (640km) two-day challenge in which 100 competitors drive 50 standards production cars and vans to compete in two categories: absolute fuel consumption and fuel consumption relative to their vehicle’s official NEDC figures.

The aim of the MPG Marathon is to remind fleet managers of the importance of ecodriving and driver training since this aspect of fleet management is still frequently overlooked in the UK, even by fleet managers that are on-message with regard to buying efficient vehicles.

The MPG Marathon is organised by “Fleet World” a widely-read weekly magazine for the fleet industry in the UK and sponsored by ALD Automotive (a major supplier of fleet vehicles), Total, Michelin, the AA, TomTom and the Energy Saving Trust. It is this collection of strong commercial sponsors that gives the MPG Marathon a uniquely influential status within the fleet industry.

The 2010 MPG Marathon took place in September and received considerably local and national media coverage. The event was even praised publicly by the British Prime Minister David Cameron [http://www.fleetworldgroup.co.uk/news/2010/Oct/0434001388.htm](http://www.fleetworldgroup.co.uk/news/2010/Oct/0434001388.htm).

The organisers of the MPG Marathon would be keen to cooperate with ECOWILL.

**Ford – Energy Saving Trust Smarter Driving Competition**

In the spring and summer of 2008 the Energy Saving Trust and Ford of Britain ran a jointly branded smarter driving competition, which stemmed from a proposal that the Energy Saving Trust wrote and sent to several vehicle manufacturers in late 2007.
Ford promoted the Challenge through national media advertising and Ford also provided £20,000 of prize money. The Challenge took place at five specially organised regional events in the UK and also at the Motor Show in London, where the competition ran for two weeks. The estimated cost of the Challenge was £200,000.

500 drivers took part in the Challenge. Each received a short-duration ecodriving lesson and the competition was to see who drove the most efficiently after training. However the Energy Saving Trust's real interest was to test the effectiveness of short-duration ecodriving training, since each driver's fuel consumption was also measured prior to his training. The drivers from the five regional events showed an average reduction in fuel consumption of 16.8%.

The Challenge provided EST with a database of fuel consumption results for 500 drivers before and after they received a short-duration ecodriving lesson. This database became the justification and the basis for the Smarter Driving Training Programme that the Energy Saving Trust now runs on behalf of the Department for Transport.

3.13.4. Non-governmental campaigns

Transport for London

From 2008-2009 Transport for London ran an ecodriving media campaign targeting private drivers in London. The campaign used advertising on billboards and buses and focused on tyre pressure, changing gears and low revs, and not carrying unnecessary weight in a vehicle.

The programme aimed to improve London's air quality and reduce CO₂ emissions.

Shell Fuel Saver

In the summer 2010 Shell UK promoted ecodriving as part of their wider “FuelSave” campaign, whose principal aim was to promote Shell's premium petrol and diesel fuels. Shell's ecodriving media activities included signing up Freddie Flintoff, a popular England cricketer to promote Shell's top tips, and following several families over a two-month period to see the extent to which ecodriving saved them money in real life.

www.shell.co.uk/home/content/gbr/products_services/on_the_road/fuels/fuelsave/fuelsave_britain/freddies_fuelsave_challenge.html

3.13.5. Other relevant information

The overall numbers of drivers that have taken specific ecodriving training in the UK are very low: EST estimates approximately 30,000 drivers out of a population of 30 million drivers.

The Department for Transport and the UK's Committee on Climate Change, which has an influential voice on UK climate change policy, are aware that the current low training volumes will have minimal effect on the UK's overall road transport emissions and they would like to find a way to encourage millions rather than tens of thousands of people to ecodrive. However an effective solution to this problem has not yet been found: In the current climate of economic there is no possibility of direct subsidies for significantly higher volumes of training, and research by EST shows that consumers are not willing to pay for training as they are sceptical about the claims made about short pay-back times.
4. Ecodriving integration into quality control and certification

Information about ecodriving integration into quality control and certification is presented in this section. Only Austria, Finland, Germany and Netherlands have these systems in place.

4.1. Austria

1. Are there any quality control and certification systems of the institutions providing Ecodriving training and/or assessment in your country?
   Yes.
2. What institutions are responsible for the creation and implementation of the quality control and certification systems?
   Austrian Driving School Association, BLT Wieselburg, klima:aktiv mobil.
3. Please shortly describe the main elements and general functioning of the systems.
   Education of trainers: Master Trainers educate Ecodriving trainers in a 2 day seminar for passenger cars and a 1 day additional education for truck-trainers.
4. What are the costs for participants? Are there any subsidies available?
   About € 400 for passenger cars and about € 700 for both (passenger cars and trucks).
5. Since when have these systems been implemented?
   – Since 2005 for passenger cars;
   – Since 2007 for trucks/busses;
   – Since 2009 for tractors.
6. How many participants have been certified?
   – 390 passenger car trainers;
   – 205 truck trainers;
   – 79 tractor teachers;
   – 6 tractor trainers.
7. Please present a list of available relevant legislation / standards / reports (indicating whether they are also available in English). Provide links, if available online.
   – Handbook for passenger car trainers (available as printed version in German only);
   – Handbook for truck/bus trainers (available as printed version in German only);
   – Handbook for tractor trainers (available as printed version in German only);
   – Handbook: Ecodriving in the 2nd phase of the drivers education (available as printed version in German only).

4.2. Finland

1. Are there any quality control and certification systems of the institutions providing Ecodriving training and/or assessment in your country?
   At least the training networks cooperating with Motiva (see 3.4.1) have quality control and certification systems. There are a number of “independent” service providers.
2. **What institutions are responsible for the creation and implementation of the quality control and certification systems?**

Basically, Motiva is in charge of development of the quality standard of Ecodriving for licensed drivers in Finland, but for the moment it has no funding for the task. Therefore, the quality standard has not been updated during last two years.

3. **Please shortly describe the main elements and general functioning of the systems.**

Each training network is in charge of implementing its quality control and certification system. The networks have to report annually to Motiva, how many drivers they have trained as well as the average reduction of fuel consumption in per cents (before-after).

Quality control of training is usually based on measuring fuel consumption (before-after), traffic safety analysis (a form that the instructor fills during the training). Some of the trainers collect feedback using a specific form, too. However, the implementation differs from network to network and in some cases even from instructor to instructor.

The certification usually includes training and a test, but probably there are variations between the networks. The goal is that each instructor would have a driving instructor's qualification as a competence, but unfortunately this is not always the case. There is a strong need for standardising both the qualification and certification procedure in order to provide nationwide Ecodriving training services of good quality.

4. **What are the costs for participants? Are there any subsidies available?**

5. **Since when have these systems been implemented?**

6. **How many participants have been certified?**

7. **Please present a list of available relevant legislation / standards / reports (indicating whether they are also available in English). Provide links, if available online.**

No specific legislation exists for Ecodriving training for licensed drivers of cars and vans.

### 4.3. Germany

DVR develops Ecodriving trainings together with associated partners like the German Driving Instructor Association according to defined quality standards. The trainings are evaluated and continuously adjusted to latest results. (See also Annex: “To the point 3” for detailed research efforts, programmes, monitoring and quality control). Quality control includes monitoring of results (fuel saving effects as well as personal feedback evaluation, safety aspects and psychological analysis). One of the main standards is the qualification/certification of trainers.

DVR cooperates with a network of highly qualified trainers which are certified according to DIN EN ISO 17024, including re-certification procedures every 4 years. All trainers are driving instructors for class A + B. Only these trainers are allowed to conduct DVR Ecodriving trainings.

This certification is in addition to the already high qualification of driving instructors in Germany. Their qualification and continuous mandatory further education on Ecodriving is defined according to the national legislation (Fahrlehrergergesetz).

### 4.4. Netherlands

There are any quality control and certification systems. The examinations for the certification will be conducted at the IBKI (Innovam Branchekwalificatie-instituut) (examination and certification for the mobility section) in Nieuwegein. The certification consists of a theoretical test (20 multiple choice questions in 30 minutes; 14 questions correctly answered is a requirement) and a practice ride (45 minutes for Cat. B or 60 minutes for Cat. C/D). The recertification process includes only a theoretical test (20 multiple choice questions, 30 minutes, at least 14 correctly answered). The certificate is valid for 5 years. Since April 2008 the certification system is implemented. There are now 431 trainers with a certificate. There are no subsidies available. The costs for the exam are:
Category B: theory test € 114,00; practice ride € 146,00; recertification test € 81,00.

Category C/D: theory test € 114,00; practice ride € 146,00; recertification test € 81,00.
Annex

Additional information on activities in Germany: “To the point 3”.
To the point 3

Studies on “Drive like a pro – safe driving, both in a professional and a private context”

Insights and results pertaining to preventive action in the future
1. The training programme "drive safely and save gas along the way – safe, economical and environmentally friendly driving"

1.1 Qualitative, depth psychology-oriented impact study on the BG/DVR-training "drive safely and save gas along the way – safe, economical and environmentally friendly driving" and its implementation in companies by certified DVR instructors

1.1.1 Background and objective
1.1.2 Training model under examination
1.1.3 Study design
1.1.4 Results
1.1.5 The psychological effects of the SWU training
1.1.6 Insights and recommendations

1.2 Corollary psychological research on the training programme "drive safely and save gas along the way – safe, economical and environmentally friendly driving" at the Hamburg Waterworks

1.2.1 Background and objective
1.2.2 Study design
1.2.3 Basic premises before the start of the training
1.2.4 Driving a car as part of one's job – five types of drivers
1.2.5 Results
1.2.6 Summary

1.3 Corollary psychological research on the training programme "drive safely and save gas along the way – safe, economical and environmentally friendly driving" at the swb Netze GmbH & Co. KG

1.3.1 General conditions
1.3.2 Results

2. Eco-trainings in the context of other events

2.1 Corollary research on the fuel-saving driving lesson at the AMI 2003

2.1.1 Background and objective
2.1.2 Training model under examination
2.1.3 Study design
2.1.4 Results
2.1.5 Recommendations

2.2 Direct interviews on "Eco-Driving – managed by DVR" (in cooperation with the Ford-Werke GmbH) and corollary research on the fuel-saving driving lesson at the 2004 AMI trade fair

2.2.1 Background and objective
2.2.2 Training model under examination
2.2.3 Study design
2.2.4 Results
2.2.5 Recommendations

2.3 Corollary research on the fuel-saving driving lesson at the 2005 AMI trade fair

2.3.1 Background and objective
2.3.2 Training model under examination
2.3.3 Study design
2.3.4 Results

3. Eco-Driving

3.1 Qualitative, depth psychology-oriented impact analysis of the Eco-Driving training for private customers (in cooperation with the Ford-Werke GmbH)

3.1.1 Background and objective
3.1.2 Training model under examination
3.1.3 Study design
3.1.4 Results
3.1.5 Recommendations
3.1.6 Attempts at optimization

3.2 Impact psychology-oriented brief analysis of the long-term effects of "Eco-Driving managed by DVR" for private customers

3.2.1 Objective and study design
3.2.2 Results

3.3 Identification of the fair market value (using the method of contingent valuation) of the Eco-Driving training for private customers (in cooperation with the Ford-Werke GmbH)

3.3.1 Objective and study design
3.3.2 Results

3.4 Results of the participant survey on the advanced training programme on Eco-Driving for driving instructors

3.4.1 Background and objective
3.4.2 Results

3.5 Results of the survey accompanying the "Eco-Driving compact" training

3.5.1 Background and objective
3.5.2 Results

4. International Eco-Trainings

4.1 Eco-Driving Europe – a manual on the promotion of an Eco-Driving style

4.1.1 Strategies for the dissemination of an Eco-Driving style
4.1.2 The significance of quality standards
4.1.3 Simulators and computer games
4.1.4 Benefits of devices for measuring consumption

4.2 Summary: Evaluation of Eco-Drive training courses – Eco-Driving Europe

4.2.1 Background and objective
4.2.2 Training models under examination
4.2.3 Results

4.3 Report on findings concerning emissions and fuel consumption with Eco-Drive – Quality Alliance Eco-Drive, Switzerland

4.3.1 Background and objective
4.3.2 Study design
4.3.3 Results of the emission and fuel consumption measurements
4.3.4 Recommendations on the emission-optimized implementation of Eco-Driving

5. Project "A more expanded market for the drive safely and save gas along the way scheme" – market surveys on Eco-Trainings

5.1 Background and objective
5.2 Study design
5.3 Municipal and private-sector fleet management from a psychological point of view
5.4 Specification of requirements and recommendations to communicate trainings and training programmes in vehicle fleets

6. Safety and environmental protection – how the programme "drive like a pro – safe driving, both in a professional and a private context" has developed

"Drive safely and save gas along the way" 41
"Eco-Driving – managed by DVR" 42
"Eco-Driving for driving instructors" 42
"Eco-Driving for learners and new drivers" 42
The "fuel-saving driving lesson" 43
The Eco-Driving compact training 43
"A new manner of driving" 43
The AMI fuel-saving driving lesson 44
"Eco-Driving for natural gas vehicles" 44
Eco-Trainings at the IAA 44
"Transporter Coaching" 44
"Passenger Car Coaching" 44
"Be a cool driver – save gas" 45
"Drive like a pro – safe driving, both in a professional and a private context" (working title: defensive driving DD) 46
Evaluation: Results and benefits 46
Fuel-saving trainings at "Schäfer's bread and cake specialties" 47
Evaluation: Results and benefits 47
Communication platforms 48
4. International Eco-Trainings

4.1 Eco-Driving Europe – a manual on the promotion of an Eco-Driving style

Austrian Energy Agency

4.1.1 Strategies for the dissemination of an Eco-Driving style

The most effective way of disseminating an Eco-Driving style is to incorporate it into driving school trainings. During the training, the Eco-Driving style should be taught as a normal manner of driving.

In order to reach this goal, the following strategies are recommended:

1. Driving instructors and inspectors who favour innovations should become part of a network which supports the development of Eco-Driving.
2. Driving instructors and inspectors should undergo Eco-Driving trainings together in order to increase the driving instructor’s motivation to spread the new driving style.
3. The driving instructors should be provided with excellent teaching material.
4. A regulatory framework for achieving this goal should be set up.

Central tasks of national Eco-Driving programmes include:

1. Development of a range of high-quality and diverse trainings (in road traffic/on the simulator, one-hour courses, half-day and all-day courses)
2. Distribution of a product by the name of Eco-Driving supported by its partners (motoring organisations, environmental groups, car manufacturers etc.)
3. Evaluation and continuous improvement of Eco-Driving
4. The use of opportunities which present themselves
5. The safeguarding of quality standards for driving instructor trainings
6. The opening up of business segments for instructors

4.1.2 The significance of quality standards

Having confidence in the tested quality of Eco-Driving is a basic prerequisite for building up a market for this product. It is only due to this fact that companies decide in favour of Eco-Driving and only then do driving schools incorporate it into their regular driving training. Therefore,

➔ both the instructors and the training should be certified,
➔ the instructors should be trained and trained further in the best possible way; their performance should be checked in regular intervals and
➔ the training materials should be optimized.
4.1.3 Simulators and computer games

Simulators and computer games on the subject make eco-driving more accessible – especially to young people. Whether online or installed on their PC, they act as an appetizer. They can have a positive impact on the Eco-Driving image and as give-away articles contribute to disseminating this new driving style.

More and more often, low-cost simulators are not only used to arouse interest during events, but also as a part of normal driving tuition. Even though people usually find it easier to transfer their experience of an on-the-road training to their daily routines, there are also some convincing arguments for the use of simulators:

- They enable a driving instructor to coach several individuals at once.
- The training is conducted without the risk of accidents and without harmful emissions.
- The training drives can be analysed and repeated more easily.

4.1.4 Benefits of devices for measuring consumption

In the context of trainings on economical driving, consumption metres are already widely used in vehicles. They give drivers an immediate feedback and help them analyse their driving style before and after the training. The equipment of vehicles with consumption metres plays a strategic role in the dissemination of an Eco-Driving style because they serve to reach the rank and file of the car drivers who do not take part in driver trainings. In the near future, every new car should therefore be equipped with such devices.
4.2 Summary: Evaluation of Eco-Drive training courses – Eco-Driving Europe

Hornung Wirtschafts- und Sozialstudien on behalf of Quality Alliance Eco-Drive and the Swiss Federal Office of Energy (BFE), January 2004

4.2.1 Background and objective

Under the umbrella brand of “Eco-Drive”, various training forms for a safe, comfortable and economical manner of driving have been developed and evaluated in Switzerland in the last few years. The present study summarises the results of the various evaluations in order to enable an overview of the effectiveness of the various Eco-Drive trainings.

For time and cost reasons, some of the individual studies had to be based on a relatively small number of readings. The study design also differs. Nevertheless, certain conclusions can be drawn from the results.

4.2.2 Training models under examination

All the different training types teach the four golden Eco-Drive rules:

- Drive in the highest possible gear at a maximum of 2,500 rpm
- Gear up early (at 2,500 rpm at most) and gear down late
- Accelerate steadily
- Think ahead and drive evenly; avoid unnecessary braking and gear-changing

The various training models are:

- All-day courses with theoretical elements and practical training on the road (Eco-Drive courses, evaluated in the years 1995 and 2000)
- Half-day courses with theoretical elements and practical training on the drive simulator (Eco-Drive simulator courses, 2001)
- Simulator drives of about 15 to 20 minutes’ duration with brief instructions and an explanation of the main principles of Eco-driving (simulator demonstration driving, 2003)
- Training units as part of the training of new drivers, two sessions of two hours to demonstrate the principles of Eco-driving in the driving instructor’s car (Eco-Drive at driving school, 2003)

4.2.3 Results

4.2.3.1 Results in general

The participants gave good to very good marks to the Eco-Drive courses: competent course instructors, instructive theoretical explanations etc. In the simulator trainings, suggestions for improvement mostly refer to an improvement of the simulator itself as well as to a more hands-on training, as the simulator was perceived as fairly unrealistic.

In the individual studies, the impact of Eco-Drive is measured by means of consumption and of the so-called Eco-ratio (= speed divided by consumption). The higher the Eco-ratio, the better is the result from an ecological point of view.
Most of the individual studies showed that in the medium and the long term it is possible to save about 10 to 15 per cent of fuel with an Eco-driving style even without driving more slowly than before. The study on "Eco-Drive at driving school" did not show any statistically significant successes – both in terms of fuel consumption or in terms of the Eco-ratio.

In the other courses, the Eco-ratio was 15 to 22 per cent higher than in the reference groups. In the Eco-Drive courses with learner drivers (evaluation in 1995), after 17 months it was even 45 per cent higher.

4.2.3.2 Results from individual studies

**Eco-Drive courses, 2000**
- Following the Eco-Drive courses, the average speed of the participants of the course was 2.5 per cent higher than that of non-participants.
- The participants drove far more smoothly (about 1/5 fewer gear changes).
- 34 per cent lower braking, acceleration and lateral forces, which results in increased driving comfort and a lower vehicle wear and tear.
- Theoretical knowledge on the Eco-Driving style is not sufficient. In comparison to the participants with a comparable level of knowledge, non-participants had significantly lower Eco-ratios.

**Eco-Drive simulator courses, 2001**
- The number of gear changes was reduced by one third.
- The average speed remained roughly the same.
- The driving comfort evidently decreased because a device that registers centrifugal forces showed a significant increase in value for some participants.
- 86 per cent of the respondents agreed with the statement that the simulator is an appropriate device for learning the Eco-driving style.

**Simulator demonstration trials, 2003**
- The short-term increase of the Eco-ratio by 15 per cent is lower than that of the considerably longer Eco-Drive simulator courses (20 per cent).
- Remeasurements conducted 6 to 8 months later confirmed that the learning effect was lasting.
- Due to small group sizes, the figures must be assessed with caution. Nevertheless, the results of the other studies were confirmed.

**Eco-Drive in driving schools, 2003**
- The results of the other studies as far as fuel consumption and Eco-ratio are concerned could not be confirmed. There are several possible explanations for this:
  - The test drives were carried out on the simulator, and the learner drivers, who were comparatively younger, even on their first simulator drive found their bearings better than older drivers.
  - The learner drivers from the reference group were also familiarized with Eco-Driving principles as part of their normal driving school training.
  - The instructions did not have a very lasting effect because there were too few chances for this manner of driving to be practised during the training phase.
- It seems appropriate to incorporate an Eco-Drive module – as had already been considered – into the second phase of the driving training as the learner drivers have more driving practice at that time.
4.3 Report on findings concerning emissions and fuel consumption with Eco-Drive – Quality Alliance
Eco-Drive, Switzerland

Dr. Martin Weilenmann, Swiss Federal Laboratories for Material Testing and Research (EMPA), January 2002

4.3.1 Background and objective

In cooperation with the Swiss Agency for the Environment, Forests and Landscape (BUWAL) and the Quality Alliance Eco-Drive, the Swiss Federal Laboratories for Material Testing and Research (EMPA) were commissioned to examine the effects of the Eco-Driving style on pollutant emissions as well as fuel consumption. Particularly as far as the emissions were concerned, previous studies on the subject had partially led to diverse results.

4.3.2 Study design

Because of the costs involved, the differences in fuel consumption and emissions between a conventional driving style and the Eco-Driving style in road traffic were not measured. Three driving patterns from the latest BUWAL measuring programme which correspond to everyday traffic flows within city limits served as a basis for the measurements. The normal way of driving and the Eco-Driving style were characterised in a very simplified form by means of different strategies for changing gears. – A normal driver with a conventional driving style shifts up at circa 3,000 rpm, and therefore shifts down early as well (“Normal 3,000”), a driver with an Eco-Driving style shifts up at 2,000 rpm and uses the highest possible gear in each case (“Eco2,000”).

4.3.3 Results of the emission and fuel consumption measurements

By means of “Eco2,000”, fuel consumption within city limits decreases by 17.6 per cent as compared to “Normal3,000”. Carbon dioxide (CO2) emissions decrease by 18.4 per cent and nitrogen monoxide (NOx) emissions by 52 per cent. On the other hand, the rates of carbon monoxide and hydrocarbon increase by more than 191 per cent and 66 per cent respectively.

<table>
<thead>
<tr>
<th></th>
<th>CO (g/km)</th>
<th>HC (g/km)</th>
<th>NOx (g/km)</th>
<th>CO2 (g/km)</th>
<th>consumption (g/km)</th>
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<tr>
<td>Eco2,000</td>
<td>1.4136</td>
<td>0.0768</td>
<td>0.0427</td>
<td>168.51</td>
<td>7.233</td>
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<tr>
<td>Normal3,000</td>
<td>0.4854</td>
<td>0.0462</td>
<td>0.0874</td>
<td>206.55</td>
<td>8.779</td>
</tr>
<tr>
<td>Difference</td>
<td>+ 191.24 %</td>
<td>+ 66.34 %</td>
<td>- 51.13 %</td>
<td>- 18.42 %</td>
<td>- 17.61 %</td>
</tr>
</tbody>
</table>

4.3.4 Recommendations on the emission-optimized implementation of Eco-Driving

To save fuel and keep pollutant emissions at a minimum, it is advisable to shift up relatively early and to accelerate gradually during acceleration phases. Furthermore, one should drive in the highest-possible gear. Vehicle manufacturers should continue to develop their engines so that even at a lower rpm range or when carrying a heavy load, they work without enrichment and therefore do not produce higher pollutant emissions.
4.4 Impact Analysis on Het Nieuwe Rijden, Netherlands

NEA Transportonderzoek en -opleiding, May 2005

4.4.1 Background and Objective

The Dutch programme "Het Nieuwe Rijden" (HNR) aims at assisting professional drivers in learning a modern driving style which takes account of state-of-the-art engine technology. This eco-driving style is designed to improve driving comfort, increase road safety, reduce fuel consumption and increase driving pleasure. The intention of the survey was to identify the possible benefits of the HNR programme.

4.4.2 Study design

The study was based on comparative economic and operative data from shipping companies. Based on the annual rate of change, a trend analysis was carried out to show important developments. Companies which enable their drivers to participate in HNR trainings and which monitor the driving behaviour of their staff were distinguished from companies which do not support their staff in this way. The latter were used as the control group.

The following parameters for the years 1996 to 2003 were to be investigated in detail:

- Fuel consumption
- Maintenance costs
- Repair costs incurred due to accidents as an indicator of road safety
- Absence from work due to diseases or accidents

The initial plan entailed an examination of both freight and passenger traffic. However, due to the fact that during the period in which the study was conducted, only a small number of companies with passenger traffic have taken advantage of the HNR programme, it was not possible to measure the effects of HNR on this group.
4.4.3 Results

Fuel consumption among the HNR companies decreased by 2.1 per cent. At an average fuel price of 68 EUR per 100 litres (inland quantity price/bulk purchasing including discount), this corresponded to savings of 0.40 cent per kilometre.

Thanks to HNR, maintenance costs could be reduced by 3.5 per cent. This corresponded to savings of 0.19 cents per kilometre.

The impact on road safety can be determined by looking at the repair costs for minor accidental damages. During the period of examination, they declined by more than 14 per cent, corresponding to savings of 0.39 cents per kilometre.

This means that with the help of HNR in freight traffic alone, costs for fuel consumption, maintenance and repairs could be reduced by 0.98 cents per kilometre. For a lorry with a mileage of 80,000 kilometres per year, this amounts to annual savings of 800 EUR.

Since reliable data for measuring absence from work have only been available since 2001, the impact of HNR on absenteeism could not be researched. As heavy goods vehicles in international carrying traffic cover distances of up to 140,000 kilometres, fuel savings amounting to 1,400 EUR can be expected.

4.4.4 Summary

The better HNR has been established in a company, the more effective it is. It appears that the fuel savings achieved by means of an HNR training normally lessen after two years. Therefore it is recommendable to repeat the training programme after a few years.
4.5 Modern technology and the measurement of the effects of fuel-saving on driving trainings in Sweden

Anders af Wåhlberg, University of Uppsala, 2002

4.5.1 Background and Objective

The goal of the deliberations undertaken in the run-up to the study was to find a criterion which could be used to prove long-term changes in driving behaviour – a metered value that would be appropriate for proving the effects of Eco-Driving trainings independently of fuel consumption. The study focussed on the modification of the acceleration scheme as a consequence of the training. The acceleration schemes of a driver remain stable on a long-term basis. They are part of a person’s individual driving style and are hard to influence or change. However, as they have a strong influence on fuel consumption, they are very likely to be changed by the Eco-Driving training.

The study was looking to answer the questions whether based on certain acceleration schemes, conclusions could be drawn on a person’s fuel consumption, and whether clear differences between test runs with different acceleration variables could be made out.

4.5.2 Study design

35 test subjects – bus drivers and other staff working for bus companies – initially drove a certain route in their usual driving style. Then they were instructed in the Eco-Driving technique, and after the training they drove the same route again.

Comparative data from both drives were recorded and evaluated.

4.5.3 Results

Acceleration schemes are indeed an appropriate means for measuring the effects of Eco-Driving trainings. The differences between the two drives could be determined by the different acceleration variables which changed as a consequence of the training: Due to the training, the average acceleration rate increased by 22.5 per cent. The average deceleration rate dropped (–15.2 per cent) as well as the driving time (–4.0 per cent) and the fuel consumption rate (–14.7 per cent). In other words, both the increase in the average acceleration rate and the changes in deceleration are directly related to fuel consumption.
6. Safety and environmental protection – how the programme "drive like a pro – safe driving, both in a professional and a private context" has developed

Since the 1980s, environmental protection has become a top theme in politics as well as in industry and society. Early on, the instructors of the German Road Safety Council (DVR) have been aware of the fact that environmental protection and road safety are actually two sides of the same coin as eco-driving is both safe and economical. Hence on the initiative and with the support of the DVR a wide range of training programmes and courses have been developed, all of which include driving practice in real-traffic situations.

The German Road Council pays close attention to the fact that the implementation of the trainings be evaluated by scientific methods in order to record and keep track of the training impact and preclude the possibility of counterproductive effects. For new programmes, a sustainable evaluation should be made compulsory.

"Drive safely and save gas along the way"

Since late 1995, the DVR and the Institutions for Statutory Accident Insurance and Prevention for Trade and Industry have been developing the "drive safely and save gas along the way – safe, economical and environmentally friendly driving" programme. It is primarily aimed at companies which have a vehicle fleet of their own. Vehicle fleet operators and field staff have received training and further training either within or outside their own companies. These companies were meant to derive profit from the training programmes in several ways: more safety, a better environmental performance, considerable improvements in fuel economy, reduced wear and tear as well as lower repair and maintenance costs.

The behavioural techniques and tips collected in the context of the "drive safely and save gas along the way" programmes are used as the basis of the contents of all DVR eco-driving programmes to this day:

- Drive in a relaxed way
- Extend your scope of action by avoiding tailgating
- Check the tyre pressure frequently
- Drive at low revolutions and shift up as soon as possible
- Use momentum and take advantage of built-up energy
- Switch off the engine whenever and wherever appropriate
- Remove surplus weight.

As the training has been developed and implemented in conjunction with the German Federation of Driving Instructors' Association, a nationwide network of qualified facilitators with an ISO DIN EN 17024 certification was available right from the start: As early as 1997, 23 companies took part in the programme. In the meantime, several thousand employees have completed the training and quite a few companies were able to benefit from its remarkably positive effects.

In order to promote participation in the training among staff members and decision-makers within the company, training modules with the contents of the "Drive safely and save gas along the way" programme are integrated into already existing seminars run by the Institutions for Statutory Accident Insurance and Prevention for Trade and Industry, e.g. those for safety experts and safety representatives. Furthermore, in specialised seminars organised by the DVR, the Institutions for Statutory Accident Insurance and Prevention for Trade and Industry and the accident insurers, the "Drive safely and save gas along the way – safe, economical and environmentally friendly driving" programme is combined with other prevention programmes, such as "stress in road traffic" or "the world of emotions and its relevance for road traffic".
"Eco-Driving – managed by DVR"

The positive experience gained from the above-mentioned programme prompted the DVR in 1999 to devise another training programme for teaching a safe, economical and environmentally friendly manner of driving in cooperation with the Ford-Werke AG. This training, which for the first time addressed itself to all motorists, was named "Eco-Driving – managed by DVR" and was first tested during the pilot phase in 1998 and 1999 and then developed further accordingly. In the year 2000, the DVR, the Ford Werke AG and the German Federation of Driving Instructors’ Association presented the programme to the general public under the motto of "Changing gears more quickly, getting ahead faster".

The "Eco-Driving – managed by DVR" programme is a four-hour course which normally takes place at a Ford dealer’s. It comprises several practice drives in everyday traffic which help the participants to adopt a more relaxed and more confident driving style. Result: The training leads to a reduction in fuel consumption by 10 to 30 per cent – depending on the previous driving style –, as well as to increased safety and the protection of the environment. These effects were also documented by an investigation carried out by the WDR television programme "Plusminus". To this end, three professional drivers took part in the training and their mileage was checked before and after the training. A female cab driver, a courier and a road safety expert of the Bonn police force saved between 17.1 and 32.5 per cent.

From that time on, the recommendations given in the "Eco-Driving – managed by DVR" programme are to be found in all the instruction manuals issued by the Cologne car manufacturer.

"Eco-Driving for driving instructors" – "Eco-Driving for learners and new drivers"

Starting from early 1999, teaching and learning a fuel-efficient and energy-saving manner of driving was included as a compulsory part of the driver’s licence exam. It is estimated that some 800,000 young people between the ages of 18 and 25 get a driver’s licence every year. A total of almost 1.3 million people in Germany attend a driving school in order to get a driver’s licence in one of the three classes. The prerequisite for turning the new driving style into a subject for the driving test was to train the driving instructors in it first.

In order to guarantee the credibility and effectiveness of the training and the driving test, the driving instructors and inspectors, apart from having sufficient knowledge about an eco-friendly manner of driving, were required to have a command of this driving style themselves and to exercise it because they are convinced of it. The 130 instructors certified in the DVR programme "Drive safely and save gas along the way – safe, economical and environmentally friendly driving" provided the driving instructors with the skills they needed to practice an eco-friendly manner of driving. However, the driving inspectors needed to learn the new driving style as well. Therefore, the 42 driving inspectors of the TÜV (Technical Inspection Authority) Rhineland/Brandenburg located in Berlin received a hands-on further training by certified DVR instructors.

In 2006, the programme was repositioned in cooperation with the German Federation of Driving Instructors’ Association (BVF) under the name of "Eco-Driving for learners new drivers". As a hands-on further training for driving instructors and inspectors it is meant to contribute to an even better integration of the basics of a safe, economical and eco-friendly manner of driving into the driving school training and to raise the awareness of new drivers for this topic even more. "Eco-Driving for learners and new drivers" is subsidized by the Federal Ministry of Transport, Building and Urban Affairs (BMVBS). The German Federation of Driving Instructors’ Association accompanies the project as part of a campaign.
The "fuel-saving driving lesson"

Since February 2002, driving schools all over Germany have been offering another modified training unit under the name of "fuel-saving driving lesson", which has been developed by the DVR in cooperation with the Institutions for Statutory Accident Insurance and Prevention for Trade and Industry and the German Federation of Driving Instructors’ Association. Under the qualified supervision of a driving instructor, all motorists have the opportunity to familiarize themselves with a fuel-efficient and environmentally friendly manner of driving. The "fuel-saving driving lesson" takes place in normal road traffic, ideally on those routes used by the motorists in question in their everyday lives. The one-hour training focuses primarily on three particularly effective tips in order to permanently reduce individual gas consumption:

- Use momentum and take advantage of built-up energy,
- Create scope for decision-making by avoiding tailgating,
- Drive at low revolutions and shift up as soon as possible.

"The Eco-Driving compact training"

In addition, since April 2002 the so-called "Eco-Driving compact training" has been offered. According to the principle of "one trainer, one participant, one hour of training", this training is another chance for participants – albeit in a very short period of time – to receive tips and to familiarize themselves with an economical and safe manner of driving. This joint initiative organised by the car manufacturer Ford and the DVR was, once again, held in close cooperation with the German Federation of Driving Instructors’ Association so that the one-hour training sessions could be carried out under the guidance of particularly well-qualified driving instructors. On a nationwide basis, more than 1,000 instructors are available for this training.

"A new manner of driving"

The year 2002 also marked the beginning of the campaign "A new manner of driving – clever, safe and further". This joint initiative by the German Association of the Automotive Industry (VDA) and the German Road Safety Council (DVR) was designed to teach motorists an economical and safe manner of driving without having to dispense with their driving pleasure and comforts. The campaign was held under the auspices of the Federal Ministry of Transport, Building and Urban Affairs (BMVBS).

The campaign website www.neues-fahren.de not only lists the relevant tips for an eco-friendly driving style, but it also contains numerous links which enable the interested visitor to establish direct contact with the providers of various Eco-training programmes. These are directed to individual motorists, to vehicle fleets as well as truck and bus drivers.

Apart from the DVR and the VDA, the Association of International Motor Vehicle Manufacturers (VDIK), the ADAC, the Deutsche Post AG, the German Federation of Driving Instructors’ Association, the Institutions for Statutory Accident Insurance and Prevention for Trade and Industry and the Autoclub Europe (ACE) have taken part in this joint campaign.
"The AMI fuel-saving driving lesson"

Since the spring of 2003, the German Road Safety Council in collaboration with the Association of International Motor Vehicle Manufacturers has been offering the "AMI-fuel-saving driving lesson" in the context of the annual Automobile Trade Fair (AMI) in Leipzig. At this fair, trade visitors are given the opportunity to get to know the vehicles of the participating manufacturers in normal road traffic while experiencing the advantages of a fuel-saving driving style.

With nearly 2,800 motorists showing interest in the programme, in 2008 the AMI fuel-saving driving lesson experienced a record rush of people. A total of 23 exhibitors, among them many renowned manufacturers from A like AUDI to V like VW, took part in the programme. In recent years, well over 10,000 fairgoers have taken advantage of this programme.

In the context of the AMI-fuel-saving driving lesson, the German Road Council and the Institutions for Statutory Accident Insurance and Prevention for Trade and Industry, the Leipzig Trade Fair and the VDIK also conducted a "fuel-saving rally" in the year 2006 where they tried to identify "the champions of all categories". The fairgoers with the best driving performance who were also able to give correct answers in a short quiz on safety and fuel-saving were awarded a prize. Participants in the "fuel-saving rally" went on a 20-minute round trip through Leipzig in the company of a professional instructor who introduced them to the fuel-saving driving techniques.

"Eco-Driving for natural gas vehicles"

"Drive with natural gas, save twice the amount". This was the motto of a universally unique campaign initiated by the Ford Werke AG and the German Road Safety Council (DVR) in October 2003. "Eco-Driving for natural gas vehicles" was the first fuel-saving training destined for gas-powered vehicles: a customized Eco-Driving training designed to utilize the savings capacity of modern natural gas vehicles on the road in the best way possible. The four-hour fuel-saving courses on natural gas vehicles are offered on the dealer’s premises and are suited for fleet managers as well as for driving instructors and private motorists.

"Eco-Trainings" at the IAA

"Saving fuel - a smart way to drive" was the title of the "Eco-Training" which was offered for the first time at the 2007 International Motor Show (IAA) in Frankfurt. Similarly to the AMI fuel-saving driving lesson, the 765 visitors who showed interest in this new training were given the opportunity to perform test drives in the company of an experienced instructor who showed them how to adopt a driving style enabling them to reduce fuel consumption and harmful emissions. Result of the IAA test drives: "Green driving" leads to an average reduction of 20.65 per cent in fuel and harmful emissions.

"Transporter Coaching" and "Passenger Car Coaching"

"Transporter Coaching" and "Passenger Car Coaching", two new programmes developed by the German Road Safety Council, combine elements of the safety and the fuel economy trainings for the implementation in companies. The goal of the programmes is to raise people’s awareness for safety issues and climate protection within the day-to-day operations of the company. It became evident that two programmes with different approaches cannot be held on the same day, but that a didactic concept was required in order to combine both programmes in an effective way. Since 2007, the programme, whose effectiveness has been confirmed in two different impact studies, has been offered via members of the German Road Safety Council.
"Be a cool driver – save gas"

"Be a cool driver - save gas" is a programme which serves to raise the awareness of motorists for a safe, economical and eco-friendly manner of driving while also making a contribution to climate protection.

"Be a cool driver - save gas" is designed as a means for permanently establishing an up-to-date manner of driving among learner drivers via the normal driving training. The programme is divulged by making use of the multiplication effect.

From 2006 to 2008, the implementation of the programme "be a cool driver - save gas" was subsidized by the Federal Ministry of Transport, Building and Urban Affairs (BMVBS). It comprises a one-day further training programme for driving instructors (as part of their compulsory advanced training), for driving inspectors and driving instructors in training, a manual with incentive video spots and didactic resources to be used in the classroom, as well other types of communication suitable for adolescents.

In the context of project-related monitoring, the degree of acceptance of the communication measures was evaluated, further trainings and trainer workshops were subjected to observation and a comprehensive set of data was collected to help assess the training series. The results of these measures will be exemplified in the following.

At present, the manual on the programme "be a cool driver - save gas" is the most suitable publication for the above-mentioned target groups. Amongst other things, it distinguishes itself by the following features:

- The highest possible degree of up-to-dateness
- State-of-the-art scientific findings
- Modern didactics and modern media
- Consistent focus on the GDE matrix (Goals of Driver Education)

On account of international queries during the term of the project it became necessary to translate the manual into English and in this way make it available to experts outside of Germany. Simultaneously, a special edition was produced for the EU member state of Luxembourg as the Luxembourg Department for Transport has enabled all driving instructors in Luxembourg to participate in the "be a cool driver - save gas" further training programme.

On a scale ranging from 1 to 5, the analysis of the 3,486 available feedback forms resulted in a score of 2.05 for the manual and the corresponding media.

The one-day training on the whole was given a score of 1.99 (3,740 available feedback forms). In addition, participants of the further training were asked to specify to what extent their expectations in terms of the practical relevance of the programme for day-to-day use had been met. The 3,728 available feedback forms resulted in an average score of 2.16.

Project-related monitoring has shown that there are regions in Germany with an exceptionally high motivation to enable driving instructors to participate in a hands-on further training which meets future requirements, but that on the other hand, there are also regions which unfortunately have as yet failed to recognize the opportunities offered by an up-to-date further training programme of that nature.

At the same time, the monitoring accompanying the training allowed for a demand-oriented readjustment of its didactic organisation while the project was still running. The success of this measure became evident in the data evaluation: Concerning the question "How easy, do you think, will it be for you to implement eco-driving in your driving trainings?", the average score increased considerably from 2.41 in the year 2006 to 2.21 in the year 2008.

The continuing demand for the "be a cool driver - save gas" scheme in the regions with a high motivation to make driving instructors benefit from the further training programme suggests that in 2009, driving instructors will once again grapple with modern didactics even though subsidies have been discontinued.

On the internet page www.coolfahren-sprit-sparen.de, interested individuals will find pertinent information on the programme and its contents.
"Drive like a pro – safe driving, both in a professional and a private context" (working title: defensive driving DD)

In cooperation with Exxon Mobil (EMPG GmbH) and the professional organisation of the mining and quarry industries, another research project and training was initiated and completed under the name of "Drive like a pro – safe driving, both in a professional and a private context". This training was meant to combine a driving style which protects the climate with other preventive elements and to guarantee safe driving in the daily work routine.

The didactic structure was modelled on the DVR programme "drive safely and save gas along the way", and it combines theoretical learning units with the exchange of ideas and a personalised practical unit. The training modules were matched closely with the needs of the company.

In the course of a one-day event, groups of six staff members each completed the following seven training modules:

**CBT Fatigue:** An interactive computer programme conveys facts and suggestions on the issue of driver fatigue. Apart from evaluating the answers given, a quiz offers additional explanations thus enabling an additional learning effect.

**Recent changes in the road traffic regulations (the German StVO):** Teams are formed to discuss and comment on recent changes in road traffic regulations.

**Deer pass:** This topic is given particular attention as many of the business-related trips of the EMPG GmbH lead through sparsely populated and often densely wooded areas.

**Discussion of dangerous situations:** Group members refer to dangerous situations in day-to-day traffic from their own experience and discuss them as a group by analysing and exchanging ideas on possible causes and alternative behaviour patterns.

**CBT Physics of driving:** This interactive computer programme focuses on facts and suggestions on how to handle loads, on braking and other aspects in connection with the physics of driving and safety considerations.

**Inspection of operational safety:** In this module, the vehicles of the participants are inspected in terms of their operational safety, followed by a discussion of the consequences which the results might have on safety in general.

**Driving practice:** Accompanied by an instructor, the participants drive their own vehicles on known routes and in everyday traffic. This one-hour DD-Training (one trainer, one participant, one car) is a compact training in real-world traffic which combines the aspects of safety, economic efficiency and environmental protection.

In each case, the training was led by two certified instructors to guarantee close supervision – particularly in the "driving practice" module.

**Evaluation: Results and benefits**

Shortly before the beginning of the training, the participants were handed out a questionnaire with questions on their expectations, their attitudes towards car driving and road safety as well as on their previous experience with road safety trainings. Immediately before and three months after the training they were asked for an evaluation and were once again questioned about their insights and their attitudes towards driving and road safety.

Subsequent to the training, all seven training modules were evaluated as exceptionally interesting, useful and important. The participants’ expectations could be met or even surpassed. In particular, the participants gave a positive appraisal of the fact that their individual circumstances had been taken into account in the practical training and in the discussion of dangerous situations, that the training was of great practical relevance and that its contents met the demands they were faced with in everyday traffic.

The chances to implement the knowledge imparted to them in day-to-day life were rated as higher than average. The participants were convinced that they would achieve positive results if they resorted to what they had learnt in the training. The motivation to implement this
Evaluation: Results and benefits

The effectiveness of the combined safety and fuel-saving training was examined by means of a pre-post study with a treatment group and a control group. Before and after the training, the drivers were questioned and their driving behaviour was examined. The observers who accompanied the delivery tours noted down certain driving behaviour patterns, e.g. driving errors and fuel-saving behaviour (releasing the accelerator when approaching a red light) in an observation form.

The driving errors were classified as follows:

- Concentration or attention error, e.g. the driver fails to yield the right of way.
- Orientation errors, e.g. when turning the driver chooses the wrong lane.
- Risk errors, e.g. the driver falls below a safe distance.
- Procedural errors, e.g. when turning the driver is unsure in the handling of his/her vehicle.

Whereas in the preliminary survey the error frequency of both driver groups was similar, afterwards the driver group who had received training committed considerably fewer errors than the group without training. Their driving style was more relaxed and more defensive. The drop in risk errors was particularly evident. It seems that participation in the course resulted in a much more defensive driving style. There were even statistically significant changes in the drivers' attitudes: The members of the treatment group reacted to stressful situations – such as nose-to-tail traffic, time pressure because of tight deadlines, shoulder-runners on the highway – with less aggression and less willingness to take risks, e.g. by railing against other drivers or by tailgating.

Furthermore, the drivers who had received training tended to decelerate earlier thus using momentum. They drove more smoothly and in a much more proactive way and therefore saved a lot more fuel than before. In the driver group which had received training the fuel economy in the second and the third month after the training amounted to 6.8 per cent. Six months after that, it was still at 3.7 per cent. In the control group which had not received any training, no such reduction in fuel consumption occurred. During the test drives the speed of both groups was practically identical. The pre-post comparison showed that the journey time for the daily tour had not increased.

Fuel-saving trainings at "Schäfer's Brot und Kuchen Spezialitäten" (Schäfer's bread and cake specialities)

In the vehicle fleet of "Schäfer's Brot und Kuchen Spezialitäten", the DVR training "drive safely and save gas along the way – safe, economical and environmentally friendly driving" was carried out for the first time with trucks of up to 7.5 tons of gross vehicle weight. In the workshops, which lasted up to 120 minutes, a maximum of 15 participants was imparted practical tips on how to behave in everyday traffic. The workshops were followed by a real-world driving training: Every driver was accompanied on his/her daily delivery tour (with an average duration of about 160 minutes) by an instructor who gave comments and tips for a fuel-saving driving style. Subsequently to the tour, the driver was provided feedback on his/her manner of driving.

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As the financial evaluation of the training programme demonstrates, the fuel-saving training had paid off for the company within one year:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
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<tr>
<td>Instructor fees, administrative costs</td>
<td>2,907 EUR</td>
</tr>
<tr>
<td>Compensation for workshop participation per 15 drivers</td>
<td>1,200 EUR</td>
</tr>
<tr>
<td>Costs:</td>
<td>4,107 EUR</td>
</tr>
<tr>
<td>Improvements in fuel economy p.a.:</td>
<td>4,725 EUR</td>
</tr>
</tbody>
</table>

0.9 l/100 km * annual mileage (ca. 35,000 km) * price per litre diesel (1,00 EUR, as per 03/2009)

Even when we consider that the price for diesel is relatively low at the moment, the savings potential still amounts to more than 600 EUR. Assuming a price of more than 1,30 EUR for one litre of diesel, which was a perfectly normal price one year ago, the savings amount to more than 2,000 EUR. If we presume that in the following year, the fuel economy performance will decrease to around 0.5 l/100 km, further savings of 2,625 EUR will ensue.

Experience shows that additional cost savings result from the preservation of material and the lower accident rates that go hand in hand with a fuel-saving driving style.

However, both factors were not quantifiable in this study.


Communication platforms

Apart from the above-mentioned websites, the German Road Council has launched several websites to accompany the numerous trainings and programmes on the subject of eco-driving. They convey the details of a fuel-saving, safe and environmentally friendly driving style and also present – partly in the form of portals – the various training programmes which are available.

Under www.spritsparstunde.de, visitors will find a calculator for the calculation of fuel costs, a quiz to test their knowledge on the subject, and a search function which will help them find a driving school close to their home which offers the "fuel-saving driving lesson".

Under www.spritsparwochen.de, an action platform on the subject of fuel-saving, the German Road Council and its partners announce events and raffle off training vouchers. With the help of a calculator for the calculation of fuel costs, website visitors have the possibility of finding out their individual savings potential, as well as finding a training provider and feedback on their practice drive.

Tips on a "green driving style" can also be found on the webpage of the United Nations Environment Programme (UNEP) under the keyword of "greener driving" (www.greener-driving.net), which is supported by the German Road Council. On a cross-cultural basis, it primarily uses comic videos to promote an environmentally friendly driving style.