EUROPEAN PARLIAMENT

DIRECTORATE-GENERAL FOR INTERNAL POLICIES

POLICY DEPARTMENT A
ECONOMIC AND SCIENTIFIC POLICY

Economic and Monetary Affairs

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Industry, Research and Energy

Internal Market and Consumer Protection

Study on consumer information on fuel economy and CO2 emissions of new passenger cars

ENVI

EN

2010

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POLICY DEPARTMENT DIRECTORATE A: ECONOMIC AND SCIENTIFIC POLICY

ENVIRONMENT, PUBLIC HEALTH AND FOOD SAFETY

Study on consumer information on fuel economy and CO_2 emissions of new passenger cars

Implementation of the Directive 1999/94/EC

Abstract

The European Union has set target values for CO_2 emissions from new passenger cars and taken measures to ensure that information on the CO_2 performance of new passenger cars is readily available for citizens. This study examines the implementation of Directive 1999/94/EC relating to the availability of consumer information on fuel economy and CO_2 emissions with respect to the marketing of new passenger cars; and assesses potential amendments to the legislation, taking into consideration research results in the field of consumer behaviour.

IP/A/ENVI/ST/2009-12 May 2010

PE 433.455 EN

This document was requested by the European Parliament's Committee on the Environment, Public Health and Food Safety (ENVI)

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LINGUISTIC VERSIONS

Original: EN

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Manuscript completed in May 2010

This document is available on the Internet at:
http://www.europarl.europa.eu/activities/committees/studies.do?language=EN

DISCLAIMER

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LIST OF ABBREVIATIONS

ACEA	European Automobile Manufacturers Association
ADEME	French Environment and Energy Management Agency
ANWB	General Dutch Automobile Club
BEUC	The European Consumers' Organisation
BOVAG	Association of Automobile Dealers and Mechanics (NL)
CECRA	European Council for Motor Trades and Repairs
DGCCRF	General Directorate for Competition Policy, Consumer Affairs and Fraud Control (FR)
ENPA	European Newspaper Publishers Association
EACA	European Association of Communications Agencies
EPC	European Publishers Council
FIA	International Automobile Federation
FIOD-ECD	Fiscal Information and Investigation Service/ Economic Investigation Service (NL)
FoEE	Friends of the Earth Europe
IEKP	Integrated Energy and Climate Program (DE)
LEEV	Light-duty Environmentally Enhanced Vehicle
RAI	Tyre and Automobile Industry Association (NL)
VDA	German Association of the Automotive Industry
VED	Vehicle Excise Duty
VROM	Ministry of Housing, Spatial Planning and the Environment (NL)

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EXECUTIVE SUMMARY

Background

In order to contribute to the reduction of greenhouse gas emissions from the transport sector, the European Union has set target values for CO_2 emissions from new passenger cars and made efforts to ensure that information on the CO_2 performance of new passenger cars is readily available for citizens.

This study examines the implementation of Directive 1999/94/EC relating to availability of consumer information on fuel economy and CO_2 emissions with respect to the marketing of new passenger cars.

The first chapter describes the regulatory framework for CO_2 emissions and passenger cars, assesses the level of compliance in a number of Member States based on 10 case studies, and gives an overview of stakeholder positions on various aspects of the Directive.

This study also explores the findings of existing research on consumer behaviour and car purchasing (chapter 2).

The last chapter develops and compares various policy issues to be addressed in the forthcoming revision of the Directive and provides the Environment Committee with concrete policy options.

KEY FINDINGS

- Various CO_2 labels for passenger vehicles are used throughout the EU. Some Member States go beyond the EC Directive and use a colour-coded comparative label. Only the Netherlands uses a relative labelling scheme.

- Directive 1999/94/EC and Regulation (EC) No 443/2009 are complementary policy measures that seek to share the burden of reducing CO_2 emissions from new passenger cars between consumers and manufacturers while remaining in line with consumer preferences and market incentives. This duality of measures suggests a shared approach, i.e. a relative label.

- The language of Directive 1999/94/EC Annex IV regarding the inclusion of CO_2 information in promotional material has led to compliance issues as well as complaints being filed with the European Commission.

- Specific compliance issues regarding Directive 1999/94/EC have been recognized in the Member States; however, because many responsibilities fall to state level authorities, information from investigations is not always required to be shared with national governing bodies. It seems the actual number of violations in the Member States is decreasing. Member States that provide guidance material to advertisers report fewer violations.

- Past stakeholder meetings depict a diverse set of interests and possibilities, by which Directive 1999/94/EC can be updated. Harmonisation of the EU-wide label using A-G colour-coded classes is positively anticipated by the majority of stakeholders. Nevertheless, continuous labels have to be considered for their higher efficiency.

- The majority of EU citizens recognises that the type of car they own has important impacts on the environment.

- Surveys determine that consumer awareness of a product label does not necessarily mean that the label is used during decision making. Studies show that environmental labels that are too complex can hinder consumer understanding of the information provided. A proper balance of information tools is important to provide consumers with the information they need without overburdening them. Consumer choice can be limited by too much, or overly complex, information.

- Fuel consumption is often only considered in the second round of decision making, and only in regard to financial implications, not environmental. Consumers often narrow car-purchasing decisions down to a specific class, and then apply secondary criteria to make their final decision. Because consumers use two rounds of decision making to narrow down their decisions, it is necessary to build information tools that can be either used specifically in one round, or applied across both decision rounds.

- Average running costs are currently used only to a limited degree in combination with the policy in Member States and are calculated to one year. Consumers and NGOs welcome the display of running costs. While NGOs favour a display of full lifecycle cost, consumers tend to focus on the first three years.

- Sales people and internet sites represent gateways to consumers and possibilities to inform consumers, and can have a strong impact on the final selection of automobile that consumers make. Intermediaries, such as sales assistants as well as physical placement of products at points of sale can be relevant in a consumer's decision to purchase a product. Therefore, special training for sales people is suggested.

- New and existing energy labels should always be designed or revised through consumer-based market research.

- Harmonisation is seen as positive by most stakeholders.

- There is no clear indication which labelling scheme is best suited to convey information: absolute, relative, graded or continuous, static or dynamic. More consumer-based market research is needed to come to a conclusion.

- The poster could be discontinued due to its low relevance. Online Guidance is given priority and should be made mandatory. The Fuel Guide itself should, however, also remain available in a print version to prevent social exclusion.

- A more detailed formulation of requirements on advertisement is needed and should be expanded to manufacturer websites. Other media do not necessarily need to be included as their role in the purchasing process differs significantly.

- Mandatory training to sales staff will help convey environmental information at the point of sale.

- Before extending the scope to other vehicles more research is required.

- The display of running costs can be achieved most easily over a set time period, either one or three years, and should include taxes and maintenance costs in addition to the fuel costs for an average mileage, though more research is needed.

CONCLUSIONS

Full information requires a harmonisation of the implementation of the car-labelling Directive, especially regarding the label. This harmonisation should also include a harmonised monitoring and reporting process to ensure that information about the implementation status is readily available.

Consumers prefer a display of three years' running costs while NGOs prefer to include the full lifecycle costs. The display of full lifecycle costs is significantly more difficult compared to all other options and will entail a complex methodological discussion. The display of costs for one or three years seems the most promising way to go, covering fuel costs, taxes and maintenance costs.

Car purchasing is a two stage process. This enables there to be different requirements for advertisements in different media. Coloured labels improve the understanding of the information and are favoured by consumers.

The actual number of violations cannot be recorded for certain. However, the data indicates that the number of cases has significantly dropped in recent years. Most violations occur in printed advertisements and can be linked to the unclear specifications in the Directive. Only few violations have actually resulted in financial penalties.

Next steps leading towards a revision of the car-labelling Directive should be driven by consumer-based market research in addition to the mandatory stakeholder processes.

1. IMPLEMENTATION OF DIRECTIVE 1999/94/EC

KEY FINDINGS

- Directive 1999/94/EC and Regulation (EC) No 443/2009 are complementary policy measures that seek to share the burden of reducing CO_2 emissions from new passenger cars between consumers and manufacturers while remaining in line with consumer preferences and market incentives.
- Various CO_2 labels for passenger vehicles are used throughout the EU; some Member States go beyond the EC Directive and use a colour-coded comparative label. Only the Netherlands uses a relative labelling scheme.
- Average running costs are only used to a limited degree in combination with the policy in Member States and are calculated to one year.
- The language of Directive 1999/94/EC Annex IV regarding the inclusion of CO_2 information in promotional material has led to compliance issues as well as complaints filed with the European Commission.
- Specific compliance issues regarding Directive 1999/94/EC have been recognised in the Member States; however, because many responsibilities fall under state level authorities, information from investigations is not always required to be shared with national governing bodies. It seems the actual number of violations in the Member States is decreasing.
- Modifications to the implementation of Directive 1999/94/EC within national law are currently planned in Germany, France and the UK, and some Member States expressed that they were waiting for decisions to first be made at the EU level before updating national law.
- Past stakeholder meetings depict a diverse set of interests and possibilities by which Directive 1999/94/EC can be updated. Harmonisation of the EU-wide label, using A-G colour-coded classes is positively anticipated by the majority of stakeholders.
- Member States that provide guidance material to advertisers report fewer violations.

This study examines the implementation of Directive 1999/94/EC relating to the availability of consumer information on fuel economy and CO_2 emissions in respect of the marketing of new passenger cars.

Chapter one is composed of three sections. The chapter begins with a description of the various policy measures which constitute the integrated framework regarding CO_2 emissions and passenger cars. This is followed by a summary and the key findings of ten case studies conducted as part of this study. The third and final section takes a closer look at the link between Directive 1999/94/EC and Regulation (EC) No 442/2009 and provides an overview of stakeholder positions on various aspects of the Directive.

1.1. Description of the Regulatory Framework

Passenger cars account for 71% of all transport related CO_2 emissions in the EU.[1] Total transport accounts for approximately 20% of all greenhouse gas emissions in the EU, only fuel combustion from energy industries accounts for more (approximately 30%).[2] Accordingly, a number of integrated EU policy initiatives have been established to improve the fuel economy of new passenger cars and thus reduce their CO_2 emissions. The strategy to reduce CO_2 emissions from new passenger cars sold in the EU is outlined in Communication (COM(2007)19) which was adopted by the Commission in February 2007.[3] The current Community policy framework seeks to meet objectives outlined by the UN Framework Convention on Climate Change and its Kyoto Protocol, and limits CO_2 emissions from new cars to 120 grams per km by 2012, which is a reduction of about 25% from current levels.[4] The regulatory framework touches upon multiple and diverse issues and encompasses complementary measures including: Directive 1999/94/EC, Recommendation 2003/217/EC, Directive 2003/73/EC, Directive 2009/33/EC and Regulation (EC) No 443/2009.

One of the principal policy instruments aimed at reducing CO_2 emissions from new passenger cars is **Directive 1999/94/EC**. This Directive seeks to "ensure that information relating to the fuel economy and CO_2 emissions of new passenger cars offered for sale or lease in the Community is made available to consumers in order to enable consumers to make an informed choice".[5] Information plays an essential role in market activities. Removing information barriers regarding the fuel economy of passenger cars enables consumers to more easily compare passenger cars according to this product attribute. Ultimately, the access to fuel economy information is expected to encourage consumers to purchase cars which use less fuel and emit less CO_2. Obtaining such information is either too difficult or too costly for consumers to do alone and thus it is necessary to introduce specific policy to accomplish this.[6] Given that reduced CO_2 emissions and increased fuel economy of passenger cars are linked to monetary savings, purchasers of new passenger cars are able to act according to their individual financial situation, while also contributing to the overall reduction of greenhouse gas emissions. Additionally, it is expected that the increased ability of consumers to consider passenger cars' fuel economy encourages automobile manufacturers to compete according to this product characteristic. Therefore, it is expected that manufacturers will take steps to reduce the fuel consumption of the cars they produce.

Directive 1999/94/EC issues a set of policy tools to be used throughout the Member States. The Directive mandates the use of a visible fuel economy **label** displayed on passenger cars at the point of sale, the production of a **guide** on fuel economy updated at least once a year and available free of charge to consumers through various means, the display of a **poster** which provides official fuel consumption data and specific CO_2 emissions data of all new passenger car models displayed or offered for sale or lease through that point of sale, and finally, the inclusion of official fuel consumption and specific CO_2 emission data of the passenger cars which it refers to in **all printed** promotional material.[7]

[1] European Commission(2008)
[2] Eurostat (2008)
[3] European Commission (2010)
[4] European Commission (2010)
[5] Eropean Commission (2010a)
[6] European Commission (1999)
[7] Europa, Summaries of EU Legislation (2009)

In addition, the Commission issued **Recommendation 2003/217/EC** to expand the scope of the original Directive to all promotional material used in marketing, advertising and promoting of new passenger cars across multiple media formats.[8]

Since its original completion, Directive 1999/94/EC has been amended to take new considerations into account and to adjust to additional applications. Most notably, **Directive 2003/73/EC** amended Annex III of Directive 1999/94/EC and requires that an **electronic poster** be displayed at the point of sale instead of the traditional poster. The electronic screen should be no less visible than the traditional poster and should be updated every three months instead of every six months as was required under the original Directive.[9]

An additional initiative within the EU regulatory framework to reduce CO_2 emissions in passenger cars is **Directive 2009/33/EC** on the promotion of clean and energy-efficient road transport vehicles. The Directive requires public authorities and some other operators when purchasing road transport vehicles to take into account the impact of these vehicles during their operational lifetime in terms of energy consumption, CO_2 emissions and other pollutant emissions. In order to fulfil this requirement, contracting authorities and other contracting operators can choose to set technical specifications for energy and environmental performance in the documentation established when the vehicle is purchased or to include energy and environmental impacts in the purchasing decision. In addition, the Commission must encourage exchange of best practice and knowledge between Member States as far as promoting the purchase of clean and energy-efficient road transport vehicles is concerned.[10]

Regulation (EC) No 443/2009 sets emission performance standards or CO_2 emission limits for **manufacturers** of new passenger cars. To accomplish this, the emission limits are applied to the average of all automobiles built by manufacturers registered in the EU in one calendar year and not to individual automobile models. Additionally, manufacturers may agree to form a pool in order to meet their targets. Where manufacturers form a pool, they should be deemed to have met their targets if the average emissions of the pool as a whole do not exceed the target emissions for the pool. The Regulation aims to provide a flexible approach that reduces CO_2 emissions and encourages innovation, while taking into account market implications, manufacturers' competiveness and the direct and indirect costs for business.[11] The Regulation also aims to increase incentives for the car industry to invest in new technologies and to promote innovation in fuel efficient vehicles. The Regulation is monitored at the Community level, whereas Directive 1999/94/EC is monitored at Member State level.[12]

Regulation (EC) No 443/2009 was formally adopted in April 2009 following a compromise agreement between the Council and the European Parliament in December 2008. A target of 120g/km was established as the overall objective. The compromise is based on a French proposal to gradually limit CO_2 emissions to 130 g/km for 65% of new cars in 2012, 75% in 2013, 80% in 2014 and 100% in 2015, to be reached by improvements in vehicle motor technology. A further 10g/km reduction towards the 120g/km target is to be obtained by other technical improvements, such as better tyres or the use of biofuels.

[8] Europa, Summaries of Legislation (2009)
[9] European Commission (2003)
[10] Europa, Summaries of Legislation (2009a)
[11] European Commission (2009)
[12] European Commission (2009)

In the long term, the agreement sets an average emissions target of 95g of CO_2/km for new car fleets by 2020.[13]

Regulation (EC) No 443/2009 provides a technical basis which may later be used by Directive 1999/94/EC as the policy is changed or updated. Currently both policy instruments seek to address the CO_2 emissions from vehicle category M1, i.e. passenger cars. Therefore the specific legal wording and technical definitions are, when relevant, shared between the two policies. Specifically, Annex 1 of Regulation (EC) No 443/2009 sets out specific CO_2 emission targets for new passenger cars which are measured in grams per kilometre and will be updated in 2016 to adjust the value to the average mass of new passenger cars in the previous three calendar years. It was agreed that mass would be used as a parameter to describe the function of the utility of cars on a linear basis as it was believed to provide the most realistic and competitively neutral targets, and because data on mass is readily available.[14] The use of mass as a parameter can also provide the basis for a linear comparison between vehicles when applying a relative labelling scheme. This can be seen in the case of the Netherlands and in the proposed scheme of Germany.

Directive 1999/94/EC and Regulation (EC) No 443/2009 provide the cornerstone of the EU's policy framework to reduce CO_2 emissions from new passenger vehicles. The two policies aim at different aspects of the EU automobile market while ultimately targeting the same goal. The Directive seeks to provide consumers with information and thus influence consumer demand for passenger vehicles.[15] The Regulation targets manufacturers and sets minimum emissions performance standards for passenger vehicles and seeks to improve the overall efficiency of the EU passenger car market.[16] These two approaches might best be described as a "push-pull" effect. The Directive "pulls" the market through increased consumer demand for more efficient vehicles while the Regulation "pushes" the market by improving the efficiency of the vehicles supplied. The combination of these two policies provides benefits that are not possible through the use of one policy instrument alone, making each policy instrument essential to the overall goal of reducing CO_2 emissions in the EU car market. The combination of these two policy instruments ensures that consumers and producers share the responsibility of reducing CO_2 emissions from new passenger cars. Moreover, this approach helps to preserve a diverse car market in line with market incentives and consumer preferences without the use of overly restrictive policy. Ultimately, the proper policy balance aims to reduce CO_2 emissions without hindering (and perhaps stimulating) economic growth.[17]

As part of the renewed Community strategy on CO_2 from cars, the Commission plans to revise Directive 1999/94/EC. An online public consultation of the Directive was carried out in 2008 to gather opinions from stakeholders and the public on the effectiveness of the existing legislation and on possible options for its improvement. A stakeholder meeting was held in 2008 which brought together key individuals and organizations to discuss various options for changing the Directive.[18]

[13] European Commission (2009)
[14] European Commission (2009)
[15] European Commission (1999)
[16] European Commission (2009)
[17] Euractiv (2009)
[18] European Commission (2010)

The European Commission's strategy for the uptake of clean and energy efficient vehicles (green vehicles) outlines key elements to be updated. The strategy asserts that an amendment to Directive 1999/94/EC will be made, and that coordination of consumer measures encouraging the purchase of green vehicles within the Member States should be encouraged by the end of 2010. In addition, the strategy suggests the continued monitoring of the implementation of Directive 2009/33/EC (promotion of clean and energy-efficient road transport vehicles). Furthermore, the strategy proposes the use of additional research projects to increase the understanding of consumer behaviour with regard to green vehicles and how this influences different information tools. In addition, a mid-term review of Regulation No (EC) 443/2009 is expected by the end of 2013. This review will look at the short-term outcomes of the Regulation to assess the modalities of reaching the 2020 target of 95 g/km for passenger cars and the long-term (2030) perspective.[19]

1.2. Case Studies on 10 Countries

A series of ten case studies was conducted to assess non-compliance and gather information regarding the implementation of Directive 1999/94/EC in the Member States. The Member States selected as case studies are: Austria, Czech Republic, Finland, France, Germany, Italy, the Netherlands, Sweden Poland and the UK. This selection of case studies aimed to ensure a representative sample and a balanced geographical mix. The number of new vehicle registrations in each Member State in 2009 was also considered before selecting the case studies (see Table 7). The following section summarizes the major findings of the case studies; it first highlights key results for each of the policy tools used within the Directive and is followed by a description of the overall relevant points of interest. The complete case studies are attached in the Annex.

The analysis of the ten case studies followed a detailed methodology designed to collect the most relevant available information. An initial screening of information sources determined the structure of the case studies and a template was designed to guide information gathering and ensure a common approach. Public information at both the EU and Member State level as well as direct communication with relevant authorities and stakeholders provided the basis for the case studies. The key elements considered in the analysis included: compliance with Directive 1999/94/EC, variations of implementing the specific measures set forth by the Directive, modifications planned by the Member States, and other research projects regarding the Directive that may provide valuable insight. The case studies provided varying degrees of information regarding the individual Member States and the Directive. This suggests that Directive 1999/94/EC is diversely implemented and operationalised throughout the EU Member States. In a number of Member States the availability of relevant information was high and was easily accessible, while in others it was much more difficult to obtain concrete answers even, after exhaustive searches.

1.2.1. Labelling

Implementation of Directive 1999/94/EC varies throughout the Member States reviewed. Five Member States go beyond what is mandated in the Directive. Four Member States (Finland, the Netherlands, UK and France) use a scaled comparative label that utilises colours and lettering in a scaled format, similar to that of the EU energy label. The Finnish label also shows the target emissions that would be required according to Regulation EC (No) 443/2009, as well as minimum and maximum CO_2 in the model series.

[19] Europa, Press Releases Rapid (2010)

Austria uses a continuous comparative label, a slightly simpler coloured scale format that enables consumers to compare vehicles according to where they fall on a continuous scale without the use of defined categories. The other Member States (Germany, Italy and Sweden) meet the minimum requirements and issue a rather simple label, providing information in a list or table format. In other Member States (Czech Republic, Poland) no format for the label is mandated, which allows for car dealerships to devise their own labels as long as the necessary information is included. Generally, all the Member States reviewed enable the automotive dealers to print their own labels, with the technical information gained from the manufacturer or supplier. With the exception of Finland, the Member States presume that the labels are self-explanatory and require no further explanation for consumers to understand the information provided. Finland provides additional information leaflets, which are also sent to vehicle owners with their yearly tax bills, and provides automotive sales persons training on interpreting the label information and using CO_2 argumentation in sales.

Currently the Netherlands is the only Member State that uses a **relative labelling scheme.** The label specifies the fuel consumption of the car (both in l/100 km and in km/l) and the CO_2 emission in g/km. In addition, it contains a classification scheme (A-G) designed to look similar to the well-known energy labels of electric appliances, with colours ranging from green (A) to red (G). Under this classification, a car with label A emits at least 20% less CO_2 than the reference level, while a car with label G emits at least 30% more than the reference level. The reference level is the weighted average of CO_2 emissions of all cars in the same size class (the weight of this part is 75%) and the average CO_2 emission of all cars, regardless of size (the weight of this part is 25%). This 'weighted average' system enables a comparison of the relative fuel efficiency of cars that are comparable in size, but at the same time ensures that the absolute fuel efficiency plays a role: it is 'easier' for a small car to get an 'A' label than for a large car.

Prior to its introduction, the system was discussed with the main Dutch stakeholders: the organisations of car importers and dealers (RAI and BOVAG), the motorists' and consumers' associations (ANWB and Consumentenbond) and the main Dutch environmental NGO (Stichting Natuur en Milieu). While all stakeholders agreed on the method to calculate the relative fuel efficiency, RAI and BOVAG initially disagreed with the mentioning of the relative fuel efficiency on the label. Nevertheless, they have now accepted it and co-operate in its implementation.

See the section on Running Costs to read about how Germany is planning to update its label.

In some instances, Member States (Austria, The Netherlands and Poland) also require additional information (i.e., emissions class, bio fuel suitability, noise level, etc.) on the label not required by the Directive. In Poland the national law does not require nor refuse the use of additional information in the label, which leaves the decision to the manufacturers. In addition, the UK has extended the use, on a voluntary basis, of the colour-coded labels for used passenger cars. See Table 1.

Table 1: Summary of Member State Labels

Surpass Directive Label Requirements		Meet the Label Requirements	
Similar to EU Energy Label	**Scaled and Coloured Label**	**Simple Label**	**Format Not Mandated**
France, Finland, the Netherlands, UK	Austria	Germany, Italy, Sweden	Czech Republic, Poland

Source: Ecologic, Table made 25.03.2010.

1.2.2. Guide on Fuel Economy

According to the results of the case studies, the Guide on Fuel Economy is available, to varying degrees, in all of the Member States, with most guides also available online. The Member States update the Guide on Fuel Economy between once a year (i.e., UK, France and Poland), twice a year (i.e., Czech Republic and the Netherlands) and four times a year (i.e., Germany). In addition to an online version of the Guide on Fuel Economy, some Member States (i.e., Finland, Austria, UK, and Czech Republic) also use an online Guide on Fuel Economy, or a database which can easily and regularly be updated to complement the traditional Guide on Fuel Economy. Some Member States often use the online source to supply additional information not included in the traditional guide.

Websites are used in many Member States as a means of enabling the communication and comparison of the information required by the Directive. In Finland, the EkoAKE website enables the comparison of CO_2 emissions and taxes. The information is updated daily and allows retailers to print up-to-date labels directly from this website. Similar websites, which are updated regularly and that allow car dealers to print their own labels, exist in the Netherlands and the UK. Websites that enable consumers to compare different car models based on a range of different criteria are also present in the UK, France, Germany and Poland. In Finland, information on CO_2 emissions will be included on annual vehicle tax bills from 2010.

Moreover, the online databases used in some Member States (i.e., the UK) allow for consumers to apply advanced search and sorting options to further compare vehicles across a range of attributes.[20] The costs of printing the Guide on Fuel Economy have led some Member States (i.e., Sweden) to suggest cancelling the printed version and only using an online version. However, the possible exclusion of some consumer segments has remained a strong argument against it.

Member States fulfil the Directive's requirement regarding the Guide on Fuel Economy and in many cases include additional information to inform consumers (i.e., additional tax rebates, vehicle recycling programs, traffic related environmental taxes, additional graphs and tables, engine power, information about cars and noise, information on alternative fuel vehicles, etc.). Though it is primarily required by the Directive to explain the CO_2 saving potential of improved driving techniques and regular car maintenance, many Member States take this a step further. For example, some Member States include additional driving tips (i.e., Italy's 10 'eco-driving' rules) and provide links to helpful websites (i.e., Germany) where consumers can obtain additional information about the benefits of certain driving techniques and regular car maintenance.[21]

[20] See: www.vcacarfueldata.org.uk

[21] See: www.neues-fahren.de

In addition, some Member States (i.e., Italy and Austria) opt to list more than the top '10 most fuel efficient models' in each fuel class as required by the Directive.

1.2.3. Poster

The posters throughout the Member States generally provide the same information as the labels but in a poster (list) format. The posters divide cars by fuel type and present the list in ascending order according to CO_2 emissions and are presented in the car dealerships showrooms. Relatively little information regarding the posters was retrieved during the case studies given that the implementation of the poster-related requirements (i.e., the Netherlands, Germany) is often left to car dealers, as long as the necessary information is provided. Similar to the label, in almost all Member States the poster is expected to be self-explanatory and require no additional explanation. However, Finland provides sales person training and a website[22] to help explain the information provided by the poster.

1.2.4. Promotional Material

The inclusion of CO_2 information in promotional material has received considerable attention in the Member States, and the implementation of this measure has presented some difficulties. Generally, difficulties stem from the interpretation, or transposition of the Directive into national law, of specific requirements of Annex IV of Directive 1999/94/EC for example, *"easy to read and no less prominent than the main part of the information provided in the promotional literature"*, and *"easy to understand even on superficial contact"*. The size or format of the text on emission and consumption data in the context of the advertisement is critical and is currently open to interpretation. This has led to a number of compliance issues regarding promotional material in the Member States and remains a major topic for many environmental organisations (see the section on compliance issues below). Italy has raised a formal question with the European Commission concerning the need to clarify the definitions included in the Directive. In the Czech Republic, a law association claims that national law insufficiently transposes the aspects of Annex IV of the Directive, and has filed a complaint with the European Commission.

There are various advertising codes in place or planned in the Member States analysed in the case studies. In the Netherlands, car suppliers are supposed to comply with the rules of the 'Advertising Code' (*Reclamecode*), which contains a number of specific items relating to passenger cars. Since October 2009 these include, among others, a specification of the requirements concerning advertisements as given by Directive 1999/94. For example, the minimum size of the letters and of the space to be used for the information on fuel consumption and CO_2 emissions are specified. The Reclamecode also applies to other media, such as websites.

In certain Member States (i.e., Finland, the Netherlands) online guidance for the use of environmental statements in car advertisements is provided by consumer agencies or advertising associations. The UK provides guidance material of what is required under UK regulations and includes recommendations and examples of good (and bad) practice to assist enforcement of the Directive as well as industry. Furthermore, a voluntary pre-publication screening process for promotional materials is provided in the UK by the Vehicle Certification Agency (VCA), which a number of manufacturers and agencies take advantage of to ensure proper compliance.

[22] See: http://www.ake.fi/AKE/Ekoautoilu/Auton+p%C3%A4%C3%A4st%C3%B6tiedot+-+EkoAKE/EkoAKEn+k%C3%A4ytt%C3%B6ohjeet/

In Italy, discussions with stakeholders are ongoing about the size of the information on fuel consumption and CO_2 emissions with a view of proposing a minimum size for this information. With respect to extending the Directive to TV and internet adverts, it was noted that consideration would need to be given to minimum time and space needed for the communication of fuel economy and CO_2 emissions.

In addition to printed material, the extension of the Directive to other media (Recommendation 2003/217/EC) is met with varying degrees of acceptance and is not implemented in many Member States. The Recommendation also stipulates how much time should be allotted to CO_2 information in advertisements (i.e., television, radio, etc.).

In Finland, all sales people of car retailers are being given training on interpreting the information on the label and on using this information in discussions with customers. This should have been completed by March 2010 and will be part of standard training in the future.

1.2.5. Running Costs

Inclusion of running costs in the label could be interesting because they depict fuel efficiency savings in monetary terms, however according to the results of the case studies this information is limited. In some specific cases, running costs have been included, for example, Finland (18,000 km per year) and the UK (12,000 miles per year) display calculated running costs on the label as well as costs of associated CO_2 taxes for one year. The UK and Finland also displays running costs and yearly tax based on CO_2 in the Guide on Fuel Economy, as well as on associated websites. The case studies reveal that running costs were considered prior to the Directive's implementation in some Member States (i.e., the Netherlands), particularly for the label. However, due to the difficulties involved (i.e., fluctuating fuel prices, etc.) and as it was not required within the Directive, the option was dismissed.

The potential financial savings of selecting a more efficient car is explained in some Member States' (i.e., Germany, France) Guide on Fuel Economy. Germany uses a concise example to demonstrate the potential yearly savings made possible from small efficiency improvements. France provides information on how car owners can calculate annual running costs for 15,000 km, as well as the bonus/malus figures.[23] Comparisons show how much more (malus), the consumer would pay for a more polluting car, and how much bonus (rebate amount) would be saved from the final purchase price of the car due to improved efficiency.

1.2.6. Planned Modifications

The case studies revealed that some Member States are currently planning modifications to the implementation of the Directive, notably Germany, France, Sweden and the UK, as well as Finland and Italy. Given that the Directive's measures are linked, updates appear likely to occur jointly or simultaneously for all measures. The case studies determined that some Member States (i.e., the Netherlands and Italy) are waiting until after a review of Directive 1999/94/EC is made at the EU level to assess what revisions will be required before implementing any national modifications to the policy.

[23] The Ademe will be responsible for communicating the format requirements of the new label format to professionals through the Ademe website, www.ademe.fr.

In both France and Germany modifications are concretely being discussed. Germany is planning on updating the label to a comparative label similar to that of the EU energy label, decided upon in the "Integrated Energy and Climate Program (IEKP)" in 2007. The German proposal would be based on a regression line drawn through a plot of the CO_2 emissions against mass of cars sold in Germany in 2008, which is a similar approach to that used in Regulation 443/2009. The label classes are contained within parallel lines to this regression curve. For example, in 2012 cars labelled "D" would fall into the region lying +/-5% around the line, those labelled "C" would lie within 5-15% below the curve, those labelled "B" would lie within 15-25% below the curve, and those labelled "A" would lie in a region more than 25% better than the line, etc. It is proposed that A+ and A++ classes would be added later on. In this approach, a very heavy car could be labelled "A" and a small car could be labelled "G". The date in which this will be implemented is not known.

In France modifications are planned for 2011 to revise the existing French Decree concerning consumer information on fuel economy and CO_2 emissions. Modifications include providing running costs on labels, as well as extending the requirements for information on fuel economy and CO_2 emissions to used vehicles, rented vehicles, and light utility vehicles.

The UK is currently revising the label to take into account changes to the Vehicle Excise Duty (VED), the revision is planned for April 2010. Modifications and restrictions regarding promotional material and CO_2 emissions have also been discussed.

Sweden has conducted a review (2007) to prepare possible revisions (especially to the label) and take new alternatives into account. Currently, however, it is unknown when the modifications will take place and what their specifics will be.

There are various advertising codes in place or being planned in the Member States examined. The Swedish Consumer Agency is planning to issue new restrictions on car advertisements, particularly in relation to environmental claims, but the details of these are not yet clear.

In Italy, discussions with stakeholders are ongoing about the size of the information on fuel consumption and CO_2 emissions with a view to proposing a minimum size for this information. With respect to extending the Directive to TV and internet adverts, it was noted that consideration would need to be given to minimum time and space necessary for the communication of fuel economy and CO_2 emissions.

1.2.7. Research Initiatives

Research initiatives or evaluations can be found throughout the Member States relating to Directive 1999/94/EC. In the case of some Member States (i.e., the Netherlands and Sweden), specific measures such as fiscal incentives linked to the label have been examined and reviewed by the Government. The case studies revealed that research and evaluation of the varying policy measures have been conducted to different degrees in the Member States. Various initiatives by NGOs, consumer organizations and independent institutes have also been undertaken to investigate various aspects regarding consumers, CO_2 emissions, and the EU car market. As a result, multiple suggestions for policy improvement have been made from independent organisations. See Table 8 for a summary of national research initiatives.

1.2.8. Compliance Issues

The case studies found few recorded instances of compliance issues concerning the poster and the guide, though more issues have been recorded in regard to the label and promotional material. However, few official investigations regarding the Directive in the Member States have been conducted. In the Netherlands, France, Sweden and the Czech Republic investigations regarding the label and poster uncovered issues of non-compliance: for example, labels were often missing from new passenger cars on sale, or they provided incomplete information. Similar issues regarding the poster were also found in France (2005) and Sweden (2003). The outcome of the violations in the Netherlands is not known.

The most commonly reported compliance issue in the case studies centred around promotional material. There were multiple instances of automobile advertisements failing to meet, or questionably meeting, the requirements of the Directive; generally those of Annex IV such as *"easy to read and no less prominent than the main part of the information provided in the promotional literature"* and *"easy to understand even on superficial contact"*. Compliance issues regarding promotional material have been reported in several of the Member States (i.e., France, The Netherlands, Italy, Czech Republic, Germany, Sweden and Austria) though few legal proceedings are reported, and often cases were dropped after the violation was corrected. In June 2008 an the European Commission investigated seven Member States[24] for failing to ensure fuel consumption figures were prominently displayed in car advertisements, following Art. 6 Annex IV of the Directive. The investigation came after a formal complaint from several NGOs, particularly Friends of the Earth.[25]

In the case of Sweden (2005), 144 violations concerning posters, were reported, 6 of which involved legal proceedings. Most were due to the poster not being sufficiently visible, or containing outdated information. The investigation in Sweden also found that the Guide on Fuel Economy was not available in many dealerships: only four out of 36 dealers reviewed had the Guide readily available. A previous survey in 2003 by the Swedish Consumer Agency found that 33% of new cars sellers had the label visible on or near the cars. The fine tends to be 100,000 SEK (€10,000) for small companies and 200,000 SEK (€20,000) for bigger companies.

In the Czech Republic in 2007, checks at 138 sales points were carried out for 26 different car brands. Financial penalties were imposed in seven cases and amounted to 63,000 CZK (€2423). The most frequent violations concerned missing labels and/or display obligations at sales points. On other occasions the obligatory text was the missing from the Guide on Fuel Economy, label or display, and CO_2 emissions and fuel consumption information was missing from the label.

In some instances, specifically in France, legal proceedings followed the investigation of particular violations, though almost all cases were eventually dropped after the violations were remedied by those at fault. In France in 2005, an investigation was made into the implementation of the requirements of the Directive at 723 new car dealerships. The investigation found that there were 206 total violations, of which 16 involved court proceedings.

[24] The Member States include: Belgium, France, Germany, Italy, Poland, Slovenia and Spain.
[25] Friends of the Earth (2008)

In particular: 53 violations related to the complete absence of labels or incomplete labels; 144 violations concerning posters (of which 6 involved legal proceedings); and 9 violations concerning promotional materials (9 of which involved legal proceedings). The DGCCRF reported a clear improvement in terms of number of violations compared to the last investigation carried out in 2003/2004. The percentage of violations decreased from 55% in 2004 to 31% in 2005. According to information received by the DGCCRF, violations that involved legal proceedings were often dropped as many were resolved by the body at fault.

In 2009 in France a national investigation was carried out to verify the extent to which car labels presented information on CO_2 emissions, and the accuracy of this information. The results were considered satisfying as there had been a significant decrease in violations of the Directive compared to the number reported in 2005. Most infractions concerned problems with the proper display of posters at points of sale, which are often insufficiently visible or not updated on a regular basis. Additional violations concerned car labels which were displayed in black and white instead of in colour.

In Germany, according to the German Competition Office (Wettbewerbszentrale), a total of 306 violations were reported between 2006 and March 2010 concerning promotional material – in 2006 there were 108 proceedings; 2007, 91 proceedings; 2008, 62 proceedings; 2009, 28 proceedings; and 2010 (until March), 17 proceedings. Of the total, 19 lawsuits were conducted through an arbitration committee for competition disputes, legal action was brought four times to the National Court and three claims necessitated an injunction. In two cases only a written notice was sent to the advertisers as there was no clear violation of the law.

In The Netherlands, violations of the Directive are punishable under the Law on Economic Offences (Wet economische delicten). The maximum penalty is a six month sentence or a fine of €18,500. The FIOD-ECD investigated the compliance with the Directive in 2002 (FIOD-ECD, Rapportage etikettering auto's, June 2003). Checks were performed at 802 sales points: 702 with advance notice and 100 spot checks. Among the former, the initial compliance rate was 98.8% and among the latter 90%. If the violations persisted at a second check, a record was made and transferred to the public prosecutor. This happened in 9 cases. It is unknown if these cases eventually led to actual sanctions. According to the Ministry of VROM, compliance with Directive 1999/94/EC and its Dutch implementing law are good, and there are no specific enforcement issues.

In April 2009, Dutch environmental NGO 'Milieudefensie' filed a legal complaint against Mercedes, Renault and Hyundai. Milieudefensie argued that the information on fuel consumption and CO_2 emissions in advertising of the companies' cars does not comply with the requirement that it should "be easy to read and no less prominent than the main part of the information provided in the promotional literature". In 2008, Milieudefensie had threatened to do the same against Pon (the Dutch importer of Volkswagen, Audi, Seat and Skoda), but the lawsuit was withdrawn after Pon promised to display the information more prominently.[26] According to the Ministry of VROM, the action by Milieudefensie led to a change in the Advertisement Code in 2009.

[26] See: www.milieudefensie.nl

Compliance issues remain difficult to control, particularly on the national level, because many Member States (e.g. Germany, Austria and Italy) have delegated the authority to enforce the laws to lower jurisdictions, which handle violations independently and are not always required to report issues of compliance to the national governing institution. This makes it more difficult to collect information. See Table 2 for a summary of the results.

Table 2: Summary of Reported Non-Compliance

Member States	Label	Poster	Guide	Promotional Material
Austria	n.a	n.a	n.a	Yes
Czech Republic	Yes	n.a.	n.a.	Yes
Finland	n.a.	n.a	n.a.	n.a.
France	Yes	Yes	n.a.	Yes
Germany	n.a.	n.a.	n.a.	Yes
Italy	Yes	n.a.	n.a.	Yes
Netherlands	Yes	n.a.	n.a.	Yes
Poland	n.a.	n.a.	n.a.	Yes
Sweden	Yes	Yes	Yes	Yes
UK	n.a.	n.a.	n.a.	n.a.

Source: Ecologic, Table made 25.03.2010.

In summary of the case studies: they provide valuable information on the implementation of Directive 1999/94/EC in the Member States. They highlight important insights relevant for consideration before modifying or updating the current Directive. The findings of the case studies feed directly into the subsequent sections of the report and provide a basis for formulating policy recommendations and identifying policy options.

1.3. The Up-Coming Review of Directive 1999/94/EC

As part of Green Week 2008 a stakeholder consultation meeting regarding the revision of Directive 1999/94/EC was held. The workshop aimed to provide stakeholders with a forum to express their views on car labelling. A range of stakeholders were present at the meeting, including representatives from automobile, advertising, consumer and environmental organizations. Prior to the stakeholder meeting, a discussion paper was issued that highlighted key points to be discussed at the meeting[27].

[27] European Commission (2008b)

In addition, some Member States are updating the implementation of the Directive in national law independently. These updates are outlined at the end of this section and contribute important recommendations and future considerations for action at the EU level. A similar integrated policy strategy exists for household appliances: Directive 92/75/EEC also seeks to use standards, comparative labelling and endorsement labelling to capture different aspects of one particular market.[28]

The following paragraphs summarise the discussion paper's most important elements.[29]

Harmonisation of the Format of the Label

It is argued that harmonisation of the label across all Member States would comply with the rules of the internal market and avoid market distortions resulting from the label differences in the Member States. Directive 1992/75/EC, on energy efficiency labelling for white goods, can be used to guide harmonisation, making adjustments when necessary.

"Absolute" versus "Relative" Labelling

CO_2 information on passenger cars can be provided in two different labelling formats. *Absolute* labelling provides data on the absolute emission levels of vehicles. Cars with low emissions would receive an "A" while cars with high emissions would receive a "G", regardless of other aspects (i.e. size, type etc). *Relative* labelling provides information on the emission levels of cars of the same category (i.e. size or type). As a result, cars are assessed in relation to factors other than emissions, and across a spectrum of vehicles. A large car may still receive an "A" and a small car a "G", depending on how they compare to cars in their category and range.

Inclusion of Additional Information Such as Running Costs and Vehicle Tax Levels

The present CO_2 label needs to display the numerical value of the official fuel consumption and the CO_2 emissions. No information on running costs or other financial advice is required to be displayed. However, it is recognised that linking running costs or vehicle tax levels to CO_2 emissions may impact consumer decisions on the purchase of a new car. Costs associated with operating a car over time extend fuel costs and taxes (i.e. depreciation, insurance, etc), and the possible inclusion of such costs would not intend to display the entire cost of operating a car.

The Guide on Fuel Economy and CO_2 Emissions

The Guide on Fuel Economy is required, inter alia, to be available at all points of sale for new passenger cars within the Member States and to be updated at least once a year. Due to related production costs and low demand of the printed Guide, it is sometimes criticised and its replacement with a digital version, available on the internet, is suggested. The low demand for the Guide on Fuel Economy may be, however, linked to a lack of recognition of the relationship between CO_2 and vehicles, and low availability of the Guide. Limiting the Guide on Fuel Economy to the internet only may also restrict access to it for certain consumer groups.

[28] European Commission (1992)
[29] cf European Commission (2008b)

The Poster/Display

The poster/display is required by the Directive to be used at the point of sale of all new passenger cars and is, according to the ADAC (2005) study, the least effective of the four measures used in the Directive. The ADAC study also suggests that focusing on the other three measures (label, Guide on Fuel Economy and promotional material) may be more useful. Therefore, discontinuing the use of the poster/display in the Directive or making it a voluntary option may be considered.

Promotional Literature

The definitions set forth in Annex IV of the Directive regarding the use of CO_2 information in promotional material have caused some uncertainty and debate within the Member States. The discussion paper issued prior to the stakeholder meeting in June 2008 recognizes that "A careful approach is needed to ensure that the objectives of the Directive are met while avoiding undue interference with advertising."

Non-Print Media

At present, Directive 1999/94/EC does not extend to non-print media (i.e. TV, radio and internet), though a non-binding recommendation on internet and computerised media has been made.[30] Extending the Directive to non-print media, in an appropriate form, reduces the imbalance of media obligations which may ultimately lead to distortions of competition in the internal market.

Extension of Labelling to N1 Vehicles (Light Commercial Vehicles)

The Directive currently covers M1 vehicles (passenger cars). Through Communication COM(2001)19 the extension of the Directive to light commercial vehicles (N1) was announced. The extension is in line with the intentions of the Commission.

Extension of Labelling to Heavy-Duty Vehicles (HDVs)

In addition to N1 vehicles, the extension of Directive 1999/94/EC to HDVs is also a possibility. It is believed that the market for HDVs and their respective purchasers may benefit from more transparent information about fuel consumption. It is also recognized that commercial considerations (i.e. running costs) are taken into account by more seriously by purchasers of N1 vehicles than by purchasers of passenger cars. Extension of the Directive to HDVs will be more feasible after updates to certification of methods, Euro VI standard, to increase transparency of data on fuel efficiency are made.

Extension of Labelling to Used Cars

Recital (6) of Directive 1999/94/EC states:

"(6) Whereas the presence of labels on used cars at the point of sale could influence buyers of new passenger cars towards low consumption cars, since this characteristic will be taken into account when the car is re-sold; whereas it is therefore appropriate, in connection with the first review of this Directive, to consider enlarging the scope to used cars covered by Commission Directive 93/116/EC of 17 December 1993 adapting to technical progress Council Directive 80/1268/EEC relating to the fuel consumption of motor vehicles."

[30] 2003/217/EC Commission Recommendation of 26 March 2003 on the application to other media of the provisions of Directive 1999/ Europa, 200894/EC concerning promotional literature.

Extending the Directive to used cars may provide benefits from a consumer information perspective. However, it is unclear whether it would reduce levels of CO_2 emissions because it is not known if new car buyers take CO_2 emissions into account when estimating the resale value. Additionally, it is unclear how much CO_2 emission levels or fuel efficiency influences the market price of used cars. Extending the Directive to used cars would also raise questions on how to include this information within the specific measures (i.e. advertisements for used cars).

Definition of the LEEV

The Communication COM(2007)19 recommended that the label includes whether a car qualifies as a Light-duty Environmentally Enhanced Vehicle (LEEV).

COM(2007)19 section 3.3.1 states: "a Light-duty Environmentally Enhanced Vehicle (LEEV) should be defined as a vehicle that both meets the next stage of pollutant emission limit values as laid down in the relevant legislation, and stays below a certain level of CO_2 emissions. At present, this level should be the Community objective of 120g CO_2/km. The definition of a LEEV should be subject to regular reviews in order to remain focused on the most advanced end of the new car fleet."[31]

"Static" versus "Dynamic" Labelling Systems

In addition to the use of an "absolute" versus "relative" labelling scheme to place vehicles into specific categories, the use of a "static" versus "dynamic" labelling system can be used. A static system establishes label classes according to absolute values and classes are evenly distributed across a spectrum of calculated emission levels. Vehicles are then labelled according to which class they fall into, regardless of the number of vehicles in each class. A dynamic system, however, is established relative to the average CO_2 emissions of the vehicles of a given year – in other words the middle point of the medium class (D on an A-G system). In a dynamic system the classes are then distributed either 1) above or below the middle point according to the specific values or 2) evenly distributed so that the volume of each class contains about the same amount of vehicles as the middle class.

The two systems offer both advantages and disadvantages. The use of a static system is easy to read and calculate and its simplicity may make it easier to harmonise across the EU. In addition, revision of a static system is needed only periodically and allows for the classes to be shifted down when necessary, which is easily communicated to consumers. However a static system is dependent on how classes are initially set in accordance with the expected evolution of the vehicles. If this is done adequately the static system may be used for several years, but if the system is set too far ahead at the beginning then many vehicles may fall into the higher categories leaving the "A" class empty. A dynamic system indicates to consumers where a vehicle falls in respect to the existing vehicle market. However, a dynamic system fails to meet a "polluter pays" principle, by adjusting according to the current vehicle average. Furthermore, a dynamic system may be more difficult to harmonise across Member States, because Member States may prefer to base values around their own CO_2 average as opposed to the EU average. In addition, a dynamic system may require more frequent revision to take into account market evolution, leading to increased administrative costs and consumer confusion.[32]

[31] European Commission (2007)
[32] Obtained from a source who wishes to remain anonymous.

Table 3: Comparative and Distributive Labelling Options

	Dynamic	Static
Absolute	Vehicles are classed according to an average CO_2 emissions level and compared across all available vehicles. *Moderately difficult*.	Vehicles are classed according to values of determined emission levels and compared across all available vehicles. *Simple*.
Relative	Vehicles are classed according to an average CO_2 emissions level and compared according to vehicle characteristics (size, type, weight, etc.) *Most complex*.	Vehicles are classed according to calculated emissions levels and compared according to vehicle characteristics (size, type, weight, etc.). *Moderately difficult.*

Source: Ecologic, Table made 14.04.2010.

Summary of Stakeholder Consultation in 2008

Overall, stakeholders were in agreement that an EU-harmonisation of the label, presenting CO_2 information in a form of colour-coded A-G rating similar to that of the energy efficiency label for household appliances, would be beneficial. The various positions of the stakeholders present at the meeting in June of 2008, plus additional stakeholder opinions received after the meeting, are summarised in Table 4.

Table 4: Summary of Stakeholder Positions in June 2008

Position	Support	Oppose
Absolute labelling scheme.	French manufacturer**, BEUC,FoEE and FIA*	German manufacturer**
Relative labelling scheme.	German manufacturer**	French manufacturer**, BEUC and FoEE
Dynamic distribution of cars across the label classes.	German manufacturer**	French manufacturer**
Static distribution of cars across the label classes.	French manufacturer**	German manufacturer**
The use of running costs and vehicle tax levels.	BEUC and FIA*	ACEA
Indicate which vehicles qualify as LEEVS.	FIA	n.a.
Use of an online Guide on Fuel Economy to replace the paper version.	ACEA and CECRA	n.a.
Use of an online Guide on Fuel Economy in conjunction with the paper version.	FIA	n.a.
Make the poster voluntary.	CECRA	FIA
Extend the Directive to used vehicles.	n.a.	CECRA
Extend the Directive to vans.	FIA	ACEA and CECRA
Extend the Directive to HDVs and N1 vehicles.	n.a.	ACEA, CECRA and FIA
The use of tougher CO_2 thresholds.	FIA	n.a.
Inclusion of non-print media in the Directive.	FIA, FoEE and BEUC	n.a.
The use of promotional material needs to be improved.	FoEE	n.a.
Voluntary agreements for the inclusion of CO_2 emissions in promotional material.	ENPA, EPC and FAEP	n.a.

Source: Ecologic, Table made 09.04.2010, all information from European Commission (2008a).
*A majority of FIA members favour absolute labelling, though admit that additional relative information would also be an advantage.
**The stated positions are not representative of all country manufacturers, and refer to communication made in the course of this review with specific car manufacturers who wish to remain anonymous.

2. CONSUMER BEHAVIOUR

KEY FINDINGS

- A majority of EU citizens recognise that the type of car they own has important impacts on the environment.
- To provide car consumers with CO_2 emissions information, policy makers must consider the significant consumer behaviour drivers and the key car characteristics that influence purchasing in regards to the information sources that consumers chose.
- General drivers behind consumer behaviour are identified as: brand recognition, product differentiation, influence of others, and socio-economic factors. Key car characteristics that influence consumer purchase are: reliability, safety, comfort and price.
- Consumers often narrow car-purchasing decisions down to a specific class, and then apply secondary criteria to make their final decision. Because consumers use two rounds of decision making to narrow down their decisions, it is necessary to build information tools that can be either used specifically in one round, or applied across both decision rounds.
- Fuel consumption is often only considered in the second round of decision making, and only in regards to financial implications, not environmental.
- Research suggests that consumers are aware that product running costs can exceed initial purchase costs, and the method in which running costs are portrayed can influence how consumers interpret this information.
- Sales people and internet sites represent gateways to consumers and possibilities to inform consumers, and can have a strong impact on the final selection of automobile that consumers make.
- A proper balance of information tools is important to provide consumers the information they need without overburdening them. Consumer choice can be limited by too much or too complicated information.
- Surveys determine that consumer awareness of a product label does not necessarily mean that the label is used during decision making. Important drivers of consumer behaviour are brand/ label recognition, product differentiation, the influence of others, and socio-economic factors.
- Studies show that environmental labels that are too complex can hinder consumer understanding of the information provided.
- New and existing energy labels should always be designed or revised through consumer-based market research.

Chapter two provides an assessment of general consumer behaviour research as well as research of consumer behaviour in relation to cars. The chapter concludes with a "lessons learned" section to outline how an understanding of the research from the previous sections contributes to Directive 1999/94/EC.

2.1. General Consumer Behaviour Research

Section 2.1 reviews consumer research in different fields to gain better insights on consumer interpretation of environmental information on vehicles. The information has been gathered to determine what aspects can be used to efficiently convey environmental costs in order to best change consumer behaviour in relation to purchasing cars that emit less CO_2 emissions. Information and analysis in this section is based on an in-depth literature review including sources such as academic journals, research institutions, consumer associations, national governments, marketing companies, etc. The following section provides an introduction and an analysis on existing policy tools, in particular product labels used to convey environmental information.

2.1.1. Drivers of Consumer Behaviour

Understanding the drivers of consumer behaviour can provide important insight on how to better design labels to influence consumer choice. Behavioural economics, which uses social, cognitive and emotional factors to understand the economic decisions of consumers, explains that consumers are strongly influenced by emotional factors, habits, and by the behaviour of the people around them. This is contrary to the idea that consumers are rational agents and thus make decisions by weighing the costs and benefits in order to maximise the utility of their decision. Consumer preferences evolve and change over time according to the situation and the way in which information is presented. Consumers are not homogenous in their behaviour and purchase products for a variety of different reasons. Data collected from several literature sources have identified some of the following drivers of consumer behaviour that can also be relevant in the context of how consumers purchase cars:

- **Brand/Label recognition:** Consumer choice is often driven by recognition of products, brands, or labels. Often, it suffices that consumers recognise a popular label (e.g. the EU Ecolabel) or a well-known name brand (e.g. Sony, Nike) to purchase the product, as opposed to buying the product based on the information conveyed.[33]

- **Product differentiation:** The difference between products is important to consumers and can influence purchasing decisions. Therefore comparability of products is an important aspect to enable consumers to distinguish between products. Literature review has also shown that comparability is one of consumers' most important demands. In fact, as one study indicates, the general proliferation of labelling schemes that offer little comparative information can undermine the relevance and usefulness of environmental information.[34] Therefore, it is important that products and services with information labels not only achieve improved environmental standards but also deliver comparative attributes such as cost and performance.

[33] PSI, BIO, Ecologic (2009)
[34] Yates, Lucy (2009)

- **Influence of others:** People want to feel their behaviour is normal and thus subscribe to descriptive norms – i.e., they react in the same way as the people around them. This behaviour is similar to herd mentality, which describes how people are influenced by their peers to adopt certain behaviours, follow trends, and/or purchase items. One study suggests that the best strategy to change consumer behaviour is to use information to allow individuals to feel that they are acting as part of a community which reciprocates and endorses their action, rather than on an individual basis. To get people to act in an information-rich world requires that people see that others are acting.[35]

- **Socio-economic factors:** Certain socio-economic factors influence consumer behaviour. For example, some study findings indicate that social factors such as higher levels of education and income are associated with greater energy-saving activities.[36] In addition, consumer acceptance of ecolabelled products is likely to differ across product classes, demographics, and consumer preferences.[37]

2.1.2. The use of Product Labels to Convey Environmental Information

Consumer policy uses market-based tools and other policy instruments to encourage consumers to make more sustainable consumption choices. Consumer policy relies on tools such as product and service labels, information provision, and a combination of these measures to supply consumers with more complete information for purchasing decisions. Labels, in particular, are often used as a tool to provide the main source of information on a product or service. Environmental labelling includes a number of activities, ranging from business-to-business transfers of product specific environmental information to environmental labelling in retail marketing. The overall goal of environmental labelling (or ecolabelling) is to encourage the demand from consumers, and the supply of products and services from manufacturers that are environmentally preferable. This is attempted through the provision of verifiable, accurate and non-deceptive information describing the environmental impacts or benefits of products and services.

Products for which Environmental Information is Communicated

A large range of products are labelled from household energy-using appliances, to vehicles and food. Even environmental information for different services is now being communicated to consumers (e.g. certain banking and electricity services). A recent study describes a consumer survey conducted to determine for which products environmental information is sought.[38] Results show that, after white goods, cars are among the products for which environmental information is sought (comparable to food and household cleaning products).

In addition, the survey study also revealed that buyers consider “performance” to be the main purchasing factor, followed closely by “price” and “energy efficiency”. Based on these observations, one could assume that economic performance (due to product efficiencies and lower running costs) is closely linked to environmental performance (as environmental performance usually requires greater product performance and less use of resources during operation) in consumers’ minds. White goods, electronic equipment, and cars are all products that use electricity or fuel to operate (and therefore the running costs of the product are significant), hence for these product types in particular, environmental improvements tie in to consumers’ desires to maximise their cost savings.

[35] Consumers International, Accountability (2007)
[36] Brohmann, Bettina et al. (2009)
[37] Johnston, Robert J. et al. (2001)
[38] TerraChoice Environmental Marketing (2009)

2.1.3. Types of Product Labels

Product labels can contain environmental information such as energy efficiency/energy consumption, water consumption, carbon footprint, total amount of greenhouse gas emissions released by a product, whether it is possible to reuse or recycle a product, and its running costs (i.e., fuel or electricity costs). The literature review identified two main types of labels: endorsement and comparison labels.

- **Endorsement labels:** indicate that products or services meet or surpass a predetermined standard or eligibility criteria and generally contain little or no comparative information. Products display a logo or mark which reveals to consumers that they have met the standard or product class and are often described as a 'seal of approval'.

- **Comparative labels:** allow consumers to form a judgment about the environmental performance and relative ranking of all products that carry a label. The most commonly used comparison labels use a scale with defined performance categories. This type of label allows consumers to easily assess the efficiency of a product in relation to an absolute scale, by means of a simple numerical or ranking system (e.g. 1, 2, 3 or 1 star, 2 stars, 3 stars or A, B, C).[39] In addition to the use of scaled formats, continuous comparative labels also provide consumers with comparative information. Continuous comparative labels do not distinguish between specific categories or classes, but mark the high and low end of a range of products.

Weaknesses of Existing Product Labels Providing Environmental Information

It is important to analyse the limitations of environmental labels to identify what aspects have made these programmes less successful. One of the principal aims of a successful labelling programme is to influence the consumer, with the environmental information displayed on the label, to purchase products and services with less environmental harmful impacts rather than their more environmentally damaging counterparts. It is often assumed that when individuals make poor choices it is due to misinformation or lack of information. For this reason, and because it is a relatively low cost policy tool, information provision has been the mainstay of consumer-facing product policy. In turn, it has generally been assumed that an excess of information does not harm consumers.

However, the increasing number of labels and the complexity of labels often hinder the consumer to accurately interpret the information displayed. Therefore, the challenge is to find a balance between providing enough information to inform discerning consumers, while also meeting regulatory requirements (on information that has to be provided) and ensuring less concerned consumers are not overwhelmed by information.[40]

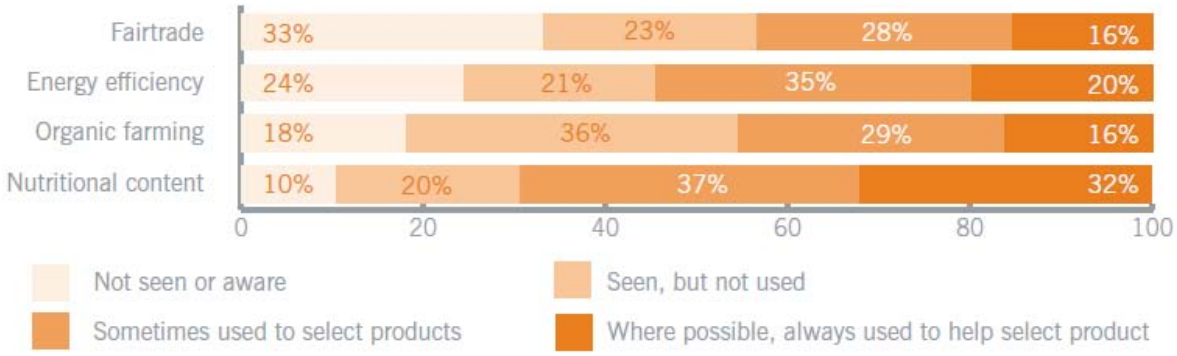
The use of scaled comparative labels, as in the case of the EU energy efficiency label provide many advantages, however, some disadvantages are also apparent. The use of specific classes or categories means that though products may fall into different classes, ultimately the difference in efficiency or CO_2 emissions may be minimal. Because placing products into specific classes or categories makes a basic judgment about a product, consumers may be encouraged to spend more on products in a higher class. However, the increased (financial) benefits of purchasing a product in a higher class may not compensate for the (possible) higher initial purchase cost.

[39] Harrington, Lloyd (2004)
[40] PSI, BIO, Ecologic (2009)

Moreover, in the case of the EU efficiency label, it has been shown that manufacturers (of white goods) are aware of the efficiency levels and build products to fall within specific classes, often within a small margin of the class values.[41] In addition, because specific classes entail a judgement and manufacturers can be aware of it, they then have an incentive to retain their products in the higher categories. This newly created incentive for manufacturers means that when it comes time to adjust label classes, after technological improvements and more products fall into the higher classes, manufacturers often then prefer to create new categories (i.e., A+, A++, etc.) instead of shifting products down into lower categories (i.e., B). Furthermore, the use of a new categories such as A+ and A++ have been shown in some cases to be more difficult to understand by consumers, causing them to shift to other product characteristics (i.e., price etc.) by which to assess products.[42] However, other studies have suggested that additional classes to the EU energy efficiency label are well understood by consumers.[43]

The US Energy Guide label is a comparative label (with black lettering on a yellow background) in a continuous-scale format that does not use specific scales or numbering. It was determined that consumer understanding of the label is low even though recognition of the label is high.[44] A similar conclusion was found in a recent consumer survey conducted by Consumers International. The survey found that while levels of awareness of various labels are generally high (90% for nutrition labels and 76% for energy efficiency labels), levels of consistent use are much lower (32% for nutritional labels and 20% for energy efficiency).[45] Therefore, this may indicate that additional measures need to be taken for consumers to not only recognise labels but to use the information on labels to influence their purchasing decision. Results of this survey are seen in Figure 1.

Figure 1: Which labels have you used over the last 6 months to inform your decisions? (US & UK combined)



Source: Consumers International, Accountability (2007)

Finally, although the existence of environmental labels is an important step in changing consumer behaviour, it is also critical that information contained on a product labels is truthful in order to gain and maintain consumer trust. There have been a growing number of complaints to advertising authorities over false green claims, prompting concerns that some businesses are seeking to unfairly exploit the "green" labels in order to boost profit margins.[46]

[41] Waide (2001)
[42] Heinzle and Wüstenhagen (2009)
[43] European Commission (2009a)
[44] Thorne, Jennifer and Egan, Christine (2002)
[45] Consumers International, Accountability (2007)
[46] Yates, Lucy (2009)

Successful Labelling Approaches

Overall, research shows that labels can play a key role in consumer purchasing decision. A recent Eurobarometer reports shows that almost half of EU citizens consider ecolabelling to play an important role in their purchasing decisions[47] This observation corresponds to the National Geographic Society/GlobeScan's second annual survey to measure and monitor consumer behaviours that have an impact on the environment. The survey found an increase in environmentally friendly consumer behaviour in 13 of the 14 countries that were surveyed in both 2008 and 2009.[48]

The EU Energy Label (see Figure 2) is an interesting case study to consider when analysing how a label can positively influence consumer behaviour. The EU Energy Label shows the energy efficiency of an appliance compared with similar models on a scale of A to G as well as a corresponding colour code from green to red. The label also includes information such as the electricity consumption of the appliance, or for example the capacity of a fridge or freezer and the wash and spin performance of washing machines. Sammer et al. (2005) concludes that the EU energy label is well-known and respected among consumers. Similarly, Egan and Waide (2005) indicate that there is clear evidence that the categorical label design of the EU Energy Label has stimulated manufacturers to develop products targeting specific higher efficiency thresholds both in advance of and in response to heightened consumer demand. The EU Energy label underwent extensive study prior to its implementation and has been implemented in the EU for almost 20 years. Analysis of the EU energy label indicates that it has most likely benefitted from a sort of 'brand recognition' due to its 18 years in use.[49] The use of a common label efficiency scale and format for all labelled products is also reported to have aided comprehension and "brand" recognition levels.[50]

A key suggestion that emerged from the expert consultation on the EU Energy Label was the need to highlight important information either through font emboldening as well as to give thought to grouping or blocking off related information (i.e., see Figure 2 where energy consumption, food volume, and noise information for refrigerators, are kept in separate blocks).[51] In addition, it was strongly suggested in the same study that new and existing energy labels should always be designed or revised through consumer-based market research.

Finally, consumers are aware that the cost of running an appliance or vehicle can be more than the initial purchase cost; therefore including this type of information on labels is worth consideration. Some insights on how to most effectively convey environmental costs to consumers can be gained from the revision of the Energy Labelling Directive 92/75/EEC. The Energy Labelling Directive was recently open for revision and a questionnaire was sent to numerous stakeholders. In particular, a question was included on whether stakeholders were in favour of adding annual running costs on the energy label and how reliable information could be assured in the light of different energy prices in the 27 Member States.

[47] Eurobaromoter (2009)
[48] National Geographic Society (2009)
[49] Thorne, Jennifer and Egan, Christine (2002)
[50] Egan, Christine and Paul Waide (2005)
[51] Egan, Christine and Paul Waide (2005)

A response from several environmental NGO's[52] indicates that rather than the annual cost (which only gives partial information), the global use cost over an average lifetime should be included.[53] For each product group, an average lifetime figure could be set and would be the same for all models in the category. The consumer would be able to quickly assess the average life-cycle cost of the product and compare it to others. An average electricity price could be used and the price should be displayed next to the figure. The Topten website was given as an ideal example of how environmental costs over an average time frame could be displayed.[54] Topten is a web portal guiding consumers to the most energy efficient appliances and cars in Europe. The website gives electricity costs (€ in 10 years) for energy using products such as TVs, printers, refrigerators, etc. The website also provides fuel prices (€ for 100,000 km) for vehicles according to size.

Results from a consumer survey conducted for the review of the US Energy Guide Label for household appliances also revealed some interesting observations concerning the environmental costs displayed on labels. The study determined that including life cycle costs to the label requires a format which is clearly understood by consumers to avoid misinterpretations of the costs (i.e., as savings).[55] This may have been due to the fact that many consumers found the financial information and description on the label too small (see Figure 2) to encourage the purchase of energy efficient products. Therefore, it would be important to effectively convey running costs in a manner in which consumers can correctly interpret the information. Consumers emphasized nonetheless, a preference for monetary analysis instead of kilowatts on the label. Retailers also placed a preference for operating costs and categorical labels, as it would simplify their explanation on the sales floor.

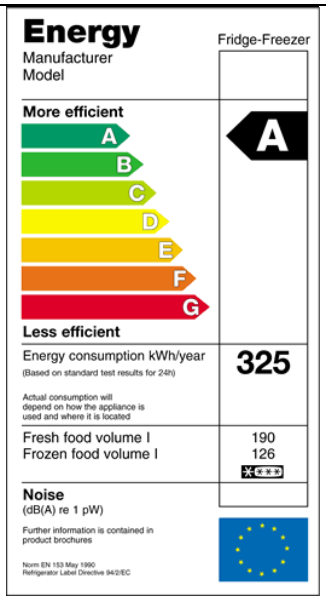
[52] NGOs that were represented in the questionnaire response included: INFORSE (International Network for Sustainable Energy Europe), WWF (World Wildlife Federation Europe), ECOS (European Environmental Citizens' Organisation for Standardisation), EEB (European Environmental Bureau), Friends of the Earth Europe, CAN (Climate Action Network Europe), and Greenpeace Europe

[53] Response of ECOS, the EEB, CAN-Europe, INFORSE-Europe, Greenpeace, WWF and Friends of the Earth to the EC Consultation Document on the revision of the Energy Labelling Directive 92/75/EEC, 2008.

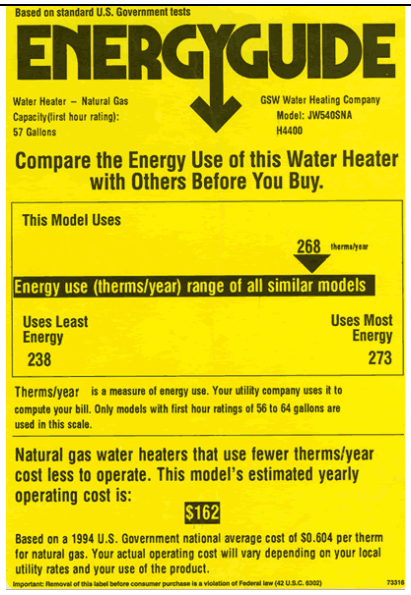
[54] www.topten.info

[55] Thorne, Jennifer and Egan, Christine (2002)

Figure 2: EU Energy Label and US Energy Guide Label



EU Energy label for refrigerators & freezers



US Energy guide label for refrigerators (2002)

Source: Thorne, Jennifer and Egan, Christine (2002)

Other recent research results related suggest the following measures to make labels more effective:

- Information on labels needs to be grouped, delineated and presented in a hierarchy of importance (e.g. by using font size and reading order to delineate importance). Otherwise, presenting too much information will reduce the label's effectiveness.

- Labels that present the efficiency of a product on a comparative scale that uses stars or letters, and a colour scheme, or on a continuous sale, as seen in the US energy guide label (Figure 2) are vastly more preferred and are more easily understood and motivating than those that present technical information only.[56]

- Government endorsement can often bring credibility to a label even in countries with historic bureaucratic problems. This is important as research shows a tension between the credibility and appeal of label designs.[57]

For long-lasting and large behaviour changes, environmental values need to be developed through education. This should also include developing research, information interpretation and decision making skills.[58]

[56] Egan, Christine and Paul Waide (2005)
[57] Egan, Christine and Paul Waide (2005)
[58] Young, William et al. (2008)

2.1.4. Other Information Provision Tools

In addition to labels, other means are used to provide environmental information about products to consumers. Websites and printed material such as leaflets and brochures are often used to convey additional environmental information. For example, under the Directive 1999/94/EC, Member States must also provide a Guide on Fuel Efficiency.

Mass awareness raising campaigns have been the first types of approaches to influence consumers to make particular purchasing decisions.[59] Awareness campaigns use a variety of communication tools such as media sources and celebrity spokespersons. Some recent campaigns that aimed at raising consumer awareness of the environmental impacts of unsustainable consumption patterns include Al Gore's "An Inconvenient Truth" documentary and the UK's "We're in this together" campaign, in which live concerts were given. Nonetheless, it is important to note that although the EU can run information campaigns, campaigns cannot be carried out under the auspices of the Directive 1999/94/EC.

Finally, intermediaries, such as sales assistants as well as physical placement of products at points of sale can also play an influential role in the purchase of products. However, larger and more powerful cars are more expensive, and thus have a bigger profit margin, than cheaper, more efficient cars. Encouraging car dealerships to sell small cars may not be achievable by sending sales staff to training courses – especially if their pay is linked to individual contribution to company profits. It is thus important to work with retailers and trade associations to encourage an optimal placement and visibility in stores and showrooms of more fuel-efficient cars and poster displays to improve product uptake by consumers. Ensuring that staff and members are well-informed about the advantages (and potential long-term cost savings) of energy efficient products could overcome the potential commercial barriers described above, to increase the chances of these messages reaching consumers.[60]

SUMMARY 2.1

- Important drivers of consumer behaviour are brand/ label recognition, product differentiation, the influence of others, and socio-economic factors.
- Studies show that environmental labels that are too complex can hinder consumer understanding of the information provided.
- New and existing energy labels should always be designed or revised through consumer-based market research.
- Research suggests that consumers are aware that product running costs can exceed initial purchase costs, and the method in which running costs are portrayed can influence how consumers interpret this information.
- Intermediaries, such as sales assistants as well as physical placement of products at points of sale can play an influential in consumers' decision to purchase a product.

[59] Consumers International, Accountability (2007)
[60] PSI, BIO, Ecologic (2009)

2.2. Consumer Research on Car-Buying Behaviour

Section 2.2 reviews consumer research on car-buying behaviour from different fields to gain better insights on consumer interpretation of environmental information on vehicles. The information has been gathered to determine what aspects can be used to efficiently convey environmental costs in order to best change consumer behaviour in relation to purchasing cars that emit less CO_2 emissions. Information and analysis in this section is based on an in-depth literature review including sources such as academic journals, research institutions, consumer associations, national governments, marketing companies, etc. The following section provides an introduction and an analysis on existing policy tools, in particular product labels used to convey environmental information.

2.2.1. Consumer's Priorities

The findings of Eurobarometer (2007) suggested that the majority of EU citizens recognise that the type of car that they own and the way that they use it have important impacts on the environment. Of those questioned, 35% believed that the best way of reversing the trend of increased CO_2 emissions from transport would be to permit only the sale of low emitting vehicles, whereas 30% felt that tax incentives would be the best way. Only 16% thought that promoting the sale of fuel-efficient cars through better information would be the best way to reverse transport's increasing CO_2 emissions.

A number of studies note that the decision to purchase a car is a complex, some say highly irrational, decision influenced by a wide range of factors (e.g. Plotkin, 1999 (quoted by UKERC, 2009 [61]), Kurani and Turrentine, 2004). ADAC (2005)[62] suggested that consumers' awareness of fuel economy and other environmental issues was not high, although this was growing. Consequently, other factors – reliability, safety, comfort and price – are more important in influencing consumers' decision to purchase a vehicle. Where fuel economy was considered, this was due to its economic implications rather than its environmental ones.

IEEP et al. (2006) collated the results of a number of studies that examined the reasons behind consumers' choice of which vehicle to purchase. Taking these together, the report proposed that fuel economy/consumption might be the fourth most important factor in a consumer's purchase decision. However, environmental factors, including CO_2 emissions, generally came further down the list of consumers' priorities when buying a car when such factors were explicitly listed (as opposed to implicitly, as in the case of fuel consumption) in surveys of consumers' preferences. Lane and Potter (2007) came to the same conclusion in their review, but go further in stating that environmental issues play little part on the decision-making process. In their annual UK survey, GfK (2009) ranked fuel consumption as the fifth most important factor in a consumer's purchase decision.

The literature reviewed in IEEP et al. suggested that fuel economy might be a secondary consideration, as consumers tend to narrow down their choices to a class of vehicle first and then apply secondary criteria, such as fuel consumption, within this class.

[61] This study, by the UK Energy Research Council (2009), reviewed a wide range of literature on policy that could potentially reduce transport's carbon emissions.

[62] This study reviewed the implementation of Directive 1999/94 for the European Commission's DG Environment. At the time, there were only 15 Member States and the study was based on an evaluation undertaken for 14 of these 15 countries (Luxembourg was the country not covered). Additionally, the study was commissioned in 2004 when Member States would have had only three years of experience with the legislation (Member States had to transpose the provisions of the Directive into national legislation by January 2001). Hence, its findings need to be seen in this light.

In the US context, Noblet et al. (2006) concluded that information may influence choice between vehicles, but not influence class choice.

2.2.2. Information Perception and Response

Both ADAC (2005) and Anable et al. (2006) noted that it is difficult to identify how consumers respond to the label and other information, as these are often introduced alongside other measures with similar objectives, e.g. tax incentives. Anable et al. (2008) argued that the provision of fuel economy information is necessary but not sufficient to influence consumers' choices.

In presenting the results of an annual survey (carried out for every year since 2006), GfK (2009) noted that awareness of the car label in the UK is increasing. New car buyers and those intending to buy a car are more aware of which category their vehicle falls into than used car owners. The most important piece of information on the label was considered to be (annual) fuel costs, which is included on the UK label.

ADEME (2007) concluded that the new French label, which is colour-coded, did not have a significant impact on consumer behaviour in its first year. While the report found that 93% of sellers and 55% of buyers were aware of the label, only 10% of the latter considered it is a criterion for influencing their purchase of a car. An assessment of the Dutch label, which is also colour-coded, suggested that the label would be more effective and relevant if it mentioned the financial advantages and disadvantages associated with the label category. This would include not only the fuel costs, but also the various tax incentives that are linked to the fuel consumption of cars (ANWB et al., 2008).

In a study looking at why there appears to be a gap between what consumers state they consider and how they act in relation to the purchase of cleaner vehicles, Lane and Potter (2007) conclude that consumers have a low understanding of fuel economy and the real costs of cars. Hence, while fuel economy is reported as a key factor in consumers' consideration of new cars, consumers often make little effort to compare the fuel economy of different models when making their decision. Many consumers assume that fuel economy depends on car size only, while some believe that fuel economy can only be achieved by compromising performance and/or safety. ADAC (2005) also noted that consumers' responses suggest that they are not aware of the correlation between fuel economy and CO_2 emissions, while Anable et al. (2006) concluded that the link between knowledge and awareness of climate change and travel behaviour is weak.

2.2.3. Comparison of Measures and Media

ADAC (2005) suggested that the guide was probably the most useful of the media required by the Directive, as it enabled the comparison of different models, while the effectiveness of the label (in the format required by the Directive) was limited. The poster and inclusion of information in advertising literature, as required by the Directive, were not considered to be that effective. However, they did suggest that the impact of the Directive was affected by a lack of compliance in dealerships.

Lane and Potter (2007) noted that consumers draw on a wide range of information when researching car purchasing, including manufacturers' brochures, consumer guides, sales staff, advertising across a range of media and discussions with family and friends. The report highlighted the increasing importance of the internet in this respect. PSI et al. (2009) also noted the importance of peers, e.g. friends and relatives, as a source of information.

According to their annual UK survey, GfK (2009) concluded that an increasing proportion of respondents had seen the label (which goes beyond the requirements of the Directive); in the car showroom, which was the most common place that respondents had seen the label, whilst a decreasing number had seen the label in sales brochures. It was not clear whether this latter conclusion was due to the fact that the label was now less common in such publications or whether these were being consulted less by potential buyers. The survey also ranked the sources of information that consumers use when purchasing a car and concluded that the salesperson/dealership was the most important, followed by consumers' guides/magazine, although this source has been decreasing in importance since the survey began in 2006. The third most important source was the internet (manufacturers or independent sites, but not government); this source had become more important since 2006. Of the 11 potential sources of information that were ranked, the label came tenth and the guide last.

Ecolane (2010), which assessed the ease of use of manufacturers' websites with respect to locating and understanding information on CO_2 from their cars, concluded that many websites were difficult to use and that the CO_2 information was hard to find. The fuel economy label was rarely used on these websites. Interestingly, this finding applied equally to manufacturers of lower CO_2 emitting cars and to manufacturers of high CO_2 emitting cars. Additionally, they noted that it was sometimes difficult to attribute the correct CO_2 information to the correct model.

The role of the sales people is important, e.g. PSI et al. noted that consumers can be heavily influenced by in-store marketing or by price promotions, so suggested that these materials were important in encouraging consumers to buy more fuel efficient vehicles. They also note that intermediaries, such as those in the car showroom, potentially have a very influential role in car purchasing and therefore that it was important that such people were well-informed about the advantages of fuel efficient vehicles was important. They also recommended making researching cars easier and suggested the development of easy-to-understand price comparison websites that enable consumers to compare upfront and future costs and other aspects of cars more generally. Anable and Bristow (2007; quoted by UKERC, 2009) surveyed UK car dealerships and identified that in 2007 86% were displaying the label, but only 61% met the target of having 75% of their cars displaying the correct label. They also found that only 25% of showroom staff referred to the label without prompting and that their knowledge of the label was often limited. The Austrian Energy Agency (1999)[63] called for the showroom and sales staff to be trained in the use of the label.

There has been some criticism of the way in which manufacturers have communicated the information on CO_2 emissions and fuel efficiency to consumers and the models on which manufacturers concentrate in advertising more generally, particularly from environmental NGOs. However, in the UK, a 2008 study (Murray; quoted by UKERC, 2009) found that advertising expenditure on cars in the A, B and C bands in the UK was increasing. Earlier studies by NGOs in many countries suggested that adverts tended to focus on higher emission vehicles, e.g. UK FoE (2007; quoted by UKERC, 2009) found that the majority (55%) of newspaper advertisements were for cars with emissions over 165g CO_2/km and FoE Italy (2008) found that some manufacturers did not advertise their low CO_2 emissions models. FoE Europe (2008) argues that some manufacturers are not complying with the legislation in terms of making fuel consumption and CO_2 emissions information easy to read or as prominent as other information.

[63] But undertaken prior to the implementation of Directive 1999/94.

Some argue for a ban on car advertising, but Murray argues that this would limit the opportunity to use environmental performance as a selling point.

SUMMARY 2.2

- A majority of EU citizens recognise that the type of car they own has important impacts on the environment.
- Key car characteristics that influence consumer purchase: reliability, safety, comfort and price.
- Consumers often narrow car-purchasing decisions down to a specific class, and then apply secondary criteria to make their final decision.
- Consumers often consider fuel consumption only in regards to financial implications, and not environmental, and apply it only as a secondary criteria.
- Sales people/ dealerships, consumer reports and magazines, as well as the internet are key sources of information for consumers purchasing cars. Independent and car manufacturer websites are increasingly gaining importance as information sources.

2.3. Lessons Learned

The previous two sections, and the literature reviewed within the sections, provide new considerations and lessons which contribute to the understanding and therefore possible improvement of Directive 1999/94/EC. It is the goal of this section to establish and review the most important lessons gathered from those, 2.1 and 2.2, and to draw a clear link between the lessons learned and Directive 1999/94/EC.

2.3.1. Lessons on Consumer Behaviour

Of key importance to consumers, as determined in the review, is price or financial information and product performance. Therefore, an ideal information tool (i.e, label) would be one that that would enable the comparison of operating costs, while conveying the product's performance as well as being easily recognizable or familiar to the consumer.

Providing operating costs is important and valuable to consumers. The literature suggests that consumers do consider fuel consumption as a factor of operating costs when making car-purchasing decisions. However, fuel consumption is factored into consumer decisions, based on its economic implications rather than its environmental ones. Furthermore, according to consumer studies there exists an increase in consumer awareness of fuel consumption information (and the CO_2 label).

A number of important drivers identified in the literature review play a key role in consumer behaviour. The actions of others, life cycle costs and socio-economic factors all as well as brand/ label recognition and product differentiation all influence consumer behaviour, and ultimately their car purchasing decision.

The most commonly used measures include labels, websites, brochures, information campaigns and various combinations of the measures. The selection of information tools are selected according to the information that is being provided.

Providing technical information often requires the use of several media, as it may not be possible to display all the content with only one measure. The challenge for policy makers is to find a balance between providing enough information to inform discerning consumers, while also ensuring less concerned consumers are not overwhelmed by information.

Car buyers seem to go through a two staged process: In a first step, they decide about the type of car they intend to purchase, i.e., a station wagon or a micro-car; in a second step, they decide which car they will chose, based on secondary criteria such as fuel efficiency. It appears that car advertisements are primarily used for the first stage.

The review of consumer behaviour and car purchasing determined that consumers value a variety of sources when seeking information regarding new passenger cars. The role of sales people stands out as an access point to information which consumers heavily rely upon. Not only do consumers seek information from sales people, sales people have a strong influence on the final selection of automobiles that consumers make. An additional information source increasingly favoured by consumers is the internet, particularly manufacturer and independent websites. Both sales people and internet sites represent gateways to consumers and possibilities to inform consumers and thus influence their choices.

2.3.2. Lessons on Labelling

The use of informative labels to provide consumers with environmental information is widespread. Two types of labels are most commonly used to convey environmental information to consumers: endorsement and comparison labels. Endorsement labels are more effective when they come from trusted sources such as from academia/universities and government, rather than from industries and manufacturers. As for comparative labels, a comparative scale such as stars, letters or numbers are more preferred and understood than those that present only technical information. Studies reveal that consumers prefer comparative labels.

Though it was determined that consumers do consider fuel consumption an important product aspect when purchasing vehicles, there appears to be a gap between what consumers state they consider and how they act in relation to the purchase of fuel efficient vehicles. One study showed that consumers have a low understanding of fuel economy and the real costs of cars. Consequently, consumers make little effort to include fuel consumption in purchasing decisions or assume that increased fuel consumption is only obtained when sacrificing other qualities (i.e., size and performance). Therefore a means of comparing fuel economy and CO_2 information in a medium which consumers can quickly comprehend in accordance with other purchasing decisions (i.e., size and performance) is important.

SUMMARY 2.3

- To provide car consumers with CO_2 emissions information, policy makers must consider the significant consumer behaviour drivers and the key car characteristics that influence purchasing in regards to the information sources that consumers chose.
- Fuel consumption is often only considered in the second round of decision making, and only in regards to financial implications, not environmental.
- Because consumers use two rounds of decision making to narrow down their decisions, it is necessary to build information tools that can be either used specifically in one round, or applied across both decision rounds.
- Sales people and internet sites represent gateways to consumers and possibilities to inform consumers, and can have a strong impact on the final selection of automobile that consumers make.

3. POLICY OPTIONS

KEY FINDINGS

- Harmonisation is seen as positive by most stakeholders.
- There is no clear indication which labelling scheme is best suited to convey information: absolute, relative, graded or continuous, static or dynamic. More consumer-based market research is needed to come to a conclusion.
- The poster might be disbanded altogether due to its low relevance. Online Guidance is given priority and should be made mandatory. The Fuel Guide itself should however remain available also in a print version to prevent social exclusion.
- A more detailed formulation of requirements on advertisement is needed and should be expanded to manufacturer websites. Other media do not necessarily need to be included as their role in the purchasing process differs significantly.
- Mandatory training to sales persons will help convey environmental information at the point of sale.
- Before extending the scope to other vehicles more research is required.
- The display of running costs can be achieved most easily over a set time period, either one or three years, and should include taxes and maintenance costs in addition to the fuel costs for an average mileage, though more research is needed.

Chapter three seeks to combine, inter alia, the review of scientific literature and multiple case studies to draw definitive conclusions by which to update Directive 1999/94/EC. This outlines a number of policy options taking insights gained in this review.

3.1. Policy Options (Excluding Running Costs and Financial Incentives)

This section begins by discussing alternative approaches proposed in the literature, followed by outlining alternative approaches either implemented or proposed in the Member States that were the subject of case studies for this report. It concludes by summarising the key advantages and disadvantages for revising the Directive (see Table 5).

3.1.1. Harmonising Directive 1999/94/EC

ADAC (2005) noted that there appeared to be relatively wide support among Member States, consumer and driver organisations regarding the need for more harmonisation of the information tools covered by the Directive. In reviewing the evidence of experience with labelling, TNO et al. (2006) [64] supported ADAC's recommendation that the label and other informational tools should be harmonised at the European level, but noted that the experience of the Member States that had gone beyond the requirements of the Directive should be considered in this respect.

[64] This study, for the European Commission's DG Environment, reviewed a wide range of potential European policy instruments for reducing passenger car CO_2.

PSI et al. (2009)[65] noted that information is generally considered to be beneficial in influencing consumers' purchase decision, but that too much information can be confusing. A similar point is made elsewhere, e.g. ADAC (2005) recommends the removal of unnecessary information from the label and other information media, while other studies noted that early versions of the US label contained too much information and so recommend that a label be as simple as possible.

The language used is important. Lane and Potter (2007) suggests that the use of "miles per gallon (mpg)" is a problematic representation for a number of reasons, including that it is difficult to use this to calculate costs, consumers believe that improving mpg compromises performance and safety and that they assume that the mpg for cars within a particular class will be similar. In the US context, Kurani and Turrentine (2004) also note that consumers interpret the term "fuel economy" negatively, as they associate this with low cost, undesirable vehicles, while "fuel efficiency" is considered to be an indication of high technological design.

Nevertheless, the EU energy efficiency label used for household appliances has demonstrated that an EU-wide labelling program can be implemented with relative success. Moreover, stakeholder proceedings and Member State case studies suggest that harmonisation is generally both expected and accepted (see section and Table 5).

3.1.2. Relative versus Absolute Label

ADAC (2005) suggested that there was a preference in Member States with prior experience of labelling for a comparative measurement across all cars measured by, for example, CO_2 emissions (g/km), fuel reach (km/l) or fuel consumption (litres/100km), rather than a measurement that compares, say, cars in particular classes (e.g. family cars). One of the main disadvantages of the first approach is that cars in the same class would be categorised similarly, e.g. small cars would probably be categorised as A or B. The second approach could potentially provide a wider categorisation within classes, but could potentially confuse consumers as some smaller cars could be in a "worse" category than larger cars. ADAC concluded that the first approach was preferable. In a UK survey, GfK (2009) found that 58% of respondents were in favour of seeing comparative information in the form of best, worst and average for similar cars being shown on fuel economy labels. For more information on the advantages and disadvantages see section **Error! Reference source not found.** and Table 5.

3.1.3. Graded (A-G) versus Continuous Label

There was a preference for information to enable consumers to make a direct comparison of the fuel efficiencies of different cars. The label used for white goods, which has an A to G scale, was mentioned positively as it was considered to be user-friendly and more informative in comparative terms. Some Member States have already adapted the white goods energy efficiency label for use on new passenger cars, see 1.2.

In order to improve the label, the literature suggests the introduction of a comparative label such as the one scaled label used for household appliances, as a number of Member States have already done, or the continuous comparative label, as in the case of Austria.

[65] This study, which was undertaken for the European commission's DG Environment, looked at how to design policy to influence consumers.

The extent to which the details of the label would need to be harmonised across all Member States is a matter for debate with Member States and other stakeholders, e.g. industry, advertisers and NGOs. Within this report, it has clearly not been possible to undertake a full cost assessment of these options. However, possible options include:

- Absolute label to which A+ and A++ categories could be added, as has been done for household appliances. However, disadvantages may also arise from the use of additional classes (see section 2.1.3).[66]

- A relative label along the lines of the Dutch label. The Netherlands uses a relative labelling scheme that specifies the fuel consumption of the car (both in l/100 km and in km/l) and the CO_2 emission in g/km. In addition, it contains a classification (A-G) designed to look similar to the well-known energy labels of electric appliances, with colours ranging from green (A) to red (G). Under this classification, a car with label A emits at least 20% less CO_2 than the reference level, while a car with label G emits at least 30% more than the reference level. The reference level is the weighted average of the average CO_2 emission of all cars in the same size class (the weight of this part is 75%) and the average CO_2 emission of all cars, regardless of size (the weight of this part is 25%). This 'weighted average' system enables a comparison of the relative fuel efficiency of cars that are comparable in size, but at the same time ensures that the absolute fuel efficiency plays a role: it is 'easier' for a small car to get an 'A' label than for a large car.

- A relative label along the lines of the German proposal in which both low and high (absolute) CO_2 emitting cars could be labelled with an "A". While this proposal would enable a comparison of cars of similar utility (in this case mass, as in Regulation EC (No) 443/2009), some argue that such an approach would be confusing for consumers, as a high CO_2 emissions car could be labelled "better" than a lower CO_2 emitting car. However, if consumers do apply fuel economy as a criterion once they have chosen the class of the vehicle that they intend to buy, as some of the literature suggests, then this may not be that problematic.

- Consideration could be given to the inclusion on the label of best, worst and average information for cars in the same class, as has been done partially in Finland, although care would need to be taken in the definition of classes. It would also be important to ensure that such information can be understood easily by consumers, as otherwise it might have a detrimental impact.

- A continuous comparative label following Austria's example also provides consumers with comparative information through the use of colour-coding without the disadvantages that accompany the use of specific classes (see section 2.1.3 and Table 5).

[66] Unnecessary barriers to trade (direct or indirect costs), or other possible undesired outcomes of a labelling scheme have to be avoided. For example: the use of A+ A++ in Directive 92/75/EC (energy efficiency for white goods), though an option, was met with criticism by NGOs and consumer groups, and the EP. In fact a particular study suggested (see Heinlze and Wüstenhagen 2009) that the move to the extended classes, means that consumers will move to easier understood product characteristics (i.e., price, colour) to base their decisions because they no longer understand the label as well. Industry does not want to lose places (be shifted from A to B), so labels end up with most of the products in the top classes.

3.1.4. Dynamic versus Static Distribution of Labelling Schemes

In addition to the use of an "absolute" versus "relative" labelling scheme to place vehicles into specific categories, the use of a "static" versus "dynamic" labelling system can be used. A static system establishes label classes according to absolute values and classes are evenly distributed across a spectrum of calculated emission levels. Vehicles are then labelled according to which class they fall into, regardless of the number of vehicles in each class. A dynamic system, however, is established relative to the average CO_2 emissions of the vehicles of a given year, in other words the middle point of the medium class (D on an A-G system). In a dynamic system the classes are then distributed either 1) above or below the middle point according to the specific values or 2) evenly distributed so that the volume of each class contains about the same amount of vehicles as the middle class (see section **Error! Reference source not found.**, Table 3 and Table 5).

3.1.5. Poster/ Guide on Fuel Economy – Print versus Internet

Given the availability of electronic information, a number of Member State contacts questioned the added value of the printed fuel economy guide, as this was relatively expensive to produce and distribute and quickly became out of date, whereas websites could be updated easily and regularly (see section **Error! Reference source not found.** and Table 5).

Some, e.g. ADAC (2005), questioned the utility of the poster, whereas others have questioned the added value of the guide compared to a more dynamic and easily updatable website or database. A website is a potentially simple way of ensuring that up-to-date information is available generally and even on the label, if it enables dealers to print out updated information. However, the question in this respect is clearly whether a website is actually available in every country and whether potential car buyers have access to the internet. Again, the issues of the respective costs and availability and relevance of websites for all countries would need to be considered.

The ADAC (2005) study also suggested that the Directive be focused on the most useful information tools (e.g. potentially discontinuing the poster) and increased use of the internet for providing consumers with up-to-date information.

3.1.6. Advertising Code of Conduct

In relation to advertising more generally, the car industry has announced that it has drafted a code of practice on advertising and codes of practice exist in a number of Member States. Within this study, it has not been possible to compare these various codes. However, it appears that there is an agreement that some type of code of practice would be useful. From Member States' experience, it appears that some type of minimum standards, e.g. of font size, might be appropriate and reduces the number of violations as seen in the Dutch example. Additionally, a UK study suggests that the inclusion of the label in printed material might be effective. However, the potential effectiveness of different approaches would need to be evaluated in more detail and discussed with stakeholders in light of current concerns (see Table 5).

Retallack (2007; quoted by UKERC, 2009) in discussing the style of the label, notes that the large health warning labels on cigarette packs have been found to be linked with decisions to quit or reduce levels of smoking. We are Futureproof (2009) commissioned YouGov to undertake a survey in the UK regarding people's responses to different advertisements – one containing the colour-coded label and one containing the fuel efficiency information in printed format (see Figure 3).

For the advert without the colour-coded label, only 31% correctly identified the fuel efficiency of the car, whereas 56% were able to do so on for the advert that contained the label. When asked which format they found easier to understand, two thirds chose the advert containing the label.

TNO et al. (2006) suggests that consideration be given to how manufacturers advertised their cars, although noted that the European Association of Communication Agencies (EACA) was then developing guidelines for advertising agencies on their approach to car advertising. The report also suggested that consideration could be given to expanding the scope of the Directive to other advertising media and an expanded role for the internet to cover all potential behavioural means of reducing a car's CO_2 emissions, e.g. eco-driving, inflating tyres, the use of other products that could improve a car's fuel efficiency.
Ecolane (2010) recommended that the accessibility, coverage and presentation of the CO_2 emissions information be improved on manufacturers' websites. In this respect, they identified five principles for the design of websites:

- Easy to navigate, generally. On the sites where the authors concluded that good practice was followed, information on CO_2 emissions was easy to find, as it was clearly sign-posted and accessible with only a few clicks of the mouse.

- CO_2 information should be provided as part of the main/basic dataset. Such an approach means that consumers do not have to undertake additional searches for this information.

- Descriptions of car models should be clearer, so that CO_2 information can be directly attributed to the relevant model. This is to ensure that consumers are able to identify the correct CO_2 emissions of the models in which they are interested.

- Comparative information should be provided to give some context. This was a feature of the sites that were considered to demonstrate good practice, e.g., the label was shown, or information for different models was shown alongside each other.

- A reliance on PDF downloads to provide CO_2 information should be avoided.

3.1.7. Provide Training to Sales People

In addition, it is practicable to provide training courses, perhaps voluntary, to automotive sales people instructing them about how to interpret the various measures (i.e, label). The role of the sales people in car dealerships was identified in the literature as being important. Also, some studies found that the label was often not referred to without prompting by retail staff and that often sales peoples' knowledge of the label was limited. In this respect, training might be appropriate. For new sales staff, integrating information about the label into training courses might be relatively inexpensive, as would integrating information into any ongoing training courses that existing staff are required to attend. However, if there are no ongoing training courses for existing staff, the costs of introducing such training courses would need to be considered before universal training was required (see sections 2.1.4 and Table 5).

3.1.8. Extending the Scope to Additional Vehicle Groups

In France, there are plans to extend the requirements on consumer information to used and rented cars, while in the UK the use of the label has been extended on a voluntary basis to used cars. This option has also been discussed at the stakeholder meeting in 2008. At the present there is no clear benefit to extending the Directive to either used or other additional vehicle groups (see section **Error! Reference source not found.** and Table 5).

3.1.9. Extending the Scope to Non-Print Media

Possible policy options may be to extend Directive 1999/94/EC to require CO_2 information on manufacturer and independent websites (see **Error! Reference source not found.** and Table 5).

As noted in some more recent studies, manufacturers' websites are also becoming an increasingly important source of information for potential car buyers, but that finding information on CO_2 emissions and fuel economy on some of these sites is often not easy. Guidelines, such as those proposed by Ecolane (2010), could thus be proposed as guidance for manufacturers in including such information on their websites.

3.1.10. Proposing Benefits for "A" Rated Cars – Bonus / Malus Incentives

Intelligent Marketing (2007) proposed a wide range of additional measures linked to the label, including benefits for "A" banded cars including free parking, lower insurance, access to certain areas/lanes and lower congestion charges, while similar penalties could be applied to "G" banded cars. Such complementary measures build on the premise that information is necessary but not sufficient in stimulating changes in consumer behaviour.

Such measures can be recommended, but are difficult to include in the binding requirements of the Directive as they are not in line with the informative approach.

Table 5: Summary of Advantages and Disadvantages of Policy Options

Policy Option	Advantages	Disadvantages
Harmonising Directive 1999/94/EC	Uniform policy measure that could be coordinated and updated at the central EU level.	Member State differences, such as language, culture and various consumer segments may not be taken into account or need to be adjusted for.
Relative Labelling Scheme	Enables consumers to compare the fuel efficiency of cars within a specific range of vehicles. Potentially cars are more widely compared.	May be confusing to consumers.
Absolute Labelling Scheme	Allows consumers to compare vehicles across the entire spectrum of available vehicles.	Cars of a similar type (i.e., weight) are likely to fall into a similar range on the label.
Graded (A-G) Label	Is easy to understand and enables consumers to make a direct comparison of the fuel efficiencies of different cars.	Requires adjusting the classes to take changes of efficiency into account. The use of specific classes, places a judgement on a car, which may induce consumers to pay for improvements in classes even though the actual increase in efficiency is minimal.
Continuous Label	Requires little adjustment for changes in efficiency and enables the inclusion of more exact comparisons.	The lack of specific categories makes it more difficult for consumers to make direct comparisons.
Dynamic Labelling Scheme	Indicates to consumers where a vehicle falls in respect to the existing vehicle market.	Fails to meet a “polluter pays” principle, by adjusting according to the current vehicle average and may be more difficult to harmonise across Member States, because Member States may prefer to base values around their own CO_2 average, as opposed to the EU average. May require more frequent revision to take into account market evolution, leading to increased administrative costs and consumer confusion.
Static Labelling Scheme	Easy to read and calculate, and its simplicity may make it easier to harmonise across the EU. Requires minimal revision.	Dependent on how classes are initially set in accordance with the expected evolution of the vehicles. If the system is set too far ahead at the beginning than many vehicles may fall into the higher categories leaving the “A” class empty
Internet Version of the Poster/ Guide on Fuel Economy	Reduces costs and removes burden of producing paper versions.	Some consumer segments may lose access to the information.

Policy Option	Advantages	Disadvantages
Advertising Code of Conduct	Provides advertisers with a set of ground rules and advertising examples for the Directive.	Member State differences, such as language, culture and various consumer segments may not be taken into account or need to be adjusted for.
Provide Training to Sales People	Sales people are an influential source of information for consumers, their increased understanding of the motivations behind the Directive would potentially lead to increased sales of fuel efficient vehicles.	The costs of providing training courses to sales people must first be assessed to determine if it is a viable option. Moreover, car dealers aim for high profits, not primarily selling green cars.
Extending the Directive to Additional Vehicle Classes	May extend reductions of CO_2 savings.	Benefits are not yet clear, and more information should be gathered regarding various automobile segments.
Extending the Directive to Non-Print Media	This would potentially reach a wider scope of consumers and allow for guidelines for information sources that consumers are already using.	Benefits are not clear. Studies suggest that consumers often do not respond to information in advertisements, and problems arise when regulating additional medias.
Benefits for "A" Rated Cars	Provides incentives to consumers, when information is not enough.	Not easily included into the existing Directive.

Source: Ecologic, Table made 15.04.2010.

3.2. Policy Options: Running Costs and Financial Incentives

In terms of potential amendments to Directive 1999/94/EC, section 3.2 focuses specifically on one particular policy option – that of running costs. Findings of section 2.1 on consumer behaviour and section 2.2 on car-buying behaviour indicate that displaying fuel economy through running costs or other financial incentives on information materials could greatly influence consumer choice of new passenger cars.

3.2.1. Linking Directive 1999/94/EC to Taxation or Provision of Incentives

Coad et al. (2009) noted that information provision is likely to be most effective when followed by financial incentives. However, they suggest that there is a danger that if environmental decisions are incorporated into the financial decision, then people may consider that they have the right to pollute if they bear the associated costs. CfIT (2005; quoted by UKERC, 2009) argue for a need to encourage the purchase of lower CO_2 emitting vehicles through informational means, complemented by other measures, e.g. taxes and incentives.

PSI et al. (2009) stated that consumers tend to read information only if they perceive some personal benefit from doing so and that consumers rarely use all of the information available to them. In this respect, they suggest that labels might be more effective if they translated efficiency into costs and savings. ADAC (2005) reached a similar conclusion, as they called for the expression of fuel consumption in terms of running costs, as consumers use fuel efficiency information for economic not environmental purposes. UK MPs have also argued that the relationship between the information on the car label and running costs needs to be explained to consumers (UKERC, 2009).

PSI et al. further found out that consumers tend to "dislike losses more than they like gains", so suggested that highlighting the additional costs associated with fuel inefficient cars will impact more on consumer behaviour than highlighting the benefits of fuel efficient cars. Anable et al. (2008) also argued for the inclusion of fuel cost information on the label, as this was likely to be a more effective metric than fuel economy.

UKERC (2009), in reviewing a wide range of evidence, identified a US study (Greene et al., 2005) looked at four other studies that reached similar conclusions that consumers only take account of the first three (at best four) years of savings when considering the value of better fuel economy. Very few of the respondents in the work by Kurani and Turrentine (2004) were able to estimate the payback period from purchasing a more fuel efficient vehicle. Lane and Potter (2007) conclude that the long payback times, i.e., the length of time that the higher purchase price can be recovered from savings in fuel costs, is a significant barrier to the uptake of low carbon technologies.

3.2.2. Linking Directive 1999/94/EC to Running Costs

Overall the research indicates that providing running costs on information materials such as posters in show rooms, TV car advertisements, and car labels would enable consumers to make a more informed decision, especially since oftentimes running costs are not provided on information materials. Nonetheless, there exists some car fuel economy labels around the world that include running costs on their labels and have proven to be effective in terms of consumer understanding of fuel economy. Examples of some of these labels are shown in the Annex in Figure 4.

Based on existing initiatives, several methods for displaying running costs on car labels and other information materials (e.g., poster, promotional materials, and fuel efficiency guide) have been identified. These options are explained in further detail in the following paragraphs.

In the UK and Finland, the respective labels give annual fuel costs based on an average, respectively, of 12,000 miles in the UK and the Finnish average annual mileage of 18,000 km, as well as the associated annual vehicle taxes and the initial purchase tax in the case of Finland. In France, there are plans to modify the label from 2011 to display average annual estimated fuel costs for 15,000 km. Including information on fuel costs for a period of longer than a year was considered, but rejected in Finland, as it this was not considered appropriate in light of regularly changing fuel prices. In the Netherlands and Poland, studies have suggested that fuel costs for a certain distance be included on the label, as this would have a higher impact, but these proposals have not been taken up. In the UK, the annual vehicle tax is directly related to the label, although for most categories of the label (which rates cars from A to G) there are two equivalent bands of tax. Other countries link vehicle taxes to a car's CO_2 emissions, e.g., France and Austria, but this is not always directly related to the label.

Anable et al. (2008) suggested that labels need to be "dynamic" in that they reflect changing fuel prices, that it should concentrate on running costs and contain best-in-class information. This last point was also underlined by Boardman (2000; quoted by UKERC, 2009). Similarly, the Austrian Energy Agency (1999[67]) noted that any label needed to be durable, i.e., that future vehicles can also be classified appropriately, and adjustable to technological developments in fuel economy.

3.2.3. Options for Displaying Running Costs

Option 1 - Average fuel costs per X km

This option displays average fuel prices based on an average distance and fuel costs (e.g. € in fuel costs for 12,000 km based on €1.95 a litre). The advantage of this option is that it offers consumers a straightforward comparison of average fuel costs between cars based on a specific distance driven. This option would provide detailed but simple information on fuel costs, which may be enough to influence consumers to purchase more fuel efficient cars.

However, this approach in displaying running costs by fuel costs based on an average distance driven may be less meaningful to consumers than annual fuel costs or fuel costs over a 3-year period. In addition, running costs could be less accurate as it only takes into account fuel costs and not other possible running costs.

Option 2 - Average annual fuel costs

Running costs can be communicated through average annual fuel costs. This option is similar to that used for the New Zealand and US fuel economy labels, which display fuel economy through annual fuel costs based on an average fuel price and an average annual driving distance (14,000 km at $1.95 a litre is used in NZ and 15,000 miles at $2.80 a gallon is used in the US). The advantage of this method of communicating running costs is that since the annual fuel costs are based on a yearly average, it could be updated every 12 months to provide accurate yearly averages.

To compliment this, a dedicated web–tool could be set up to provide consumers with even more frequently updated fuel prices[68]. Research has shown that if too much information related to running costs is displayed on a label, it may confuse the consumer; therefore a complimentary website may be a more effective format for describing detailed information.

Furthermore, communicating running costs through annual fuel costs may be easier for consumers to interpret than if fuel costs were communicated per certain number of kilometres. Consumers may have a more concrete idea of the significance of "yearly" costs rather than costs per *X* km which is an element of the information contained in the fuel economy label in the UK (although per *X* miles), for example (see Figure 4).

Finally, it should also be considered that "costs per 12,000 km" type methodologies for communicating running costs may provide a less accurate estimate of actual running costs of the car than the annual option, as they are not well suited to include aspects such as annual taxes that may be applied to certain passenger cars.

[67] But undertaken prior to the implementation of Directive 1999/94.
[68] A similar tool is provided by the New Zealand authority responsible for the fuel economy label. See here for further details: www.fuelsaver.govt.nz/car.html

Option 3 - Average fuel costs over a 3 year period

Most consumers who purchase a new passenger car keep it for more than a year. Therefore, presenting estimated fuel costs for a three-year period may correlate with consumer consideration of the long-term costs of a car rather than just annual costs. In fact, studies such as UKERC (2009)[69], have shown that consumers take account of up to the first three years of potential cost savings when considering the value of fuel economy. Similar to option 1, displaying average fuel costs over a defined period may be easier for consumers to interpret compared to running costs which are communicated based on an average distance (e.g. per X km).

Nonetheless, the disadvantage of this option is that similar to option 2, running costs could be less accurate as it only takes into account fuel costs and is not well suited to account for other costs such as taxes, insurance, etc.

In addition, in contrast to the research studies mentioned above, such as UKERC (2009), other research[70] points out that oftentimes consumers fail to adequately consider future costs; people do not always weigh up immediate costs against long-term running costs. Therefore, additional measures would be helpful to assist consumers consider long-term cost savings of more fuel efficient cars instead of being influenced by purchasing price of new fuel efficient cars versus cars that may be cheaper but less fuel efficient.

Option 4 - Average fuel & taxation costs

Displaying running costs through annual fuel costs along with annual taxation would communicate a more realistic running cost of cars compared to options 1, 2, and 3. Actual running costs can differ considerably due to taxes and other fees that vary greatly across countries. This approach is similar to the UK fuel economy label and would allow consumers to compare both fuel costs and vehicle taxes that could vary according to the type of car being purchased. However, it should be noted that although the UK label includes the vehicle duty per annum, average fuel costs are expressed by 12 000 miles, and is not specifically stated on the label that 12, 000 miles is based on a yearly driving distance. There may be a difference in effectiveness in engaging consumers depending on whether or not the label states that the fuel costs is estimated to be per annum (as seen in the US and New Zealand fuel economy label).

In addition, this labelling option would also inform consumers of the existence of a specific vehicle tax that they may have not been previously aware of.

The disadvantage of this label is that it would include more information than in options 1 and 2, and therefore may risk including too much information for consumers to process. Research has shown that too much information can be confusing, so adding more detail may not be beneficial. Therefore, including one total annual figure that includes both fuel costs and taxes, rather than separate figures for both fuel costs and taxes, may be more easily interpreted by consumers.

[69] UK Energy Research Center, (2009)
[70] PSI, BIO, Ecologic (2009)

Option 5 - Global running costs

Option 5 could display the global running cost annually or over the average lifetime of the car. The running costs in this option would include not only fuel and tax costs, but also repair and maintenance costs, insurance costs, taxes etc. Global running costs could be expressed annually and be more informative that other options, however would also be more complex and burdensome in terms of calculations than including just annual fuel and tax such as in option 4).

Global running costs could also be expressed over the average lifetime of the car. This would provide consumers with a long-term global outlook of how much it would cost to use the car during its lifetime. This option would provide the most complete picture of actual running costs of a car compared to other options that provide only partial information. Suggestions for displaying running costs over the lifetime of a product were also recently suggested for energy products that fall under the EU Energy Label.[71]

However, option 5 would be the most difficult option to calculate because it would include all running costs related to car use such as repair and maintenance costs, as well as possible taxes and would not take into account possible fluctuations in fuel costs, which can be very volatile over the lifetime of a car. Authorities would also need to determine the average duration lifetime of a new passenger car, which could differ according to region and the type of car. Finally, the amount of information required under this option may not be easily understood by consumers and may instead cause confusion.

[71] Response of ECOS, the EEB, CAN-Europe, INFORSE-Europe, Greenpeace, WWF and Friends of the Earth to the EC Consultation Document on the revision of the Energy Labelling Directive 92/75/EEC,2008.

Table 6: Summary of Advantages and Disadvantages of Running Costs Options

Option	Information displayed	Advantages	Disadvantages
1	**Average fuel prices per *X* km**	Offers consumers a straightforward comparison of average fuel costs between cars based on a specific distance driven.	Running costs could be less accurate as it only takes into account fuel costs and not other costs such as taxes, insurance, etc. Not clear whether fuel costs by "XX km" would be more easily understood compared to expressing average fuel costs by year.
2	**Average annual fuel costs**	This option would provide easily interpreted information on fuel costs, which may be enough to influence consumers to purchase more fuel-efficient cars.	Running costs could be less accurate as it only takes into account fuel costs and not other costs such as taxes, insurance, etc.
3	**Average fuel costs over a 3 year period**	This option could encourage consumers to consider not just initial price of a car but also the long-term running costs.	Consumers do not always consider future costs; therefore, additional measures may be needed to assist consumers consider long-term cost savings of more fuel efficient cars.
4	**Average fuel & taxation costs**	This option would more accurately represent actual running costs of a car by including additional costs such as annual taxes, which can vary considerably across countries.	Not clear how to most efficiently include additional financial information along with fuel costs to be easily processed by consumers.
5	**Global running costs**	This option would provide the most complete picture of the running costs of a car, which can either be expressed annually or over the car's lifetime.	Difficulty in calculating global running costs. Uncertainty in terms of how well consumers would interpret lifetime costs information.

Source: BIO, Table made 09.04.2010.

3.2.4. Recommendations for Displaying Running Costs

Based on the research, the following recommendations are suggested in terms of displaying running costs, which can be applied to all of the options discussed:

- Since running costs are important to consumer decision-making when purchasing a new car, financial information should be displayed in a visible manner.

- A balance must be struck between detailed information to provide consumers with a thorough description of running costs, and a straightforward approach that is easy to understand and does not confuse consumers. The balance depends on the media under consideration (i.e., labels should contain less information, whereas websites and brochures could contain more detailed figures).

- In addition to including running costs on the car label, similar information included on posters in showrooms and on the sales floor is important as many consumers purchase cars directly on-site. This could help retailers to better explain the relationship between fuel efficiency and running costs on the sales floors when giving advice to consumers.

- In order to ensure that running costs are fairly and accurately displayed, it is imperative that fuel cost information is updated on a regular basis. Therefore, labels need to be "dynamic" by reflecting changing fuel prices. Moreover, labels should be developed with long-term aspects in mind so that future cars can also be classified appropriately, and adjustable to technological developments in fuel economy.

- To guarantee a level playing field, particularly regarding the inclusion of fuel costs on information materials, there is a need for coordinated action amongst the industry. For example, a voluntary agreement of car manufacturers on an EU wide code of good practice regarding car marketing and advertising aimed at the promotion of sustainable consumption patterns may be an effective means to ensure participation by industry.

- Finally, it is difficult to say that one option for displaying running costs would be appropriate for all EU-27. Consumers are not homogenous and consumer behaviour is based on many aspects that are specific to a country such as culture, demographics, national circumstances, etc. Therefore, it is suggested that a dedicated consumer survey be undertaken that aims at selecting the most appropriate option amongst those described above (or other variations on these) for displaying running costs as consumers will interpret labels differently in different countries and in different contexts.

3.3. Conclusions and Next Steps

The in-depth review of Directive 1999/94/EC including, inter alia, a review of scientific literature and multiple case studies have provided valuable insights into the specific workings of this policy and its influencing factors. Ultimately, the investigation has uncovered a number of options, or recommendations, which stand out as the best possible way forward. The recommendations combine current academic theory with Member State experience while keeping in mind the limitations of such a policy tool. Options and recommendations suggested by this review can be selected individually or combined to progress the Directive 1999/94/EC and support the EU in accomplishing its goal of reducing CO_2 emissions from new passenger vehicles.

Chapter one outlined the implementation of Directive 1999/94/EC by providing a description of the regulatory framework, followed by a summary of the ten case studies as well as the up-coming policy review. Chapter one highlights that Directive 1999/94/EC and Regulation (EC) No 443/2009 are complementary policy measures that seek to share the burden of reducing CO_2 emissions from new passenger cars between consumers and manufacturers while remaining in line with consumer preferences and market incentives. The case studies determined that implementation of Directive 1999/94/EC varies broadly across the Member States and recognised a number of compliance issues and violations of the policy, often in regards to promotional material. Half of the Member States reviewed use labelling schemes that go beyond what is mandated by the Directive, while the other half use measures that meet the requirements for the label. Four out of the ten Member States reviewed use an absolute labelling scheme, while only the Netherlands uses a relative scheme.

Running costs are used to a limited degree with the policy measure, and when used, calculated as average running costs for one year. Modifications to Directive 1999/94/EC within national law are currently planned in Germany, France and the UK and some Member States expressed that they were waiting for decisions to first be made at the EU level before updating national law.

Chapter two reveals insight into consumer behaviour and the car purchasing process. A label can only affect the purchasing decision to a certain degree, as other key drivers dominate, i.e., socio-economic factors such as income and age. Also, label awareness does not suffice to actually change consumer behaviour. Moreover, too much information can reduce the impact of a label. Information should be clearly structured and reduced to the minimum. Otherwise consumers fall back to other comparison criteria such as price or brand name. Furthermore, specialised trainings should be offered to sales persons so that they can better inform customers about available choices and their costs and benefits. The purchase itself is usually a two-staged process. In a first step, consumers decide about the kind of car they prefer; in a second step, they make the purchasing decision based on secondary criteria such as fuel efficiency and environmental concerns.

Chapter three assesses various policy options (see 3.1 and 3.2) up for discussion in the upcoming review process. This evaluation leads to the following recommendations:

Harmonisation

Harmonisation of Directive 1999/94/EC is a likely next step forward for the policy and is already anticipated and discussed by the European Commission, many of the Member States, and various stakeholders. A harmonised EU policy would enable a uniform version of the individual policy measures and could be built on the best practices of particular Member States. Moreover, EU harmonisation would most likely reduce disturbances to the internal market caused, for example, by the use of different labels. In addition, harmonisation would also allow compliance to be managed at an EU level, reducing costs of information gathering and managing technical knowledge. However, harmonisation also presents various challenges, namely the differences of stakeholder interests, in respect to their Member States, and the differences between Member States and their populations (i.e., language, culture, consumption trends etc.). Nevertheless, the example set by the EU energy efficiency label advocates that these challenges, through adept policy planning can be overcome. In addition, harmonisation can be extended across all or just certain (i.e., the label) aspects of the Directive. Furthermore, EU harmonisation of the policy may eventually benefit from EU level internet databases for car comparisons or EU wide tax incentives.

Upgrading the Label

The evaluation of the multiple CO_2 labels used throughout the Member States and consulting relevant scientific literature indicates that updating the label to meet a minimum format would increase the likelihood of consumer response. An update to the label which follows the model of the EU energy efficiency label would incorporate the consumer recognition of the established energy label. It is suggested that the energy efficiency label has gained a sort of ‘brand recognition’ through its long standing use. The challenge of revising the CO_2 label to match that of the energy efficiency label would depend on the label currently used in the Member State. Moreover, the CO_2 label would gain from the use of a colour coded comparative label that uses specified classes to inform consumers about differences in fuel consumption and CO_2 emissions. Consumer behaviour research focusing on environmental or energy labels advocate that consumers respond to labels which provide information in a hierarchical format which draws consumers’ attention to the most important information while removing unnecessary or distracting information.

The format of the energy efficiency label, decided upon after extensive consumer studies and expert reviews, employs a layout that is consistent with literature discussing successful labelling schemes. In addition, experts suggest always conducting consumer based market research studies prior to introducing new labelling programs. Conducting research of CO_2 labelling alternatives and consumer response throughout the Member States would enable an informed decision based on the responses of car consumers.

Make the Poster Voluntary

The review of Directive 1999/94/EC, in particular the case studies, advocates that the poster be made a voluntary option.

Require Manufacturer and Independent Websites to Display CO_2 Information

Due to the importance of the internet as a main source of information for car consumers, extending Directive 1999/94/EC to cover internet media would increase the likelihood that consumers using the internet would also obtain CO_2 information for new passenger cars. Commission Recommendation 2003/217/EC of 26 March 2003 on the application to other media of the provisions of Directive 1999/94/EC concerning promotional literature may be a viable option.

Require an Online Guide on Fuel Economy but do not Replace the Paper Version

The high costs and burden of producing a paper version of the Guide on Fuel Economy has led to some Member States request that it be made voluntary and replaced instead with an online version. Nevertheless, to ensure that certain consumer segments do not lose access to the information provided by the Guide on Fuel Economy, it is necessary to continue its use. However, requiring, or encouraging the use of an online version of the Guide, as already done in some Member States, would strengthen the use of the online version and shift dependency away from the traditional Guide. Moreover, because the internet is an important source for consumers to gather information, supplying the Guide on Fuel Economy Online would help to reach consumers searching online for car information. In addition, links from manufacturer or independent websites could also be used or required. Eventually, the paper version could be completely replaced with the established online version if no consumer segments will lose access to the information.

Precisely Define the Requirements for CO_2 Information in Promotional Material, Annex IV

The language used in Annex IV of Directive 199/94/EC has been interpreted in various ways and lead to issues of compliance and legal disputes regarding what is required. It is recognised that ambiguity may arise from the transposition into national law. Nevertheless, adequately defining the requirements may reduce the amounts of compliance issues involved with this particular measure of the Directive. It is not clear how much impact advertising information has on consumer decisions. On the one hand it is said that consumers form their opinions before going to a car dealer, therefore it is good that it is included in advertisements, and on the other hand, publishers and car manufacturers argue that advertisements appeal to consumers emotions and they are not concerned with CO_2 information.

Running Costs

The inclusion of running costs as a financial incentive for consumers when purchasing a new passenger vehicle remains a complex issue. Nevertheless, providing operating costs presents an important opportunity to inform consumers. A number of available options are summarised in section 3.2.3 and Table 6. Including running costs within the Directive can be included in a number of manners across an array of combinations of the measures, all of which contain advantages and disadvantages. The current measures used at the national level, in the UK and Finland and proposed in France, supply a model for including running costs (option 2 in Table 5).

Both Member States provide average annual running costs for an established driving distance (i.e., 12,000 miles and 18,000 km). The advantage of this method of communicating running costs is that since the annual fuel costs are based on a yearly average, it could be updated every 12 months to provide accurate yearly averages. Moreover, this method of communicating running costs through annual fuel costs provides a relatively straight forward approach to explaining running costs and may be easier for consumers to interpret than other options. However, as always, the trade off is between providing consumers with simple, easy to interpret, information and a more technical and accurate estimation of costs. Including running costs in all other measures of the Directive could follow the same format used by the label or provide slightly more complex and technical information, specifically in the Guide on Fuel Economy. However, it is important to maintain the display of running costs in somewhat uniform manner, to build on the link between the specific measures.

Do not Extend Directive 1999/94/EC to Additional Vehicle Types

Extending the Directive to Vans, HDVs or used cars should only be implemented after additional policy research or done on only a voluntary basis. The different vehicle categories attract various consumers, in some cases commercial industries. In some instances (i.e., commercial fleet operators) the information disclosure required by the Directive may not be enough information, and in other cases (i.e., used cars) CO_2 and fuel consumption information may affect the price of a vehicle while it stays on the road. Because these different consumer groups take different considerations into account when purchasing a vehicle it is recommended that impacts of extending Directive 1999/94/EC be reviewed in regards to these markets before mandating any policy.

Initiate Consumer-based Market Research

The main lesson from the debates on possible revisions to the car-labelling Directive is the clear need for consumer-based market research in order to have a scientific foundation for decisions on issues such as: absolute vs. relative and dynamic vs. static labelling; continuous vs. graded label; inclusion of running costs etc.

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ANNEXES

Glossary of Key Terms

- Absolute Label - Label that depicts the absolute emission level of vehicles. Vehicles are compared according to CO_2 emissions, and all other aspects (i.e., size, type, weight, etc.) are ignored.
- Relative Label – Label that depicts the emission level of vehicles in relation to additional characteristics (i.e., size, type, weight, etc.). Therefore cars are assessed relative to other factors and across the whole spectrum of vehicles.
- Static Distribution of Label Classes – Label classes are established according to absolute values and classes are evenly distributed across the spectrum of determined emission levels. Vehicles are labelled according to which class they fall into, regardless of the number of vehicles in each class.
- Dynamic Distribution of Label Classes - Label classes are established relative to the average CO_2 emissions of the vehicles of a given year. Vehicles classes are then distributed 1) according to the value above or below the determined middle point or, 2) evenly distributed so that the volume of each class contains about the same amount of vehicles as the middle (bell curve).

Table 7: New Passenger Car Registrations in the EU (2009)

Member State	Registrations	% of Total	Accumulated %
Germany	3.591.611	27,45%	27,45%
France	2.040.279	15,59%	43,04%
Italy	1.991.546	15,22%	58,26%
United Kingdom	1.844.063	14,09%	72,36%
Spain	862.019	6,59%	78,94%
Belgium	449.364	3,43%	82,38%
Netherlands	379.593	2,90%	85,28%
Austria	299.983	2,29%	87,57%
Poland	291.819	2,23%	89,80%

Source: ACEA data, www.acea.be

Table 8: Summary of Research Initiatives

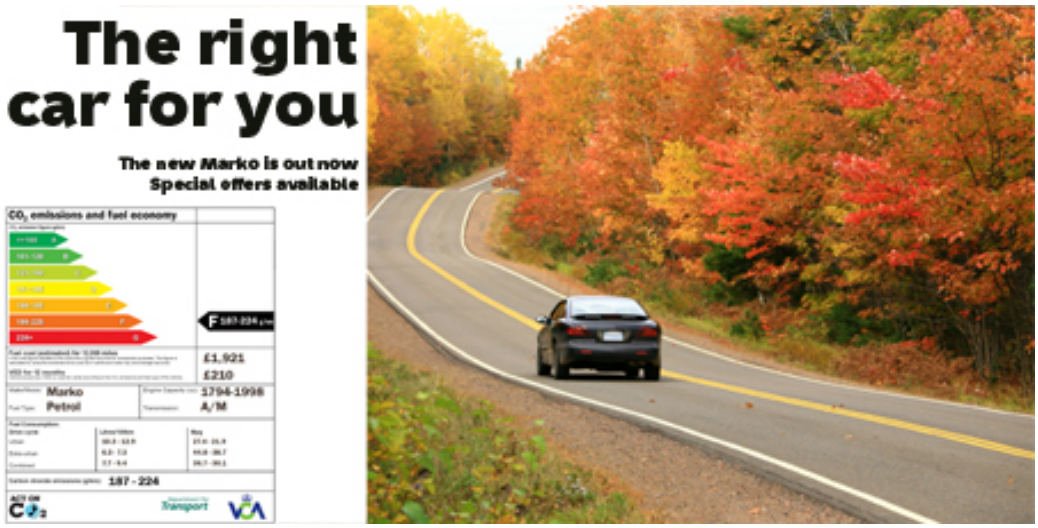
Member State	Research Initiative
Austria	n.a.
Czech Republic	"Searching for A category drivers" http://www.uspornajizda.cz/ http://www.uspornajizda.cz/vyber-usporneho-vozu
Finland	www.trafi.fi/ekoake
France	n.a.
Germany	Verbraucherzentrale NRW e.V., Europäisches Verbraucherzentrum (EVZ), 2005: „Verordnungs-Check. CO_2-Label für Neuwagen. Eine Untersuchung der Verbraucherzentrale Nordrhein-Westfalen zur Umsetzung der Pkw-Energieverbrauchskennzeichnungsverordnung"
Italy	No specific study or report. An official letter ('circolare') was sent to carmakers and made available on the website of the Ministry for Economic Development to prompt for the collection of information on new vehicles. The carmakers are requested to fill in a word format, to be sent electronically to the Ministry. http://www.sviluppoeconomico.gov.it/pdf_upload/documenti/lettera_circ_2010.pdf
The Netherlands	2001: Evaluation of the label that was sent to the Netherlands House of Representatives. 2002: Evaluation of the label and fiscal measures based on the label, that was also sent to the Netherlands House of Representatives. 2006 and 2007: An evaluation study on the energy label (in connection with the fiscal incentives that were linked to the label) was published. This report was also sent to the Netherlands House of Representatives. - ANWB et al. (2006): Evaluatierapport Werkgroep evaluatie energielabel en bonus/malus regeling BPM 2006. Den Haag, 15 mei 2008. In March 2009, a study was published by the Netherlands Environmental Assessment Agency (PBL) on the impact of the energy label on the choice of car type. - S.F. Kieboom and K.T. Geurs: Energielabels en autotypekeuze. Effect van het energielabel op de aanschaf van nieuwe personenauto's door consumenten. PBL-publicatienummer 500076010/2009, Planbureau voor de Leefomgeving, Bilthoven.
Poland	Independent Car Market Institute (www.samar.pl) each year provides a report on average CO_2 emissions from new cars sold in Poland.
Sweden	Konsumentverket (2007): Markningssystem vid marknadsforing av nya bilar, 2007:13. Konsumentverket (2009): Marknadsundersokning av information om nya bilars bransleforbrukning, koldioxidutslapp och miljoklass m.m, Redovisning av undersokning genomford I februari 2009 av kommunala konsumentvagledare pa uppdrag av konsumentverket. 2009. The Swedish Consumer Agency http://www.miljorapporten.se/431.html TemaNord 2003:540, Miljöinformation som styrmedel – Förstudie, Nordiska, Ministerrådet, Köpenhamn 2003, ISBN 92-893-0928-8.

Member State	Research Initiative
UK	AECOM (2009): Exploring the Scope for Used Car Fuel Efficiency Labelling. Available: http://www.dft.gov.uk/pgr/roads/environment/research/fuelefficiencylabelling.pdf Ecolane (2010): Car CO_2 Internet Survey How accessible is CO_2 information on car manufacturers' websites? Available: http://www.ecolane.co.uk/projectspublications.php (registration required) Ecolane (forthcoming): Improved consumer information for cars and vans. Once published will be available: http://www.ecolane.co.uk/projectspublications.php Low Carbon Vehicle Partnership (LCVP), GfK Automotive, Jim Farrel, 2006, 2007, 2008, 2009, Car Buying Attitudes LCVP Label Research Programme (2009): ESA Market Research MORI (2003): Comparative Colour-Coded Labels for Passenger Cars

Source: Ecologic, Table made 30.03.2010.

Figure 3: Images Shown to UK Consumers as Part of the Survey Undertaken by YouGov for We are Futureproof (2009)

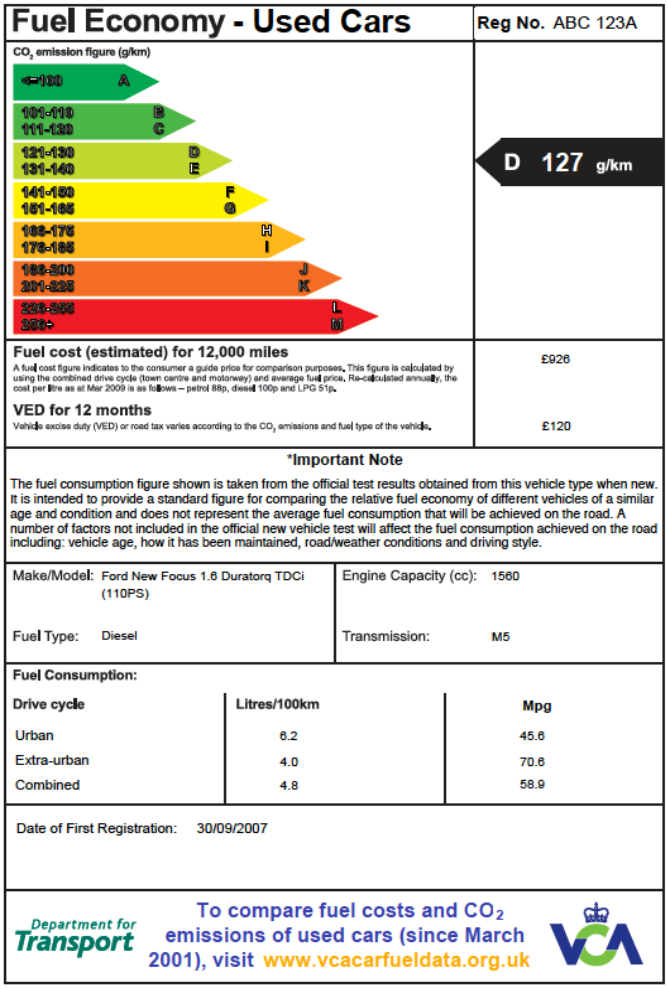
Source: We are Futureproof (2009)



Source: We are Futureproof (2009)

Figure 4: Examples of running costs on existing car fuel economy labels[72]

UK Fuel Economy Label



Fuel Economy - Used Cars

Reg No. ABC 123A

CO_2 emission figure (g/km)

<=100 A
101-110 B
111-120 C
121-130 D
131-140 E
141-150 F
151-165 G
166-175 H
176-185 I
186-200 J
201-225 K
226-255 L
256+ M

D 127 g/km

Fuel cost (estimated) for 12,000 miles £926

A fuel cost figure indicates to the consumer a guide price for comparison purposes. This figure is calculated by using the combined drive cycle (town centre and motorway) and average fuel price. Re-calculated annually, the cost per litre as at Mar 2009 is as follows – petrol 88p, diesel 100p and LPG 51p.

VED for 12 months £120

Vehicle excise duty (VED) or road tax varies according to the CO_2 emissions and fuel type of the vehicle.

***Important Note**

The fuel consumption figure shown is taken from the official test results obtained from this vehicle type when new. It is intended to provide a standard figure for comparing the relative fuel economy of different vehicles of a similar age and condition and does not represent the average fuel consumption that will be achieved on the road. A number of factors not included in the official new vehicle test will affect the fuel consumption achieved on the road including: vehicle age, how it has been maintained, road/weather conditions and driving style.

Make/Model: Ford New Focus 1.6 Duratorq TDCi (110PS)

Engine Capacity (cc): 1560

Fuel Type: Diesel

Transmission: M5

Fuel Consumption:

Drive cycle	Litres/100km	Mpg
Urban	6.2	45.6
Extra-urban	4.0	70.6
Combined	4.8	58.9

Date of First Registration: 30/09/2007

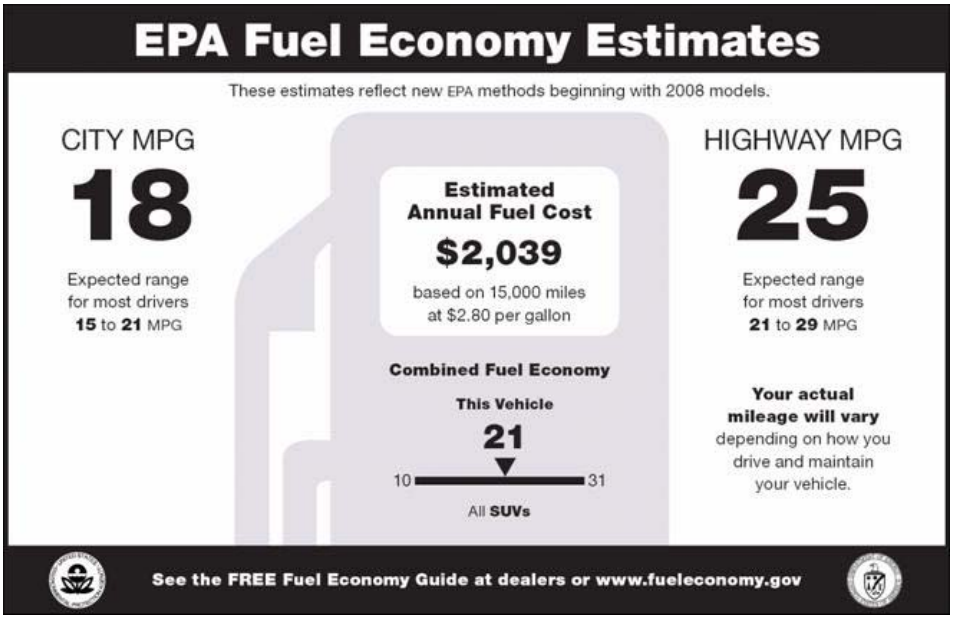
Department for Transport

To compare fuel costs and CO_2 emissions of used cars (since March 2001), visit www.vcacarfueldata.org.uk

VCA

[72] The Used Car Fuel Economy Label in the UK displays estimated fuel cost for 12,000 miles as well as the vehicle excise duty (VED) or road tax per 12 months. The VED varies according to the CO2 emissions and fuel type of the vehicle. The fuel economy label in New Zealand shows a star rating of the vehicle's fuel efficiency, and an estimation of the annual running costs of the vehicle. Finally, the US fuel economy label displays estimated annual fuel cost based on a given number of miles and fuel price, which is also listed on the label.

US Fuel Economy Label



New Zealand Fuel Economy Label

CASE STUDIES

Austria

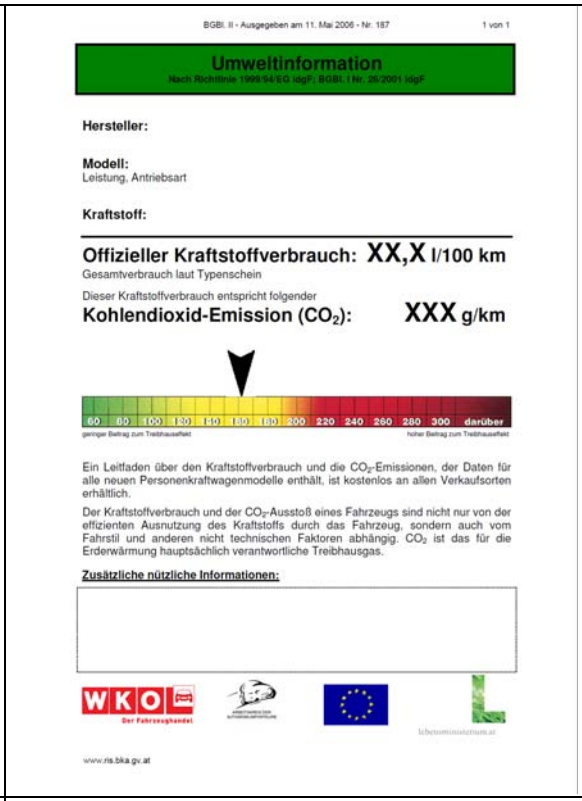
Member State Contact Information

Institution:	Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft (BMLFUW) Address: Stubenring 1, 1010 Wien Web Address: http://www.umweltnet.at/
Contact Person:	Name: Frau Mag. Eva-Maria Grünsteidl (Ministerialrätin) Address: Abt. V/5, BMLFUW Tel: +43 1 515 22 1208 Fax: n.a. Email: eva-maria.gruensteidl@lebensministerium.at

Implementation in Member State

Implementation:	Bundesgesetz über die Bereitstellung von Verbraucherinformationen beim Marketing für neue Personenkraftwagen (*Personenkraftwagen-Verbraucherinformationsgesetz – Pkw – VIG*)
Additional or previous regulations	Normverbrauchsabgabe (NoVA Steuerbonus): Tax bonus for automobiles with less CO_2 and pollutants Normverbrauchsabgabe (NoVA Steuerbonus): Tax bonus for automobiles with less consumption and alternative engines Tax bonuses for the transferring of motor pools to environmentally friendly technologies (Hybrid, Biodiesel, Palmoil, etc.) Fuel tax based on fuel type.

Label

Label example	
Internet version	The label can be found on various internet sites, for example: http://www.autoverbrauch.at/
Format of the label	The fuel and CO_2 emission information is provided as: • official fuel consumption – l/100km rounded to the first decimal place and • official CO_2 emissions – g/km as a complete number or rounded off. Physical description: • Size: 297mm x 210mm (DIN A4) • High quality and colour format. • Horizontal format also allowed. • In certain cases, a black and white label is also accepted. • The label uses a horizontal, coloured bar, with an arrow depicting the vehicles greenhouse gas emissions. • The label may also be provided electronically.
Explanation of the label	The information on the label is supposed to be self-evident. The label's horizontal bar, which ranges from green to red, is marked on both ends according to its high or low greenhouse gas emissions and an arrow is used to depict where the vehicle places on the comparative bar. There are no further explanations about how the vehicles CO_2 levels were calculated.

Label responsibilities and enforcement	The retailer is required to ensure that all new passenger cars for sale or lease at that particular location has an official CO_2 label and is easily visible. The automotive supplier is required to provide all data required for the label.
Additional information provided	Within Austrian law, the following information can be included on the label within designated fields: 1. Exhaust emissions class 2. Amount of standard consumption output as a percent of the selling price (Normverbrauchsabgabe) 3. Bio fuel suitability 4. Indication of the usability of other fuels 5. Operating noise 6. Weight of the vehicle 7. Length and width of the vehicle 8. Number of seats
Running costs	Currently no political discussion concerning the inclusion of running costs to any of the Austrian Directive 1999/94/EC information tools exists.
Planned modifications	Currently no political discussion regarding any modifications to the Austrian CO_2 label exists.
Research initiatives	No research initiatives regarding aspects of Directive 1999/94/EC have been undertaken or are planned.
Comments	In the course of this case study it has been suggested that the opposition of the Austrian automotive industry to EU or national regulations has created an environment in which changing or adjusting the Regulation would be extremely difficult. While the situation in other EU Member States allows for a more open discussion of changing the Directive.
Label violations	Violations of Directive 1999/94/EC (Personenkraftwagen-Verbraucherinformationsgesetz – *Pkw – VIG)* are regulated by district authorities, which are not required to report violations to the BMFLUW. However, if the EU were to implement an examination of the Directive, the local authorities would be required to report violations to the BMFLUW.

Guide on Fuel Economy

Example for Guide on Fuel Economy	The Austrian Guide on Fuel Economy is provided in two parts. The Guide is compiled of all car models for sale in Austria and organized alphabetically by make. http://www.autoverbrauch.at/
Internet version	The guide can be found on various internet sites, for example: http://www.autoverbrauch.at/ Consumers can compare cars according to fuel consumption attributes on the website.
Version reviewed in case study	Part 1: Includes a list of the 30 (instead of 10 as required) most efficient cars by fuel type, as of 05.02.2010 data from 2008. Part 2: Internet Databank of available cars and CO_2 information-updated in February 2010, also available in printed form at the retailers.
Frequency of updates	Required in Austrian law to be updated at least once a year.
Comparison of vehicle models, energy efficiency rating	For every model provided in the Guide the following info is supplied: • Official fuel economy provided as l/100km, rounded to the first decimal place. • Official CO_2 emissions provided as g/km, as a complete number or rounded off.
Guide on Fuel Economy responsibilities and enforcement	The Federal Board of the Automotive Trade (Das Bundesgremium des Fahrzeughandels) is the body responsible, appointed by the BMLFUW, for producing the Guide on Fuel Economy. All retailers are required to provide the Guide free of charge at their place of sale or lease. Automotive manufacturers are required to provide the dealers with the relevant information.
Additional information provided	The advice to motorists, which is required, is provided by a BMLFUW Minister. Additional information provided include, information encouraging consumers to reduce their CO_2 emissions, a table showing the increase in CO_2 emissions (1990-2006), links to various relevant websites, references to other climate and transport initiatives including tax bonuses as well as an explanation of the CO_2 reduction possibilities of alternative fuel sources and lists of those cars (by fuel source) ranking their efficiency.
Running costs	*See the label running costs above.*
Planned modifications	*See the label planned modifications above.*
Research initiatives	*See the label research initiatives above.*
Comments	*See the comments on the label above.*
Guide on Fuel Economy violations	*See the label violations above.*

Poster

Guidance material	n.a.
Comparison of vehicle models, energy efficiency rating	For every factory model provided on the poster (in ascending order of CO_2 emissions), the following info is supplied: • Official fuel economy provided as l/100km, rounded to the first decimal place. • Official CO_2 emissions provided as g/km, as a complete number or rounded off.
Explanation of the poster	n.a.
Poster responsibilities and enforcement	The retailer is required to display a poster for every factory model of a new passenger car sold or for lease at that place. The automotive supplier is required to provide all necessary data required for the poster or to provide the poster at their own cost. The poster is to be updated every six months. New models arriving between revisions of the poster are to be added to the bottom of the list.
Additional information provided	n.a.
Running costs	*See the label running costs above.*
Planned modifications	*See the label planned modifications above.*
Research initiatives	n.a.
Comments	*See the comments on the label above.*
Poster violations	*See the label violations above.*

Promotional Material

Guidance material	n.a.
Additional information provided	n.a.
Running costs	*See the label running costs above.*
Balancing advertisements	n.a.
Planned modifications	*See the label planned modifications above.*
Research initiatives	*See the label research initiatives above.*
Comments	*See the comments on the label above.*
Promotional material violations	On 29 March 2008 Greenpeace activists attended an auto show in Graz to inspect advertising and exhibition spaces of car manufacturers. Following the inspection, Greenpeace announced that a lawsuit would be filed regarding violations of manufacturers. Because of this development, the Austrian advertising association (Fachverband Werbung) which legally represents the communications industry in this situation organized a meeting with the concerned parties. The meeting was moderated by the association's chairman, Dr. Peter Drössler, and was attended by top representatives of the automotive industry, advertising industry and Greenpeace to discuss solutions.

References

ADAC (2005): Study on the effectiveness of Directive 1999/94/EC relating to the availability of consumer information on fuel economy and CO_2 emissions in respect of the marketing of new passenger cars, for DG Environment.

BKA/RIS Bundesrecht (2006): "Verordnung des Bundesminister für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft über die Bereitstellung von Verbraucherinforationen beim Marketing neuer Personenkraftwagen (Personenkraftwagen-Verbraucherinformationsverordnung – Pkw –VIV).

KFZ – Leitfaden (2009): „Leitfaden über Kraftstoffverbrauch und CO_2-Emissionen" URL: http://www.autoverbrauch.at/

Czech Republic

Member State Contact Information

Institution:	Ministry of Transport of CR Address: nábř. L. Svobody 1222/12, 110 15 Praha 1, CZ www.mdcr.cz
Contact Person:	Information given by: Lubomír Kincl, lubomir.kincl@mdcr.cz Responsible body for implementation: Department of Road Transport, Ministry of Transport Responsible body for monitoring the availability of consumer information: Czech Trade Inspection Authority www.coi.cz

Implementation in Member State

Implementation:	The Directive was implemented by the following acts: • Act no. 56/2001 Coll. on the conditions of road traffic (*zákon č. 56/2001 Sb., o podmínkách provozu vozidel na pozemních komunikacích, v platném znění)* – Section 24 • Decree no. 245/2005 Coll. laying down details of labels and posters on fuel consumption and CO_2 emissions of new passenger cars (*Vyhláška MD č. 245/2005 Sb., o náležitostech informačních štítků a plakátů s údaji o spotřebě pohonných hmot a emisích CO_2 při prodeji nových osobních vozidel)* • Decree no. 341/2002 Coll. on the technical capacity and technical conditions of road vehicles, as amended (*vyhláška MDS č. 341/2002 Sb., o schvalování technické způsobilosti a o technických podmínkách provozu vozidel na pozemních komunikacích*)
Additional or previous regulations	-

Label

Label example	A standardised label format does not exist since it is not set by legislation. Therefore, every car dealer can use a different format. The Decree no. 245/2005 Coll. only lays down the label's size and the mandatory information as set out by the Directive. Some labels are displayed on the car dealers websites, some are not. The survey showed that usually a label is a promotional material on the specific type of the car, which apart from other information includes information on CO_2 emissions and fuel consumption. See Fiat examples: http://fiat.dojacek.cz/dokums_raw/17/evoactive3.pd http://fiat.dojacek.cz/dokums_raw/17/pandaactualklima_1.pdf
Internet version	Not set by legislation. A brief survey showed that car dealers do not have it on internet.
Format of the label	Format is A4. As mentioned above, the detailed layout of the label including colours have not been discussed at the central level. This is entirely left to the car dealers respectively car manufacturers. Information on the fuel consumption can be given either in l/100 km or in km/l but the l/100 km format is most common.
Explanation of the label	Information on the label is well understandable for consumers. Therefore there is no need of any supplementary explanation.
Label responsibilities and enforcement	The car manufacturer (respectively its representative) is responsible for the correctness of the information given on the label. Display of the label in the marketing points is within the competence of the dealer as based on the contractual relationship with the car manufacturer, which is responsible *de lege*. Special CO_2 testing centres do not exist. The controlling body is the Czech Trade Inspection Authority (*Česká obchodní inspekce*).
Additional information provided	Not requested by law.
Running costs	Not requested or specified by law.
Planned modifications	Not being considered.
Research initiatives	None
Comments	-

Label violations	The Czech Trade Inspection Authority did provide the following information: in 2007, control at 138 sales points was carried out for 26 different car brands. Financial penalties were imposed in 7 cases, altogether amounting to CZK 63 000 (€2,423). The most frequent violations concerned missing labels and/or display obligations at sales points. On other occasions the obligatory text was missing from the Guide on fuel economy, label or display or the CO_2 emissions and fuel consumption information was missing from the label.

Guide on Fuel Economy

Example for Guide on Fuel Economy	It is available on the website of the Ministry of Transport http://www.mdcr.cz/cs/Silnicni_doprava/Dovoz_registrace_a_schvalovani_vozidel/Schvalovani_vozidel/Pruvodce_o_palivove_ekonomii.htm
Internet version	See above
Version reviewed in case study	July 2009
Frequency of updates	Twice a year
Comparison of vehicle models, energy efficiency rating	The information is given in l/100 km. The ten most efficient cars are part of the Guide and the file is available at the same address http://www.mdcr.cz/NR/rdonlyres/B007B7CC-EC6A-46E0-BD18-078892AE0AD5/0/CO2_Palivo_2Q_2009.xls. Also, there was a specific project "Searching for A category drivers", indicating whether websites use the information included in the guide (http://www.uspornajizda.cz/), especially in the file on Efficient Cars http://www.uspornajizda.cz/vyber-usporneho-vozu.
Guide on Fuel Economy responsibilities and enforcement	The Ministry of Transport is responsible for the Guide but enforcement of information to be provided for in the Guide is a competence of COI.
Additional information provided	The guide itself does not provide additional information. Ministry of Transport stated that information on the safety of road traffic provided by a designated body of the Ministry (BESIP), which runs its own website http://www.ibesip.cz/, are to be considered additional information but there is nothing mentioned about the fuel economy or CO_2 emissions.
Running costs	Not monitored
Planned modifications	Not planned
Research initiatives	Not undertaken
Comments	-
Guide on Fuel	No violations have been identified and no sanctions have been

Economy violations	imposed. However, the on-site visit at a sales point of one car dealer showed that the guide was not available there although the label states that “the guide on fuel economy (…) is available at any point of sale free of charge”.

Poster

Guidance material	There is no guidance material – the size and content of the poster are laid down in the Decree no 245/2005 Coll. as set forth by the Directive.
Comparison of vehicle models, energy efficiency rating	This information is not prescribed by law. An example of a comparison poster from Skoda for their Octavia model is also available on the internet. This also serves the purpose of a label since this particular car manufacturer does not have any labels to download. http://www.skoda-auto.cz/cze/model/newoctaviacombi/pricelist/Pages/newpricelist-newoctaviacombi.aspx
Explanation of the poster	The same as for the label.
Poster responsibilities and enforcement	The same as for the label.
Additional information provided	The same as for the label.
Running costs	The same as for the label.
Planned modifications	Not planned.
Research initiatives	None
Comments	-
Poster violations	

Promotional Material

Guidance material	There is no guidance material on how to elaborate promotional material and advertisements. Promotional material also needs to comply with the Directive but the Czech law insufficiently transposes the violations part. As a result there is no one competent to control the promotional material. Also the part on the readability of the information has not been transposed. A link to some promotional material without any information: http://www.volkswagen.cz/pdf/cenik_golf.pdf
Additional information provided	No
Running costs	Not monitored
Balancing advertisements	Some car dealers do use balancing advertisements but it is not required by the law so it depends on the individual dealer. The Ministry does not supervise these activities.
Planned modifications	None
Research initiatives	None
Comments	--
Promotional material violations	Since there is no controlling body, information on the violations is missing. There was a European wide campaign of several NGOs ´Advertise CO_2´, which identified several breaches. In the Czech Republic the advertisements screened either did not include the information or were very difficult to read. The Czech law insufficiently transposes the obligation stated in point 1 of Annex IV that such information should *be easy to read and no less prominent than the main part of the information provided in the promotional literature*; the Czech public interest law association “Ekologicky pravni servis” therefore filed a complaint in June 2009 to the European Commission.

References

Czech website of the project Advertise CO_2 http://www.affichezleco2.fr/spip.php?rubrique89&lang=cs

TV NOVA report from April 2008 on CO_2 information in car advertisements http://www.youtube.com/watch?v=ENZayZu_Ws0

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Filip Gregor, Environmental Law Service (EPS) filip.gregor@eps.cz

Finland

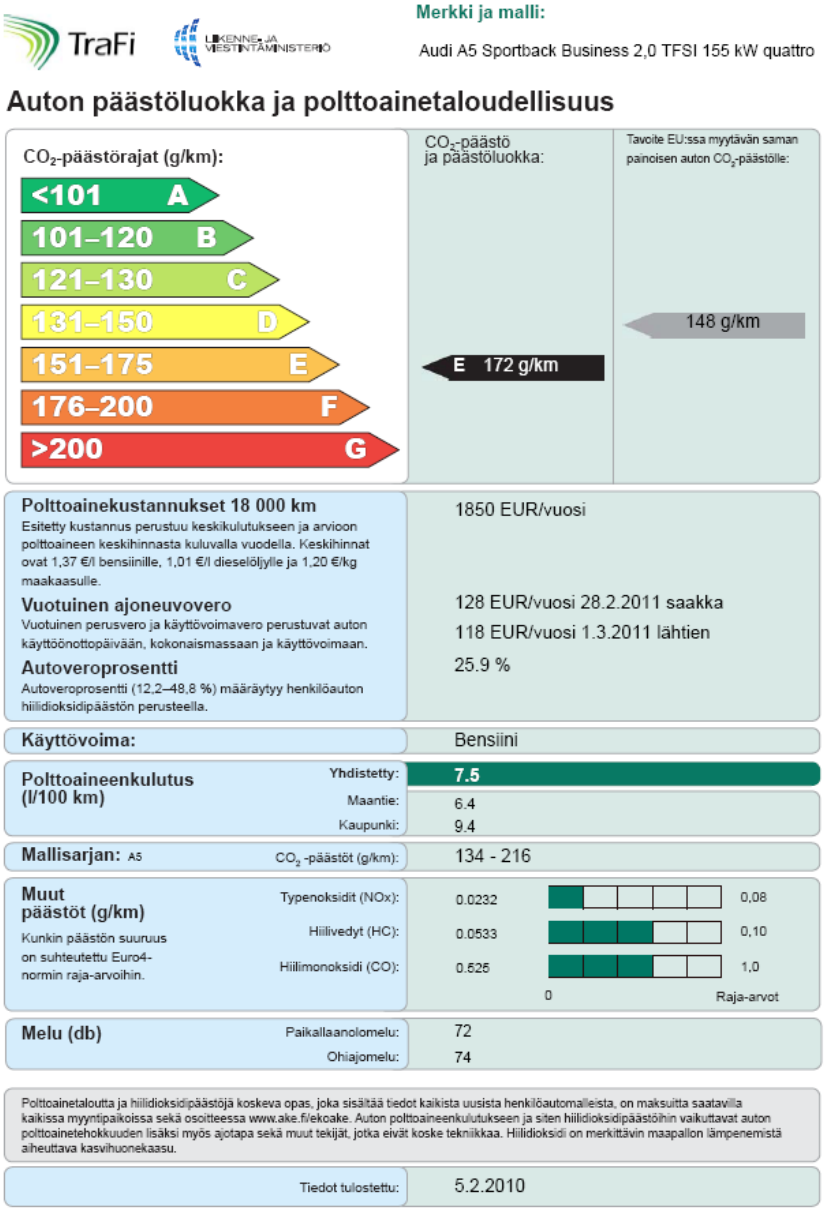
Member State Contact Information

Institution:	Ministry of Transport and Communications Address: P.O.BOX 31, FI-00023 Government Web Address: www.mintc.fi
Contact Person:	Name: Maria Rautavirta Address: P.O.BOX 31, FI-00023 Government Tel: +358407185975 Fax: [INSERT FAX NUMBER] Email: maria.rautavirta@mintc.fi

Implementation in Member State

Implementation:	Yes, Government Degree 938/2000 Name of Directive 1999/94/EC in National Law: Valtioneuvoston asetus autojen polttoaineenkulutuksen ja hiilidioksidipäästöjen ilmoittamisesta. 938/2000
Additional or previous regulations	Information on environmental issues in car purchase: www.trafi.fi -> http://www.trafi.fi/Ekoautoilu/ EkoAKE Webservice for CO_2 comparison (counts also the taxes): http://ekoake.autoalanverkkopalvelu.fi/default.asp In EkoAKE it is also possible to print “Ecolabel” for a specific car model Yearly bulletins for retailers: http://www.trafi.fi/Ekoautoilu/ More info about transport and environment: http://www.motiva.fi/liikenne/

Label

Label example	 Print Screen from EkoAKE Webservice. The form of the label is always the same. Instructions have been drawn if partially used. The elements required by law and EU directive always need to be presented.
Internet version	http://ekoake.autoalanverkkopalvelu.fi/default.asp

Format of the label	Scales are drawn as a result of comparison data of other labels in use in other countries. The Finnish average has been used as a base level (D,E). The graph shows also targeted CO_2-levels according to Regulation (EC) No 443/2009 calculated by mass. It also tells the price for fuel (18 000 km/yearly finnish average), yearly tax (based on CO_2) and vehicle purchase tax. Min. and max. CO_2 in the model series. And other emissions as well as noise. All information is based on the type approval documents and is updated daily. The information available in the web service for consumers differs slightly from the official monitoring information of CO_2, which is based on registrations, that is COC-information.
Explanation of the label	There is information in leaflets about the use of EkoAKE. Information of EkoAKE will be added to all yearly tax bills posted to each individual vehicle owner 2010. By March 2010 all salespersons of car-retailers are given training on interpreting the label information and using CO_2 argumentation in sales. Ministry of Transport and Communications provided the training material and training for the trainers. From now on training will be given as a part of the normal training.
Label responsibilities and enforcement	www.trafi.fi Type approval authority is responsible for the information. In Finland Trafi is also responsible for the yearly taxation of vehicles which makes more pressure on the data accuracy. From 1 March all M1 and N1 vehicles are taxed according to their CO_2-emissions.
Additional information provided	The purpose is to give all relevant environmental performance data in one label targeted for individual persons planning purchase or companies responsible for car policy, or sales persons. The additional information is seen in the label.
Running costs	Yearly costs are calculated. The price of oil can change so no longer period is seen practicable for comparison between models.
Planned modifications	Waiting for new EU legislation to which the label may be forced to be adjusted.
Research initiatives	www.trafi.fi/ekoake
Comments	Guide on the use of the label 1.1.2010 http://www.motiva.fi/files/2947/Henkiloautojen_energiamerkinnan_kaytto_1.1.2010.pdf
Label violations	No recorded violations

Guide on Fuel Economy

Example for Guide on Fuel Economy	Guidance on fuel economy (fulfilling the requirements of the Directive 1999/94/EC Annex II) www.trafi.fi/ekoautoilu General guidance (pdf) provided yearly in 2002-2008 http://www.ake.fi/NR/rdonlyres/285015EB-103D-41E0-BECF-00CF7FAD8AC4/0/Ekoake2008.pdf Online database on vehicle models including CO_2 emissions. http://ekoake.autoalanverkkopalvelu.fi/default.asp
Internet version	Web pages on environmental friendly use of vehicles. www.trafi.fi/ekoautoilu
Version reviewed in case study	Online version. www.trafi.fi/ekoautoilu
Frequency of updates	Online database and guidance on the website is updated when new information is available.
Comparison of vehicle models, energy efficiency rating	l/100 km
Guide on Fuel Economy responsibilities and enforcement	The Transport safety agency (Trafi) is responsible for the Guide. Online service is based on information provided by car manufacturers and Transport safety agency.
Additional information provided	Additional information on the web pages on e.g. engine techniques, recycling of scrap vehicles and information on traffic related environmental taxes. Information is relevant for the consumers.
Running costs	Running costs (fuel) for each vehicle included in the above mentioned database and label.
Planned modifications	No national plans.
Research initiatives	n.a.
Comments	n.a.
Guide on Fuel Economy violations	No recorded violations.

Poster

Guidance material	No guidance material for the poster. Instead of the poster the information is mostly/often provided at the point of sale on electronic display using the online database provided by the Traffic safety agency.
Comparison of vehicle models, energy efficiency rating	l/100 km
Explanation of the poster	Website available to explain the use and content of the database. http://www.ake.fi/AKE/Ekoautoilu/Auton+p%C3%A4%C3%A4st%C3%B6tiedot+-+EkoAKE/EkoAKEn+k%C3%A4ytt%C3%B6ohjeet/
Poster responsibilities and enforcement	The Transport safety agency (Trafi) is responsible for the database.
Additional information provided	No additional requirements.
Running costs	Costs for fuel/year as mentioned above.
Planned modifications	No national plans.
Research initiatives	n.a.
Comments	n.a.
Poster violations	No recorded violations.

Promotional Material

Guidance material	Guidelines on use of energy label for vehicles (in Finnish) http://www.motiva.fi/files/2947/Henkiloautojen_energiamerkinnan__kaytto_1.1.2010.pdf (in Finnish)
Additional information provided	n.a.
Running costs	n.a.
Balancing advertisements	Additional guidance for marketing of cars from the Consumer agency. 'Use of environmental statements in marketing of cars.' (In Finnish, Ympäristöväittämien käyttö autojen markkinoinnissa). http://www.kuluttajavirasto.fi/File/948cd66b-9e2a-4c83-ac5f-897007de3d22/Ymp%C3%A4rist%C3%B6v%C3%A4itt%C3%A4m%C3%A4t+autot.pdf

Planned modifications	No national plans.
Research initiatives	n.a.
Comments	n.a.
Promotional material violations	Survey made in 2009 on advertisements in journals. No recorded violations.

France

Member State Contact Information

Institution:	Ministry for the Environment/Ademe (French Environment and Energy Management Agency)
Contact Person:	Thomas Berbach (DGCCRF) Thomas.berbach@dgccrf.finances.gouv.fr

Implementation in Member State

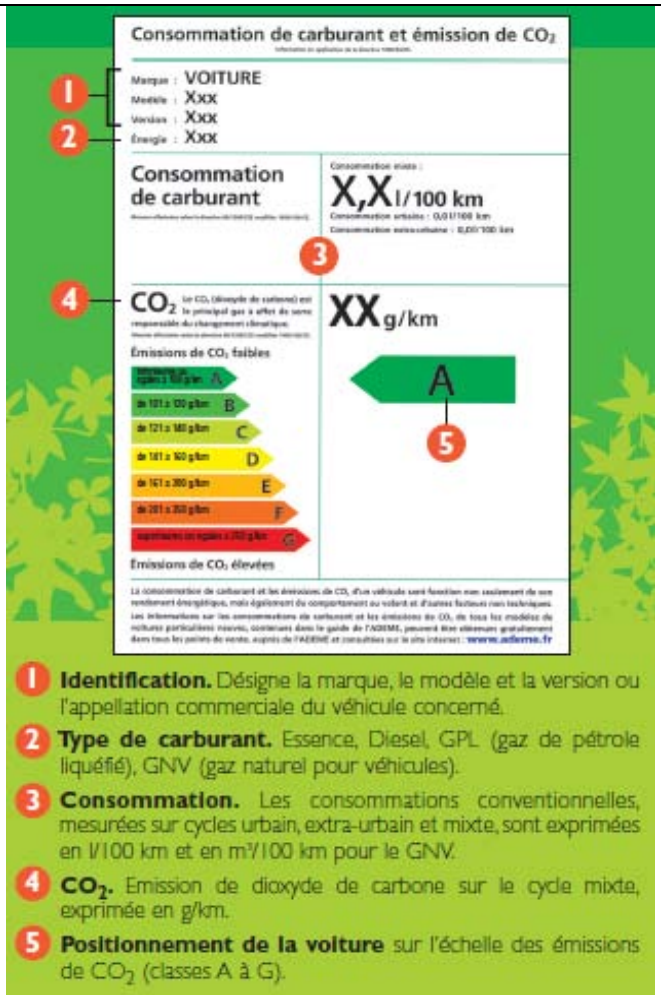
Implementation:	Implementation of Directive 1999/94 was adopted into French law under Decree n° 2002-1508 of 23 December 2003. The CO_2 label for passenger cars has been implemented in France since 10 May 2006. This decree is part of the wider Climate Change Action Plan (Plan Climat). Under the Decree, consumers should be informed on fuel economy and CO_2 emissions on new passenger cars. This information should be made available through a label displayed on new cars, on posters displayed at the points of sale, on any promotional materials, as well as in technical manuals. A Decree of 10 April 2003 allows for the electronic transmission of this information; however, this method is not widely used[73]. In France, the DGCCRF (General Directorate for Competition Policy, Consumer Affairs and Fraud Control) is responsible for ensuring and enforcing rules on required information to consumers and fair business practices directed at consumers. Accordingly, the DGCCRF ensures that consumers are given clear and honest information concerning goods and services offered for sale (labelling rules, ingredients and naming of merchandise, prevention of forgeries and deception). It oversees the proper use of symbols that enhance the value of products (quality logos, labels, certifications of origin, organic agriculture labelling, etc.). It detects and sanctions practices deemed detrimental to consumers (e.g., deceptive advertising, artificial discounts and abuse of weakness) and checks for compliance with price posting rules.

[73] DGCCRF website, September 2005 « Commerce des véhicules automobiles : la DGCCRF vérifie la bonne information des consommateurs »
www.dgccrf.bercy.gouv.fr/fonds_documentaire/dgccrf/03_publications/actualitesccrf/automobiles189.htm

Additional or previous regulations:	**Bonus-Malus**: France introduced the Bonus-Malus scheme for personal cars in 2007 to encourage manufacturers to develop low-emission vehicles by guiding consumer choice. The Bonus-Malus taxing system combines both taxes and incentives and is aimed at speeding up the removal from French roads of old polluting vehicles by replacing them with new greener ones. This scheme provides a subsidy to those who purchase a new car that emits less than 130 grams of CO_2 per kilometre, while imposing a penalty on those who buy a new car that emits over 160 g CO_2/km. **Additional CO_2 tax on car registration** ("carte grise"): This additional tax has been active from 1 June 2004. An additional tax is charged to cars that emit more than 200g/km when registering vehicles. **Financial incentives for electrical vehicles:** The Ademe is offering a financial incentive of €2,000 to €3,000 for the purchase of certain electrical vehicles. This initiative is valid until 31 December 2010.
Planned modifications	Plans are currently underway to modify the existing French Decree concerning consumer information on fuel economy and CO_2 emissions of new passenger cars. Modifications include providing running costs on labels, as well as extending the requirements for information on fuel economy and CO_2 emissions to used vehicles, rented vehicles, and light utility vehicles. Implementation of the above modifications is planned for the beginning of 2011.

Label

Label example



1-Identification: Indicates the make and model of the car
2-Type of fuel: Petrol, diesel, GPL (liquefied petroleum gas), GNV (natural gas for vehicles)
3-Consumption: Fuel consumption of the car measured by XX litres per 100 km (based on urban cycles and extra-urban cycles)
4-CO_2: CO_2 emissions based on a mixed cycle expressed in g/km
5-Ranking of car performance relative to CO_2 emissions (on a scale from A to G)

A to G Scale based on CO_2 emissions :

Class A: less or equal to 100 g/km
Class B: from 101 to 120 g/km
Class C : from 121 to 140 g/km
Class D: from 141 to 160 g/km
Class E: from 161 to 200 g/km
Class F: from 201 to 250 g/km
Class G: more than 250 g/km

Internet version	The label and detailed description can be accessed on various internet sites and included in a brochure to be downloaded from the internet from the Ademe (French Environment and Energy Management Agency) website - http://www2.ademe.fr/servlet/getBin?name=1468EE1DDC1D67B36A62E15B0E86EAC21153908873316.pdf
Format of the label	The label includes 7 colour codes (similar to the EU energy label used for household electrical appliances). The label allows the potential car purchaser to visually interpret and compare the CO_2 emissions of different vehicles.
Explanation of the label	Please see further information listed under 'Label example'.
Label responsibilities and enforcement	The DGCCRF is responsible for ensuring that labels placed on new cars contain correct and required information.
Additional information provided	N.A.
Running costs	A new format of the existing label for new passenger vehicles is being planned that would display annual running costs based on average annual estimated fuel costs for 15 000 km. This modification to the Decree is currently planned for adoption in 2011. The Ademe will be responsible for communicating the format requirements of the new label format to professionals through the Ademe website.
Planned modifications	See above information on running costs.
Research initiatives	N.A.
Comments	In 2007, the Ademe carried out a study after the first year of the label's implementation on the impacts of the label for car purchases. Findings show that 93% of car sellers and 55% of car purchasers are aware of the label. However, the label is considered as a criterium for the purchase of a less polluting car for only 7% of car sellers and 10% of car buyers. The study indicates that the label is not yet seen as a measure that encourages the purchase of less polluting vehicles. However, it should be noted that this study was carried out one year after the label's implementation, therefore not necessarily indicating how a longer term implementation of the label might have affected car purchases in 2010.

Label violations	In 2005 the DGCCRF investigated implementation of the requirements related to the provision of consumer information on fuel economy and CO_2 emissions of new cars. The investigation was carried out among 723 new car manufacturers and suppliers. Findings of the investigation show that there were 206 total violations of which 16 involved court proceedings. In particular, 53 violations related to the complete absence of labels or incomplete labels; 144 violations concerning posters (6 of which involved legal proceedings); and 9 violations concerning promotional materials (9 of which involved legal proceedings). The DGCCRF reported a clear improvement in terms of number of violations compared to the last investigation carried out in 2003/2004. The percentage of violations decreased from 55% in 2004 to 31% in 2005. According to information received from the DGCCRF, violations involving legal proceedings were often dropped as many of the infractions were remediated by the professional at fault. In 2009 a national investigation was carried out to verify the extent and accuracy to which car labels presented information on CO_2 emissions. Results of this investigation were considered satisfying as there has been a significant decrease in infractions of the Decree compared to the number of violations reported in 2005. Most infractions concerned problems with the proper display of posters at points of sale, which are often not visible enough or updated on a regular basis. Less frequent violations include those professionals that display the car label in white and black instead of in colour.

Guide on Fuel Economy

Example for Guide on Fuel Economy	The Guide ('Consommations de carburant et émissions de gaz carbonique') is available here: http://www2.ademe.fr/servlet/getDoc?cid=96&m=3&id=52820&p1=00&p2=12&ref=17597 The Guides from 2004 up to 2010 can be downloaded.
Internet version	See above.
Version reviewed in case study	2009
Frequency of updates	Annually
Comparison of vehicle models, energy efficiency rating	Tables are included in the Guide that contain information on the make, model, horsepower, transmission, fuel type, fuel consumption, CO_2 emissions, CO_2 class grade, and bonus/malus costs that allow car owners to compare the energy and environmental performance of new cars.
Guide on Fuel Economy responsibilities and enforcement	The Ademe is responsible for collecting the data and publishing the Guide on Fuel Economy every year. Data is collected annually from the UTAC (Technical Union of Automobiles and Motorcycles) and from car manufacturers. The Ademe should ensure the Guide on Fuel Economy is available free of charge in the points of sale.

Additional information provided	The additional information provided in the guide includes a summary of current legislation and initiatives that affect car owners, a section on the importance of reducing CO_2 emissions by selecting more environment-friendly cars, and how to keep the car well maintained so as to reduce CO_2 emissions.
Running costs	The guide provides information on how car owners can calculate annual running costs for 15 000 km as well as the Bonus/Malus figures. Comparisons in the guide show how much more (Malus) the consumer would have to pay for a more polluting car, and how much bonus (rebate amount) would be taken off the final purchase price of the car due to more environment-friendly features.
Planned modifications	See information included on planned modifications in the Implementation section.
Research initiatives	N.A.
Comments	
Guide on Fuel Economy violations	

Poster

Guidance material	Information not available.
Comparison of vehicle models, energy efficiency rating	Information not available.
Explanation of the poster	The poster should recapitulate fuel economy and CO_2 emissions of new passenger cars.
Poster responsibilities and enforcement	The DGCCRF is responsible for ensuring that posters contain correct and required information. Under Article 3 of the Decree, at every point of sale data must be displayed in a visible manner on the fuel economy and CO_2 emissions of new passenger cars.
Additional information provided	N.A.
Running costs	N.A.
Planned modifications	See information included on planned modifications in the Implementation section.
Research initiatives	N.A.
Comments	
Poster violations	In 2005, there were 144 violations of requirements concerning posters, and 6 violations which involved legal proceedings. Most poster violations are due to the poster display not being visible enough or containing outdated information.

Promotional Material

Guidance material	The Ademe has created many promotional materials to provide the information needed by potential car owners to select less polluting cars. An example includes an online web-tool/calculator that allows potential car owners to select the least polluting cars based on search criteria such as the mark and model of the vehicle, vehicle size, number of car doors, etc. The tool can be accessed here: www.ademe.fr/internet/aide_choix_vehicule. The Ademe also publishes every a year a list of the best vehicles in terms of environmental performance ("palmarés 2009"). Finally, the Ademe website also provides a list of French consumer magazines and guides that compare CO_2 emissions of cars.
Additional information provided	Many of the promotional materials such as the guide mentioned above include additional information on other financial initiatives (Bonus/Malus, reduction in car registration costs, etc.).
Running costs	An additional consumer's guide is published annually to inform consumers about the different financial incentives available when purchasing less polluting passenger vehicles. The goal of this guide is to make it more financially attractive to purchase more environment-friendly cars. In addition, comparisons are included in the guide that shows the differences in annual running costs of less polluting vehicles compared to more polluting ones. The guide can be downloaded here: http://ecocitoyens.ademe.fr/sites/default/files/guide_aides_vehicules09.pdf
Balancing advertisements	N.A.
Planned modifications	See information included on planned modifications in the Implementation section.
Research initiatives	N.A.
Comments	
Promotional material violations	Recently, several individual consumer and consumer association complaints in France pointed out that on several promotional materials, such as TV advertisements, information on CO_2 emissions and fuel consumption are not visible enough. Currently no legal proceedings have been filed in reaction to these complaints.

References

Ademe, (2010), Webtool for assistance in selecting less polluting vehicles, [Available online: www.ademe.fr/internet/aide_choix_vehicule]

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Personal contact with Mr. Thomas Berbach (DGCCRF), 16/03/2010

Germany

Member State Contact Information

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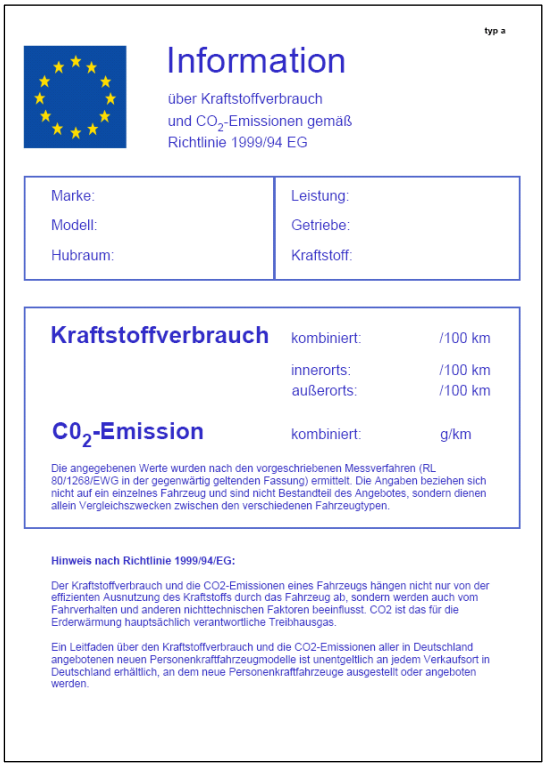
Implementation in Member State

Implementation:	Verordnung über Verbraucherinformationen zu Kraftstoffverbrauch und CO_2-Emissionen neuer Personenkraftwagen *(Pkw-Energieverbrauchskennzeichnungsverordnung – Pkw-EnVKV)*
Additional or previous regulations	Motor tax, based on emission level and engine capacity. Tax-free allowance for low emission passenger cars. New motor tax system based on CO_2 emissions in discussion. Ecological fuel tax reform: fuel tax increase in 5 steps. Reduction of the income tax relevant “distance rate”. Commitment of ACEA, JAMA and KAMA regarding the reduction of CO_2 emissions of new passenger cars. Commitment VDA and VDIK regarding the introduction of energy saving measures as standard equipment of new passenger cars. Source: ADAC 2005

Label



typ a

Information

über Kraftstoffverbrauch
und CO_2-Emissionen gemäß
Richtlinie 1999/94 EG

Marke:	Leistung:
Modell:	Getriebe:
Hubraum:	Kraftstoff:

Kraftstoffverbrauch kombiniert: /100 km
innerorts: /100 km
außerorts: /100 km

$C0_2$-Emission kombiniert: g/km

Die angegebenen Werte wurden nach den vorgeschriebenen Messverfahren (RL 80/1268/EWG in der gegenwärtig geltenden Fassung) ermittelt. Die Angaben beziehen sich nicht auf ein einzelnes Fahrzeug und sind nicht Bestandteil des Angebotes, sondern dienen allein Vergleichszwecken zwischen den verschiedenen Fahrzeugtypen.

Hinweis nach Richtlinie 1999/94/EG:

Der Kraftstoffverbrauch und die CO2-Emissionen eines Fahrzeugs hängen nicht nur von der effizienten Ausnutzung des Kraftstoffs durch das Fahrzeug ab, sondern werden auch vom Fahrverhalten und anderen nichttechnischen Faktoren beeinflusst. CO2 ist das für die Erderwärmung hauptsächlich verantwortliche Treibhausgas.

Ein Leitfaden über den Kraftstoffverbrauch und die CO2-Emissionen aller in Deutschland angebotenen neuen Personenkraftfahrzeugmodelle ist unentgeltlich an jedem Verkaufsort in Deutschland erhältlich, an dem neue Personenkraftfahrzeuge ausgestellt oder angeboten werden.

Label example	
Internet version	To provide the manufacturers with the easiest access to the program, an online site was developed. http://www.dena.de/de/themen/thema-mobil/projekte/projekt/pkw-label/

Format of the label	The label is absolute and without coloured scales or comparative information The fuel and CO_2 emission information is provided as: • official fuel consumption – l/100km (urban, rural and combined) rounded to the first decimal place and • official CO_2 Emissions – g/km as a complete number or rounded off. Physical description: • Size: 297mm x 210mm (DIN A4) • Table/ list format. • Colouring – white background with blue lettering. • EU flag included in upper left corner. • The use of large lettering is required. • Horizontal format also allowed. • In certain cases a black and white label is also accepted. The label also makes the required references as set forth by the EC Directive.
Explanation of the label	The information on the label is provided in a table or list format and is therefore supposed to be self-evident.
Label responsibilities and enforcement	The retailer is required to ensure that all new passenger cars for sale or lease at that particular location has an official CO_2 label and is easily visible, either on or near the passenger car. The automotive supplier is required to provide all data required for the label. The label can be easily obtained through the online program.
Additional information provided	n.a.
Running costs	n.a.
Planned modifications	The German Federal Government adopted on 23-24 August 2007 in Meseberg the core principles for an "Integrated Energy and Climate Program" (IEKP) to elaborate, *inter alia*, a concept for the improvement of the national CO_2 consumption label for cars. The federal government plans within the context of the IEKP to implement the introduction of a color efficiency scale for new cars with a relative assessment of vehicle efficiency, the evaluation factor being the vehicle mass. The label classes are contained within parallel lines to this regression curve. For example, in 2012 cars labelled "D" would fall into the region lying +/-5% around the line, those labelled "C" would lie within 5-15% below the curve, those labelled "B" would lie

	within 15-25% below the curve, and those labelled "A" would lie in a region more than 25% better than the line, etc. It is proposed that A+ and A++ classes would be added later on. In this approach, a very heavy car could be labelled "A" and a small car could be labelled "G". It is not yet known when this will be implemented. The Program also suggests considering greater EU harmonization of the Directive, i.e., an EU wide CO_2 label.
Research initiatives	Verbraucherzentrale NRW e.V., Europäisches Verbraucherzentrum (EVZ), 2005: „Verordnungs-Check. CO_2-Label für Neuwagen. Eine Untersuchung der Verbraucherzentrale Nordrhein-Westfalen zur Umsetzung der Pkw-Energieverbrauchskennzeichnungsverordnung"
Comments	n.a.
Label violations	Issues of non-compliance fall under the responsibility of the 16 states (*Bundesländer*) of Germany, which have governing bodies that are responsible for this task. More time would be needed to collect information from all of the bodies involved in this.

Guide on Fuel Economy

Example for Guide on Fuel Economy	http://www.dat.de/leitfaden/LeitfadenCO2.pdf
Internet version	The Guide on Fuel Economy can be downloaded here at: http://www.dat.de/leitfaden/LeitfadenCO2.pdf
Version reviewed in case study	2010, first quarter.
Frequency of updates	Required by law to be updated at least every year, but is updated four times a year.
Comparison of vehicle models, energy efficiency rating	For every passenger vehicle offered for sale or lease in Germany, the Guide on Fuel Economy provides: • official fuel consumption – provided as l/100km (urban, rural and combined) rounded to the first decimal place. • official CO_2 Emissions – provided as g/km as a complete number or rounded off.
Guide on Fuel Economy responsibilities and enforcement	The manufacturers are legally required to designate an agency on their behalf to create the guide in printed form and update and distribute to the dealers, consumers and other interested parties. This function is currently performed by the Deutsche Automobil Treuhand GmbH (DAT).

Additional information provided	The Guide of Fuel Economy includes additional information about the factors of fuel consumption, such as a monetary example to consumers about the potential savings because of increased fuel efficiency. The Guide explains that through small efficiency savings, consumers receive potentially greater savings. It also explains that fuel consumption can vary considerably between different vehicles of the same fuel type. The Guide on Fuel Economy also provides a pie graph depicting the amount of CO_2 emissions in Germany (for 2009) – where passenger vehicles contribute 12% of total CO_2 emissions. An explanation about the CO_2 saving potential of the various fuel types is provided in the Guide on Fuel Economy. For example, bio fuels are suggested as an alternative that reduces CO_2 emissions. In addition to an explanation about the influence of vehicle maintenance and driving style on CO_2 emissions (as set forth by Directive 1999/94/EC), the Guide on Fuel Economy provides a link (www.neues-fahren.de), which supplies readers with further general advice about CO_2 emissions, driving safety, etc.
Running costs	Not used.
Planned modifications	*See the label planned modifications above.*
Research initiatives	*See the label research initiatives above*
Comments	n.a.
Guide on Fuel Economy violations	*See the label violations above.*

Poster

Guidance material	n.a
Comparison of vehicle models, energy efficiency rating	For every factory model provided on the poster (in ascending order of CO_2 emissions), the following info is supplied: • official fuel consumption (combined urban and rural measurements) - provided as l/100km • official CO_2 emission (combined urban and rural measurements) - provided as g/km as a complete number or rounded off. The exact implementation of the poster is left to the manufacturer or dealer.
Explanation of the poster	Further explanation or assistance for the poster is not offered by government means.

Poster responsibilities and enforcement	The retailer is required to display a poster for every factory model of a new passenger car sold or for lease at that place. The automotive supplier is required to provide all necessary data required for the poster or to provide the poster at their own cost. The poster is to be updated every six months. New models arriving between revisions of the poster are to be added to the bottom of the list. The poster is required to be updated every six months.
Additional information provided	n.a.
Running costs	n.a.
Planned modifications	*See label planned modifications above.*
Research initiatives	*See label planned research initiatives above.*
Comments	It is also possible to provide the poster in an electronic version.
Poster violations	*See label violations above.*

Promotional Material

Guidance material	A press release was issued by three organisations, the German Competition Office (Wettbewerbszentrale), the Organisation of the Advertising Industry (Zentralverband der Werbewirtschaft (ZAW)) and the Organisation of the German Automobile Industry (Zentralverband Deutsches Kraftfahrzeuggewerbes (ZDK) calling the attention of automobile manufacturers and advertisers to Directive 1999/94/EC on 24 August 2009. The press briefly explained the importance of the Directive and informed about legal proceedings that had been taken regarding advertising violations. Internet links and relevant contacts from the aforementioned organisations were provided to supply interested parties with more information and answers.
Additional information provided	No additional information is provided.
Running costs	n.a.
Balancing advertisements	n.a.
Planned modifications	*See label planned modifications above.*
Research initiatives	*See label research initiatives above.*
Comments	Internet and electronic marketing are also required to meet specific requirements regarding Directive 1999/94/EC – Recommendation 2003/17/EC of 26 March 2003.

Promotional material violations	According to the German Competition Office (Wettbewerbszentrale): 2006: 108 Proceedings 2007: 91 Proceedings 2008: 62 Proceedings 2009: 28 Proceedings 2010 (until March): 17 Proceedings Total: 306 Between March 2006 and March 2010, 306 proceedings (official complaints to the competition office) were received. In 140 cases injunctions relating to competition law were sent, demanding that the action cease otherwise penalties would be imposed. There were also 19 lawsuits through an arbitration committee for competition disputes. In addition, legal action was brought to the State Courts four times and three applications for injunctions were made. In two cases only a written notice was sent to advertisers. All complaints relating to promotional material concerned print and internet media, not car showroom promotions.

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Wettbewerbszentrale (2009): Pressemitteilungen – 24.08.2009 // Sanktionen bei Verstößen gegen Informationspflichten beim Neuwagenkauf – Verletzung der Energieverbrauchskennzeichnung beim Autohandel wird effektiv verfolgt, URL: http://www.wettbewerbszentrale.de/de/presse/pressemitteilungen/_pressemitteilung/?id=186, Last accessed: 09.04.2010.

ITALY

Note: information marked with * represents the contact person's personal opinions and not the official position of the Ministry (although they can be considered reasonably in line with the Ministry views).

Member State Contact Information

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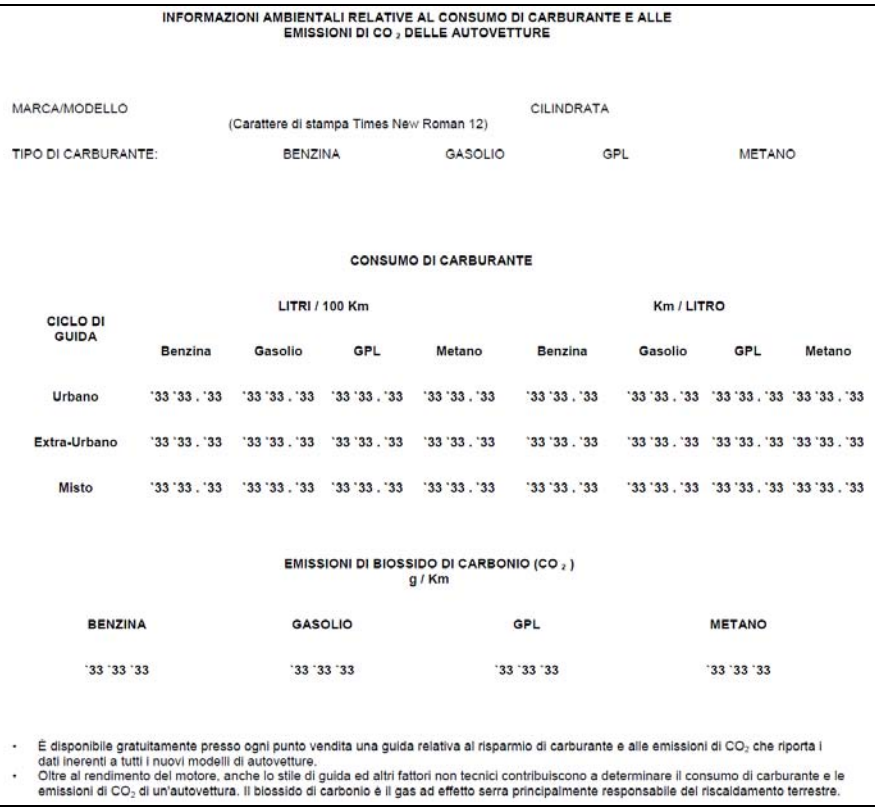
Implementation in Member State

Implementation:	Following an infringement procedure opened against Italy, in 2003 the European Court of Justice ruled that Italy failed to fulfil its obligations under Article 12 of Directive 1999/94/EC, which required Member States to comply with the Directive by 18 January 2001 (Case C-22/02). The Directive was finally transposed through Decree of the President of the Republic of 17 February 2003, n. 84 (DPR 84/2003) – published in Gazzetta Ufficiale N. 92 of 19 April 2003. http://www.apat.gov.it/site/_Files/NormativaAria/DPR/Dpr17febbraio2003n.84.pdf A number of official letters ('circolari') with additional information on implementation have been circulated by the Ministry of Economic Development to the provincial Chambers of Commerce, Industry, Craft Trade and Agriculture, which are in charge of the implementation. In July 2005 Italy was sent a final warning for failing to notify to the Commission its national implementing legislation on the availability of consumer information on fuel economy and CO_2 emissions in respect of the marketing of new passenger cars (European Commission 2005). This was related to a delay in the transposition of Directive 2003/73/EC, although this was transposed through Ministry Decree DM 6 April 2005.*
Additional or previous regulations	None

Label

Label example	 INFORMAZIONI AMBIENTALI RELATIVE AL CONSUMO DI CARBURANTE E ALLE EMISSIONI DI CO_2 DELLE AUTOVETTURE MARCA/MODELLO CILINDRATA (Carattere di stampa Times New Roman 12) TIPO DI CARBURANTE: BENZINA GASOLIO GPL METANO CONSUMO DI CARBURANTE CICLO DI GUIDA — LITRI / 100 Km: Benzina, Gasolio, GPL, Metano — Km / LITRO: Benzina, Gasolio, GPL, Metano Urbano `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 Extra-Urbano `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 Misto `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 | `33 `33 . `33 EMISSIONI DI BIOSSIDO DI CARBONIO (CO_2) g / Km BENZINA GASOLIO GPL METANO `33 `33 `33 `33 `33 `33 `33 `33 `33 • È disponibile gratuitamente presso ogni punto vendita una guida relativa al risparmio di carburante e alle emissioni di CO_2 che riporta i dati inerenti a tutti i nuovi modelli di autovetture. • Oltre al rendimento del motore, anche lo stile di guida ed altri fattori non tecnici contribuiscono a determinare il consumo di carburante e le emissioni di CO_2 di un'autovettura. Il biossido di carbonio è il gas ad effetto serra principalmente responsabile del riscaldamento terrestre.
Internet version	The label format is presented as an annex to the national regulation (see above), which is available on line http://www.apat.gov.it/site/_Files/NormativaAria/DPR/Dpr17febbraio2003n.84.pdf
Format of the label	A description of the label format is provided in art. 3 and Annex 1 of DPR 84/2003, and follows the requirements set out in Directive 1999/94/EC Annex I. A standardised format for the label is presented in Appendix 1 of the DPR (see above). Font 'Times New Roman' size 12 is required. Fuel consumption information should be provided in terms of litres/km and km/litre. CO_2 emissions are to be expressed in g/km.
Explanation of the label	No website available
Label responsibilities and enforcement	The Ministry of Economic Development is responsible for the implementation of the information programme and is meant to prepare a report on the implementation status and the effectiveness of the law. The provincial Chambers of Commerce, Industry, Craft Trade and Agriculture are responsible for monitoring the correct implementation of the law. The responsibles of the point of sales are in charge of displaying the label with the due information. Failure to do so will lead to an administrative fine (see below), enforced by the Chambers of Commerce.
Additional information provided	No further information provided
Running costs	Running costs are not included.

Planned modifications	Modifications are not planned until the Directive will be revised. It is noted that discussions at EU level focus in particular on a label similar to the one used for energy using products and linked to CO_2 emissions.*
Research initiatives	None
Comments	No additional comments.
Label violations	The financial penalty for omitting to provide the required information, as set out in art 10 of DPR 84/2003, is an administrative fee between €250 and €1,000. Data on the violations for this specific obligation are not available, as violations are reported in aggregated form by the Chambers of Commerce and include other violations at the point of sales. Nevertheless, some Chamber of Commerce reported some specific violations related to the label – about less than 10 violations per year each (it should be noted that each Chamber of Commerce reports only the violations occurred in their province, hence a relatively small area).

Guide on Fuel Economy

Example for Guide on Fuel Economy	Ministero dello Sviluppo Economico, Ministero dell'Ambiente e della Tutela del Territorio e del Mare, Ministero delle Infrastrutture e dei Trasporti (2009): Guida sul risparmio di carburanti e sulle emissioni di CO_2 delle autovetture
Internet version	As requested by DPR 84/2003, the guide is available in the Italian Official Gazette ('Gazzetta Ufficiale') and on the web sites of : the Ministry of Economic Development http://www.sviluppoeconomico.gov.it/pdf_upload/documenti/phpRsWLJr.pdf the Ministry of the Environment http://www.minambiente.it/opencms/export/sites/default/archivio/notizie/guida_risparmio_carburante_co2_09.pdf the Ministry for Infrastructures and Transport (although this seems to contain only the 2008 guide) http://www.mit.gov.it/mit/mop_all.php?p_id=05645 In addition, the guide can also be found on other governmental web pages. As from 2008, the guide is also published on the European Commission website
Version reviewed in case study	2009
Frequency of updates	Yearly. The first guide was released in 2008. The 2010 guide is under development.

Comparison of vehicle models, energy efficiency rating	The guide firstly provides a list of vehicles with the lowest CO_2 emissions (top 10 emission values) for each fuel category (petrol, methane, LPG, diesel). For each model, the guide provides information on: cubic capacity (cm^3), CO_2 emissions (g/km), urban/extra urban and mixed fuel consumption (l/100 km). The guide also provides a list of new vehicles, grouped into carmaker brands. For each model, again, the guide provides information on cubic capacity, CO_2 emissions and fuel consumption.
Guide on Fuel Economy responsibilities and enforcement	The guide is prepared by the Ministry of Economic Development in collaboration with the Ministry of the Environment and the Ministry of Infrastructure and Transport. By law, carmakers should provide the information on new vehicles and related information to the Ministry of Economic Development every year. Car sellers should make a free copy of the guide available to the consumers who request it. The guide should also be made available by the provincial Chambers of Commerce, Industry, Craft Trade and Agriculture.
Additional information provided	The guide provides the information requested by Directive 1999/94/EC. Compared to what is required by Annex II, the Italian guide provides somewhat more detailed information on fuel consumption, distinguishing between urban consumption (i.e., within a city/town), extra urban consumption and an average of the two, hence taking into account differences related to traffic conditions. Advice to motorists is detailed into 10 'eco-driving' rules and a number of advices on vehicle conditions and driving style. While the Directive requires to listing the '10 most fuel efficient models', the Italian guide opts for listing the top 10 emission values for each fuel type car – the list therefore encompasses more than ten models.
Running costs	Running costs are not included.
Planned modifications	Data collection for the 2010 guide is ongoing. It is expected that the new guide will be released in the coming months. In the meantime the three Ministries involved in its preparation are discussing how to make the guide more up to date in the future, possibly including additional information not covered by the current directive, following the example of other Member States (e.g. the UK). In the future, the possibility of substituting or complementing the paper version with an electronic version (i.e., a 'digital guide') is being discussed. The Guide could then be made available through a screen, as is currently possible for the poster.*

Modello	Cilindrata (cm^3)	Consumi (l/100km) Urbano	Extra Urbano	Misto	Emissioni CO_2 (g/km)

Research initiatives	No specific study or report. An official letter ('circolare') was sent to carmakers and made available on the website of the Ministry for Economic Development to prompt for the collection of information on new vehicles. The carmakers are requested to fill in a word format, to be sent electronically to the Ministry. http://www.sviluppoeconomico.gov.it/pdf_upload/documenti/lettera_circ_2010.pdf
Comments	Information campaigns on the guide on fuel economy have been conducted in 2004 and 2008, both through the press and through brochures distributed by the Chambers of Commerce.
Guide on Fuel Economy violations	The financial penalty for omitting to provide the required information, as set out in DPR 84/2003, is an administrative fee between €250 and €1,000. Data on the violations of this specific obligation are not available, as violations are reported in aggregated form by the Chambers of Commerce which includes other violations at the point of sales.

Poster

Guidance material	The poster format and characteristics are described in Art. 5 and Annex III of DPR 84/2003, and are in line with the provisions set in Directive 1999/94/EC art. 5 and annex III. The Italian legislation allows the information to be alternatively provided through a display/electronic screen – as foreseen by Directive 2003/73/CE (transposed into Italian legislation through Ministry Decree DM 6 April 2005).
Comparison of vehicle models, energy efficiency rating	DPR 84/2003 copies the Directive's text allowing for the information on fuel consumption to be presented either in l/100 km or km/l; CO_2 emissions should be depicted in g/km. Different units can also be used if compatible with national law.
Explanation of the poster	No websites available
Poster responsibilities and enforcement	The Ministry of Economic Development is responsible for the implementation of the information programme and is meant to prepare a report on the implementation status and the effectiveness of the law. The provincial Chambers of Commerce, Industry, Craft Trade and Agriculture are responsible for monitoring the correct implementation of the law. The responsibles of the point of sales are in charge of displaying the poster/monitor with the due information. Failure to do so will lead to an administrative fine (see below)
Additional information provided	No additional information provided.
Running costs	Running costs are not included.
Planned modifications	No planned modifications.
Research initiatives	None
Comments	No additional comments.

Poster violations	The financial penalty for omitting to provide the required information, as set out in DPR 84/2003, is an administrative fee between €250 and €1,000. Data on the violations for this specific obligation are not available, as violations are reported in aggregated form by the Chambers of Commerce which includes other violations at the point of sales.

Promotional Material

Guidance material	The requirements regarding promotional material are set out in Art. 6 and annex IV of DPR 84/2003, which adhere to the requirements se out in Art. 6 and Annex IV of Directive 1999/94/EC. Some additional information was provided in an official letter ('circolare' of 29 April 2009) from the Ministry of Economic Development to the Chambers of Trade, including some guidance on the implementation of the legislation (some key points from this letter are presented below in the 'Comments' section).
Additional information provided	No
Running costs	Running costs are not included.
Balancing advertisements	No information
Planned modifications	No modifications planned, but some clarifications are considered needed – see below.
Research initiatives	No initiatives – though some discussions are ongoing regarding some unclear aspects of the directive – see below.
Comments	The Ministry of Economic Development is investigating, in dialogue with stakeholders and the Chambers of Commerce, how to clarify some controversial aspects of the definitions included in the Directive. The size of the information on emissions and consumption in the context of advertisement messages was considered a critical point of the Directive, which make its implementation difficult.* In 2007 the European Parliament required that this information was given a space of at least 20% of the announcement. Even if this suggestion was considered excessive, it was noted that it would be indeed important to define a minimum size for this information, in terms of character size or as percentage of the total advertisement size, as the issue of readability is often crucial for the correct application of the law. It was suggested that the proposal for food labelling COM (2008)40, adopted by the European Commission on 30 January 2008, which provides some indication on minimum label size, could be a useful example.* Italy also raised a formal question to the Commission concerning the need to clarify some definitions included in the Directive, related to fuel consumption and official emissions. Another crucial issue relates to the definition of the 'main part of the information' (as referred to in Annex IV of Directive 1999/94/EC) to which the readability of consumption and emission information is compared to.

	In a formal letter ('circolare' of 29 April 2009) to the Chamber of Commerce, the Ministry attempted to bring some clarity. The 'main part of the information' was considered to be related to technical information (e.g. speed performance, security equipments, etc). The Ministry suggested that texts on consumption and emission data should have the same size. Other information, such as price or contractual information, was not considered to be part of the 'main' information. This interpretation, however, might be debatable and has indeed received some criticism by an environmental NGO. The proposal to extend the Directive also to television and internet was considered sensible, given the increasing importance of these media in marketing campaigns. Nevertheless, it was noted that some aspects will need serious consideration, such as the minimum time to dedicate to emission and fuel consumption data and their description – e.g. in line with what is currently being advertised with respect to pharmaceutical goods. As mentioned above, the minimum size of the information should also be specified. Furthermore, in the case of Italy, such approach could make monitoring by the Chambers of Commerce difficult, especially for television ads.*

Promotional material violations	The financial penalty for omitting to provide the required information, as set out in regulation D.P.R. 17 February 2003, n. 84, is an administrative fee between €250 and €1,000. These have recently been raised and the Chambers of Commerce have been engaged in a more stringent periodical monitoring of advertisements in the press. The results were considered positive. After an initial large number of infractions, the quality of the announcements was considered to have been improved substantially. The infractions are now quite limited. Some infractions are still being contested though. The Ministry provided clarification to a number of questions raised by interested associations, and in one case asked the Commission for clarification. A dialogue facilitated by the Ministry for Economic Development is currently taking place between the cars association and an environmental NGO on promotional material, including advertising billboards. In March 2009 an infraction procedure was opened by the European Court of Justice against Italy and other seven Member States with regard to the implementation of art. 6 and Annex IV of the Directive, as a result of an NGO's complaint (Friends of the Earth). Italy responded in due course presenting its counter-argument. No further action has been undertaken since then.

References

Ministero dello Sviluppo Economico, Ministero dell'Ambiente e della Tutela del Territorio e del Mare, Ministero delle Infrastrutture e dei Trasporti (2009): Guida sul risparmio di carburanti e sulle emissioni di CO_2 delle autovetture. Available at http://www.sviluppoeconomico.gov.it/pdf_upload/documenti/phpRsWLJr.pdf

D.P.R. 17 febbraio 2003, n. 84. Regolamento di attuazione della direttiva 1999/94/CE concernente la disponibilità di informazioni sul risparmio di carburante e sulle emissioni di CO_2 da fornire ai consumatori per quanto riguarda la commercializzazione di autovetture nuove (2). Gazzetta Ufficiale del 19 aprile 2003, n. 92. http://www.apat.gov.it/site/_Files/NormativaAria/DPR/Dpr17febbraio2003n.84.pdf

Circolare del Ministero dello Sviluppo Economico – Dipartimento per l'Impresa e l'internazionalizzazione Direzione generale per il mercato, la Concorrenza, il Consumatore, le Vigilanza e la Normativa Tecnica – Divisione XVII. Oggetto: Indicazioni relative all'acquisizione dei dati ex articolo 4 D.P.R. 17 Febbraio 2003, n.84, recante regolamento di attuazione della direttiva n. 1999/94/CE, concernente la disponibilita di informazioni sul risparmio di carburante e sulle emissioni di CO_2 da fornire ai consumatori per quanto riguarda la commercializzazione di autovetture nuove. http://www.sviluppoeconomico.gov.it/pdf_upload/documenti/lettera_circ_2010.pdf

Judgment of the Court (Second Chamber) of 11 September 2003 in Case C-22/02: Commission of the European Communities v Italian Republic (Failure of a Member State to fulfil obligations — Failure to implement Directive 1999/94/EC). OJ C 264 , 01/11/2003 P. 0013 – 0014 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2003:264:0013:0014:EN:PDF

European Commission (2005): Italy: Commission takes action over breaches of environmental law. Press release 26 July 2005. IP/05/1007

The Netherlands

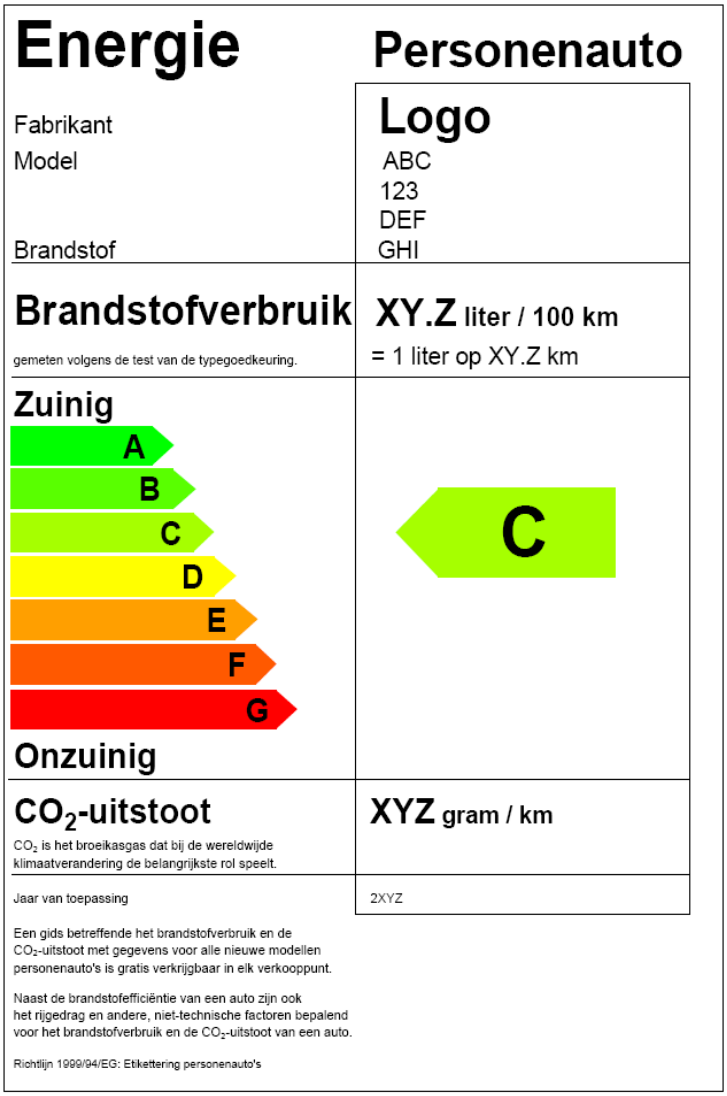
Member State Contact Information

Institution:	Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer (VROM) Address: Postbus 20951, 2500 EZ Den Haag Web Address: www.vrom.nl Name of Directive 1994/94/EC in National Law: Richtlijn nr. 1999/94/EG van het Europees Parlement en de Raad van de Europese Unie van 13 december 1999 betreffende de beschikbaarheid van consumenteninformatie over het brandstofverbruik en de CO_2-uitstoot bij het op de markt brengen van nieuwe personenauto's.
Contact Person:	Name: Mr Louis Zuidgeest Address: Postbus 20951, 2500 EZ Den Haag Tel: +31 70 339 2091 Email: louis.zuidgeest@minvrom.nl

Implementation in Member State

Implementation:	Directive 1999/94/EC was implemented in the Netherlands by the 'Besluit etikettering energiegebruik personenauto's' (Decree on the labelling of the energy use of passenger cars), published in the 'Staatsblad' (Official Gazette) 2000, no. 475. The decree's most recent amendment was published on 9 December 2009 (Staatsblad 2009, no. 540).
Additional or previous regulations	n.a.

Label

Label example	
Internet version	The label can be found on various internet sites. For example, the site http://www.energielabel.nl/pagina.aspx?onderwerp=Energielabel%20auto presents the label with an explanation.

Format of the label	The label specifies the fuel consumption of the car (both in l/100 km and in km/l) and the CO_2 emission in g/km. In addition, it contains a classification (A-G) designed to look similar to the well-known energy labels of electric appliances, with colours ranging from green (A) to red (G). Under this classification, a car with label A emits at least 20% less CO_2 than the reference level, while a car with label G emits at least 30% more than the reference level. The reference level is the weighted average of the average CO_2 emission of all cars in the same size class (the weight of this part is 75%) and the average CO_2 emission of all cars, regardless of size (the weight of this part is 25%). This 'weighted average' system enables a comparison of the relative fuel efficiency of cars that are comparable in size, but at the same time ensures that the absolute fuel efficiency plays a role: it is 'easier' for a small car to get an 'A' label than for a large car. Prior to its introduction, the system was discussed with the main stakeholders: the organisations of car importers and dealers (RAI and BOVAG), the motorists' and consumers' associations (ANWB and Consumentenbond) and the main Dutch environmental NGO (Stichting Natuur en Milieu). While all stakeholders agreed on the method to calculate the relative fuel efficiency, RAI and BOVAG principally disagreed with the mentioning of the relative fuel efficiency on the label. Nevertheless, they have accepted it as a matter of fact and actually co-operate in its implementation.
Explanation of the label	The information on the label is supposed to be self-evident. There is no explanation on the label itself about the methods used to calculate the absolute and relative fuel efficiency and CO_2 emissions. However, the similarity of the 'A-G' classification to the familiar system for electric appliances should make it easily understandable for the prospective car buyer. Detailed information on the label is available from various websites, including the above mentioned one.
Label responsibilities and enforcement	The Road Traffic Agency (Dienst Wegverkeer, RDW) is responsible for providing the information on the average CO_2 emissions and the car size parameters needed to calculate the fuel efficiency class of a particular car. These figures are taken from the type approval information of each car. The car suppliers (i.e. the companies bringing cars onto the market in the Netherlands) are responsible for providing the labels to car dealers to whom they supply new passenger cars, and for the correctness of the information on the labels. The car dealer has to ensure that the label is fixed on or near the car that he offers for sale or lease. Initially the enforcement was done by the Fiscal and Economic Investigation Service (FIOD-ECD). Now it is done by Food and Consumer Product Safety Authority (VWA).

Additional information provided	In addition to the information mandated by Directive 1999/94/EC, Annex I, the Dutch label specifies the car's fuel efficiency class (A-G) as described above. No other information is included on the label.
Running costs	Initially, the option of including information on fuel costs for a certain distance (e.g. 20,000 or 60,000 km) on the label was considered. Eventually, this option was rejected as it would imply an additional requirement, not mandated by EU law. Moreover, it would entail the need to establish a method to calculate fuel costs in a world with strongly fluctuating fuel prices. Nevertheless, a recent evaluation study ((ANWB et al., 2008) suggests that the label would increase in effectiveness and relevance if it would mention the financial advantages and disadvantages associated with the label category. This would not only include the fuel costs, but also the various tax incentives that are linked to the fuel consumption of cars.
Planned modifications	At present there are no modifications planned for the label in the Netherlands. Developments at EU level are being awaited.
Research initiatives	The Dutch label has been evaluated several times: 2001: Evaluation of the label that was sent to the Netherlands House of Representatives. 2002: Evaluation of the label and fiscal measures based on the label that was also sent to the Netherlands House of Representatives. 2006 and 2007: An evaluation study on the energy label (in connection with the fiscal incentives that were linked to the label) was published (ANWB et al., 2008). This report was also sent to the Netherlands House of Representatives. In March 2009, a study was published by the Netherlands Environmental Assessment Agency (PBL) on the impact of the energy label on the choice of car type (Kieboom and Geurs, 2009).
Comments	Car dealers can nowadays print their own labels, using the most up-to-date information, through a facility offered by RDC (www.rdc.nl). The RDW provides the information to RDC on a daily basis.
Label violations	Violations of the Decree are punishable under the Law on Economic Offences (Wet economische delicten). The maximum penalty is six months detention or a fine of €18,500. The FIOD-ECD has investigated the compliance with the Decree in 2002 (FIOD-ECD, Rapportage etikettering auto's, June 2003). Checks were performed at 802 sales points: 702 with advance announcement and 100 without advance announcement. Among the former group, the initial compliance rate was 98.8% and among the latter 90%. If the violations persisted at a second check, a record was made and transferred to the public prosecutor. This happened only in 9 cases. It is unknown if these cases eventually led to actual sanctions. According to the Ministry of VROM, compliance with Directive 1999/94/EC and its Dutch implementing law is good, and there are no specific enforcement issues.

Guide on Fuel Economy

Example for Guide on Fuel Economy	The Guide ('Brandstofverbruiksboekje') is available from a number of different websites. At http://www.rdw.nl/nl/voertuigeigenaar/auto/kopen_en_verkopen/milieu_en_verbruik/milieu_verbruik.htm the Guides from 2004 up to 2010 can be downloaded.
Internet version	See above
Version reviewed in case study	2010
Frequency of updates	Until now: annually; as from 2010: bi-annually
Comparison of vehicle models, energy efficiency rating	The Guide presents for each model the fuel efficiency both in l/100 km and in km/l, and the CO_2 emission.
Guide on Fuel Economy responsibilities and enforcement	The Road Traffic Agency (RDW) is responsible for compiling the Guide and for making it freely available to the car suppliers. The suppliers, in turn, have to make it freely available to the car dealers. The Minister of Environment (VROM) has to appoint one or more institutions where the consumer can obtain a free copy of the Guide. Enforcement is a task of the Fiscal and Economic Investigation Service (FIOD-ECD).
Additional information provided	In addition to the absolute figures for fuel efficiency and CO_2 emission, the Guide mentions for each model the energy class, ranging from A to G (see above under 'Label'). Furthermore, the Guide provides most of the other information specified in Annex II of the Directive, though some elements are lacking (e.g. item 6: "a reference to the Community's target for the average emissions of CO_2 from new passenger cars and the date of which the target should be achieved").
Running costs	N.a.
Planned modifications	N.a.
Research initiatives	See under 'Label'.
Comments	Printing annual editions of the Guide is expensive and paper-consuming. The Ministry of VROM considers that nowadays this information should preferably be distributed through the internet and there should be no obligation anymore to make it available free of charge to consumers.
Guide on Fuel Economy violations	According to the Ministry of VROM, compliance with Directive 1999/94/EC and its Dutch implementing law is good, and there are no specific enforcement issues.

Poster

Guidance material	No information available.
Comparison of vehicle models, energy efficiency rating	The requirements for the poster (or display) are largely similar to those in Annex III of the Directive (as amended by Directive 2003/73/EC). Fuel efficiency should be specified both in l/100 km and in km/l (for natural gas: in m^3/100 km and in km/m^3).

Explanation of the poster	As there is no standard format for the poster, no general conclusions can be drawn on the extent to which the posters are self-explanatory. This may differ by supplier.
Poster responsibilities and enforcement	Car suppliers have to make the posters available to their dealers. The dealers have to ensure that the poster (or display) is clearly visible at the point of sale. Enforcement is a task of the Fiscal and Economic Investigation Service (FIOD-ECD).
Additional information provided	n.a.
Running costs	n.a.
Planned modifications	No
Research initiatives	See under 'Label'.
Comments	In the Committee that was established under Article 10 of the Directive the Netherlands has commented on the lack of informational value of the poster. A lot of information (in the past sometimes on many hundreds of models) is presented in a non-communicative way.
Poster violations	According to the Ministry of VROM, compliance with Directive 1999/94/EC and its Dutch implementing law is good, and there are no specific enforcement issues.

Promotional Material

Guidance material	Car suppliers in the Netherlands are supposed to comply with the rules of the 'Advertising Code' (Reclamecode; see www.reclamecode.nl). The Reclamecode contains a number of specific items relating to passenger cars. Since October 2009 these include, among others, a specification of the requirements concerning advertisements as given by Directive 1999/94/EC and the Besluit etikettering energiegebruik personenauto's. For example, the minimum size of the letters and of the space to be used for the information on fuel consumption and CO_2 emissions is specified.
Additional information provided	The requirements in the Besluit etikettering energiegebruik personenauto's are similar to those in Annex IV of the Directive.
Running costs	n.a.
Balancing advertisements	n.a.
Planned modifications	No
Research initiatives	See under 'Label'
Comments	As in the Directive, the Dutch regulations on promotional material are restricted to printed matter. However, the Reclamecode (see above) applies to other media, such as websites, as well.

Promotional material violations	In April 2009 the Dutch environmental NGO 'Milieudefensie' filed a legal complaint against Mercedes, Renault and Hyundai. Milieudefensie argued that the information on fuel consumption and CO_2 emissions in their car advertising does not comply with the requirement that it should "be easy to read and no less prominent than the main part of the information provided in the promotional literature". In 2008 Milieudefensie had threatened to do the same against Pon (the Dutch importer of Volkswagen, Audi, Seat and Skoda), but the lawsuit was withdrawn after Pon promised to advertise the fuel efficiency and CO_2 emissions of their cars more prominently. See www.milieudefensie.nl. According to the Ministry of VROM, the action by Milieudefensie led to the change in the Advertisment Code in 2009, as mentioned above.

References

ANWB et al., Evaluatierapport Werkgroep evaluatie energielabel en bonus/malus regeling BPM 2006. Den Haag, 15 mei 2008.

S.F. Kieboom and K.T. Geurs: Energielabels en autotypekeuze. Effect van het energielabel op de aanschaf van nieuwe personenauto's door consumenten. PBL-publicatienummer 500076010/2009, Planbureau voor de Leefomgeving, Bilthoven.

Poland

Member State Contact Information

Institution:	Institute for Sustainable Development Address: ul. Nabielaka 15 lok. 1, 00-743 Warsaw Web Address: www.ine-isd.org.pl
Contact Person:	Name: Andrzej Siemiński Address: Departament Transportu Drogowego Tel: 022 630 12 40 Fax: 022 621 02 02 Email: asieminski@mi.gov.pl

Implementation in Member State

Implementation:	Yes. Directive has been fully implemented through: Articles 80a, 80b and 167 of the Environmental Protection Act (Dz.U. 2001 Nr 62 poz. 627 z późn. zm.) and subsequent regulations: • Rozporządzenie Ministra Gospodarki i Pracy w sprawie produktów objętych obowiązkiem zaopatrzenia w informacje istotne z punktu widzenia ochrony środowiska z dnia 28 grudnia 2004 roku (Dz. U. 2005, nr 6, poz. 40) – regulation of Ministry of Economy and Work • Rozporządzenie Rady Ministrów w sprawie w sprawie zestawień istotnych z punktu widzenia ochrony środowiska informacji o produktach z dnia 29 kwietnia 2004 roku (Dz. U. 2004, nr 98, poz. 999) – regulation of Council of Ministers
Additional or previous regulations	None.

Label

Label example	 Presented examples are deemed by the sellers as labels which fulfil legal requirements of Polish law implementing Directive 1999/94/EC.
Internet version	There are no label examples placed on the Internet.

Format of the label	This is a standard A4 page with basic information which should include: • trade mark, type, variant and version of the car • data about the fuel used by the car • text "fuel consumption" - in l/100km • text "emission of CO_2" - in g/km • text "Except for information about fuel consumption, car driver's behaviour and other non-technical factors may influence fuel consumption and CO_2 emissions of the car" A proposal has been issued in 2007-2008 by the independent Car Market Institute (www.samar.pl) to use a scale similar to the energy efficiency labels on products (A to E), but this has not been implemented. As you can see from the examples attached, the labels usually contain also other technical information about the car. It is not sure whether the label should contain also this additional information as no claims were made by consumers to the controlling bodies to check this issue.
Explanation of the label	The consumers are expected to understand the label directly without any additional explanations. However, experts contacted for this study (from the Ministry of Infrastructure and Samar) said that consumers usually do not understand or do not read the information about CO_2 emissions.
Label responsibilities and enforcement	All information that is placed on the label comes from the Polish Liaison of Car Manufacturers (imported cars) or the Institute for Car Transport (Centre for Car Certification). The Centre for Car Certification has testing centres for homologation of new cars produced in Poland. The information on fuel consumption and CO_2 emissions is the same as stated in the homologation documents of the car. It is the Market Inspection who should control whether the label is presented at the point of sale and if the information provided on the label is the same as of the exact car labelled.
Additional information provided	As stated before, labels presented by the sellers include many other technical data about the car, however Polish Law does not say this data is allowed or denied to be placed. Additional data is presented according to the rationale of each manufacturer so no logical explanation can be given to the fact why this data is presented.
Running costs	There is no information about the running costs presented in the information tools of the Directive used in Poland.
Planned modifications	A proposal has been issued by the independent Car Market Institute (www.samar.pl) to use a scale similar to the energy efficiency labels on products (A to E), but this has not been implemented. The system should link the information about fuel consumption with the information about the running costs of the car, which is deemed to have a much higher impact on consumer's decisions. Moreover the proposed system is similar to the well known system for other energy consuming products and should be easy to understand for consumers.

Research initiatives	The independent Car Market Institute (www.samar.pl) provides an annual report on average CO_2 emissions from new cars sold in Poland.
Comments	n.a.
Label violations	No violations have been recorded officially by the controlling institutions, neither public (Consumer Rights and Competition Office, Market Inspection) nor private (Council of Advertising, Association of Polish Consumers). The Council of Advertising rarely records any claims made by consumers on environmental grounds against advertisements. According to a field study carried out in several points of sale in Warsaw, the labels were generally in place. However: • all labels included lots of additional technical information, which somehow was hiding the information about fuel consumption and CO_2 emissions • in some points of sale labels were not presented on/near the car, but in other places - together with car folders or on demand (Ford, Nissan, Mitsubishi – please bear in mind that not all of the car manufacturer's points of sale were inspected!) According to experts from the Ministry of Infrastructure and the Car Market Institute, most car sellers stick to the law and rules of the Directive. A Polish NGO (the Institute for Civic Affairs from Lódź) was considering to claim on non-compliance (concerning labelling and poster) with Directive 1999/94/EC, but they have given up after reconsidering their chances to win the case.

Guide on Fuel Economy

Example for Guide on Fuel Economy	A recent Guide can be found at following website: http://www.mi.gov.pl/files/0/1790977/InformacjedotyczczezuyciapaliwiemisjiCO2wsamochodachosobowych.xls Guides from 2008 and 2009 can be found at: http://www.mi.gov.pl/2-48246b7ab716c.htm
Internet version	As stated above
Version reviewed in case study	Recent version from a year 2009.
Frequency of updates	Every year.
Comparison of vehicle models, energy efficiency rating	Information is depicted in l/100km and g/km. The Guide is issued in two versions: • comparison of every vehicle model available for sale; • rating of 20 car models, which have the least emission of CO_2. Rating is presented for three types of fuel: diesel, fuel, CNG gas.

Guide on Fuel Economy responsibilities and enforcement	It is the ministry responsible for transport (recently Ministry of Infrastructure, Department of Road Transport) which needs to provide information about the Guide. This is being done on the website of the Ministry (www.mi.gov.pl). Guides from 2008 and 2009 can be found at http://www.mi.gov.pl/2-48246b7ab716c.htm. Information in the Guide comes from the Polish Liaison of Car Manufacturers (imported cars) or the Institute for Car Transport (Centre for Car Certification – cars manufactured in Poland). The Centre for Car Certification has testing centres for homologation of new cars produced in Poland.

Additional information provided	Yes. It is: • The code of the product according to the national code of products (PKWiU). • The volume of the car engine • The car engine's power When purchasing a car, people usually make their choice on the basis of the volume of the car engine and the car engine's power, not on the basis of the code of the car model. The products' code gives a firm link to the national classification, which is made separately from the manufacturers' codes and can provide opportunity for a double check of the data of the car.
Running costs	No information could be found.
Planned modifications	Yes. There were modifications considered to include segregation of cars into multiple segments according to the volume or power of the car engine. Such segments are being used by the Car Market Institute (www.samar.pl). The classes are: A – Mini, B – Small, C – Lower middle class, D – Middle class, E – Higher class, F – Luxury cars, G – Super luxury cars, H – Combivans, M – Minibusses, T – Trucks. More information on segmentation is available at: http://www.samar.pl/__/__la/pl/__ac/sec,82/rep/586/__SAMAR-Definicje-Segmentacja-rynku-samochody-osobowe.html (after registration and login). Experts say that consumers choose cars according to the segments of the market they can afford and it would be useful to provide comparisons of fuel consumption and CO_2 emissions within the segments. Comparison between cars in such segments could be made with application of classes similar to other products (A (A+++) to E). These considered modifications were deemed unnecessary because EU legislation does not require this, it only recommends it.

Research initiatives	Website www.samar.pl is very relevant. The website presents reports on sales and other characteristics of cars sold in Poland (Poland Car Fleet, Management briefings, Car Registration statistics). The website is ran commercially; therefore reports are sometimes sold and not distributed freely. Visitors of the website can retrieve in a catalogue of the Institute new cars according to user defined criteria, e.g. fuel consumption or CO_2 emissions. See: http://www.samar.pl/__/__la/pl/__ac/sec,63/__Katalog-modeli-Szukaj.html This on line catalogue allows users to identify cars with the lowest CO_2 emissions.
Comments	Guide on Fuel Economy is not easy to be found on the http://www.mi.gov.pl/ website.
Guide on Fuel Economy violations	None. According to a postal survey among Market Inspections in each region of Poland.

Poster

Guidance material	The only guidance are the regulations mentioned in section "Implementation in Member State". Posters should be provided by car dealers.
Comparison of vehicle models, energy efficiency rating	A poster should present an ascending rating of cars according to CO_2 emissions at the point of sale. The information should be provided in l/100km and g/km. The poster can be printed or presented as an electronically generated image (70x50 cm). Alternatively, information could be presented as an electronic presentation of slides with following dimensions: 32x35 cm.
Explanation of the poster	The consumers are expected to understand the label directly without any additional explanations. There are no websites related to the poster.
Poster responsibilities and enforcement	As in the "Label" section. It is the Market Inspection who should control whether the poster is presented at the point of sale and if the information provided on the poster is correct.
Additional information provided	No.
Running costs	No information could be found.
Planned modifications	As in the sections "Label" and "Guide on the Fuel Economy".
Research initiatives	As in the sections "Label" and "Guide on the Fuel Economy".
Comments	n.a.

Poster violations	None. According to the postal survey among Market Inspection in each region of Poland. On the basis of visits of the team to several car selling points in Warsaw, it was concluded that the posters was are not always exposed (no poster in the points of sale of Nissan and Ford). Sometimes the poster was only exposed in the less frequently visited parts of the point of sale (such as the second floor of the point of sale – Mitsubishi).

Promotional Material

Guidance material	There is no guidance material. The only information about the issue is provided in the regulation implementing the directive.
Additional information provided	No. Information on fuel consumption is usually presented in a triple form – city-driving cycle, non-city-driving cycle, mixed cycle (average). This information is taken directly from the certification and homologation procedures.
Running costs	About five years ago a Polish car magazines provided a comparison of running costs of five different car models (selected as representative cars of a particular market segment). The comparison was presented in an article titled “How much does a car really cost?”. The calculation included: • decrease of the value of the car as an asset; • fuel consumption and fuel price; • insurance costs; • service, parking, car-wash, registration and regular check-up costs; • costs of lost alternatives (bank account) The comparison was made for five years of running costs. No other studies have been carried out out since then.
Balancing advertisements	There are no experiences in Poland in balancing advertisements.
Planned modifications	As in the sections “Label” and “Guide on the Fuel Economy”.
Research initiatives	As in the sections “Label” and “Guide on the Fuel Economy”.
Comments	Polish legislation does not cover non-printed material. It is said that the information required to be provided (especially about CO_2 emissions) is difficult to understand by consumers and because it is not necessary as EU law in this matter has not been implemented.

Promotional material violations	None. According to the postal survey among Market Inspections in all regions of Poland. Catalogues and folders of the cars, also those provided on Polish websites of car manufacturers, always provide information on fuel consumption and CO_2 emissions of cars. No violations have been recorded concerning promotional material.

References

- All relevant references and studies have been mentioned in the tables above.

- Experts interviewed to prepare this report:

  - Andrzej Siemiński, environmental protection expert from the Polish Ministry of Infrastructure, Department of Road Transport
  - Wojciech Drzewiecki, car market expert, president of the Car Market Institute SAMAR

- Postal survey among Market Inspections in all regions of Poland (responses from Inspections can be provided on demand).

- Field study in car points of sale in Warsaw: Opel, KIA, Ford, Saab, Chevrolet, Nissan, Mitsubishi, Citroen, carried out by Mateusz Godlewski.

Sweden

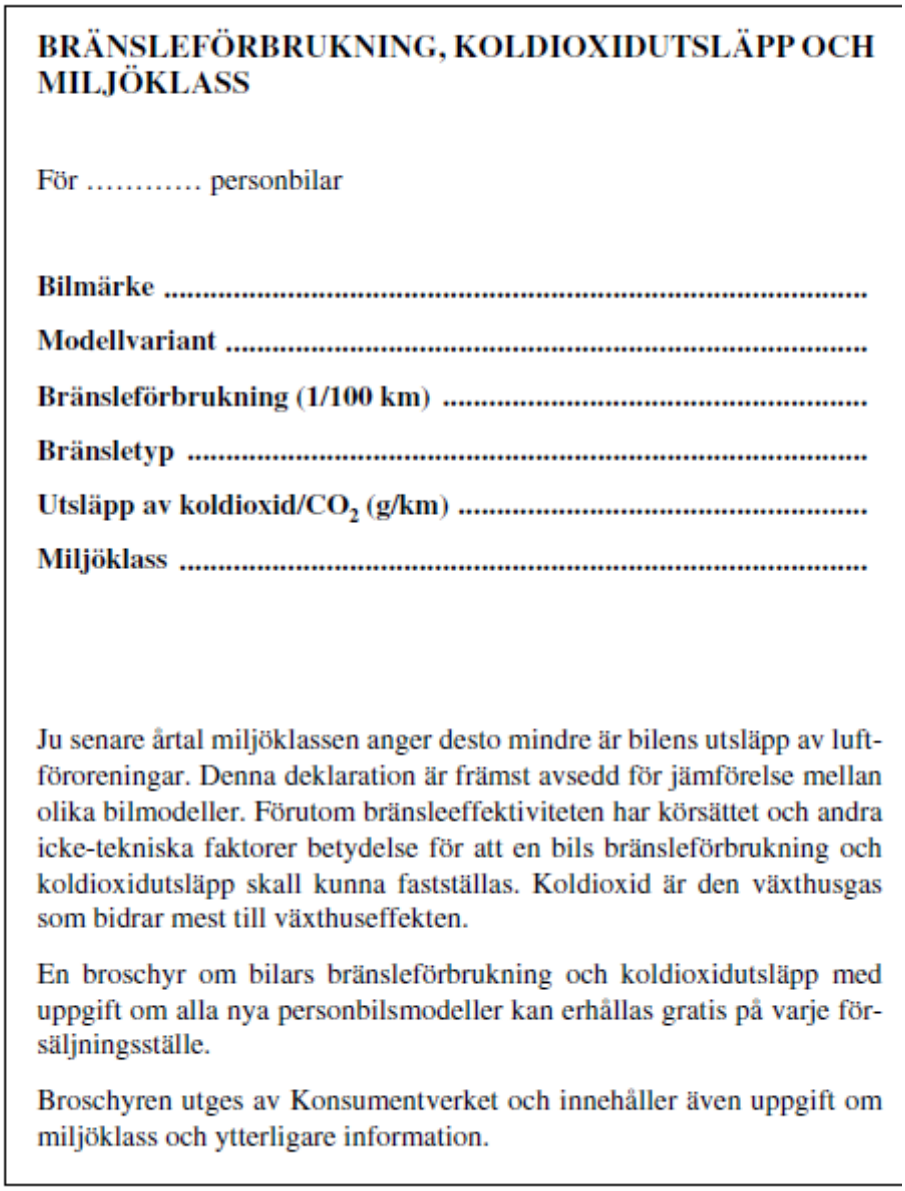
Member State Contact Information

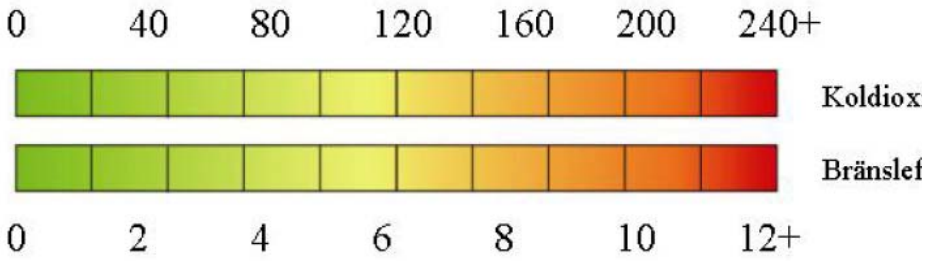
Institution:	Ministry of Integration and Gender Equality, Consumer Policy Affairs Address: SE-103 33 Stockholm Web Address http://www.sweden.gov.se/sb/d/8366
Contact Person:	Name: Rebecca Heinemann Address: SE-103 33 Stockholm Tel: 00 46 8 405 14 08 Email: rebecca.heinemann@integration.ministry.se

Implementation in Member State

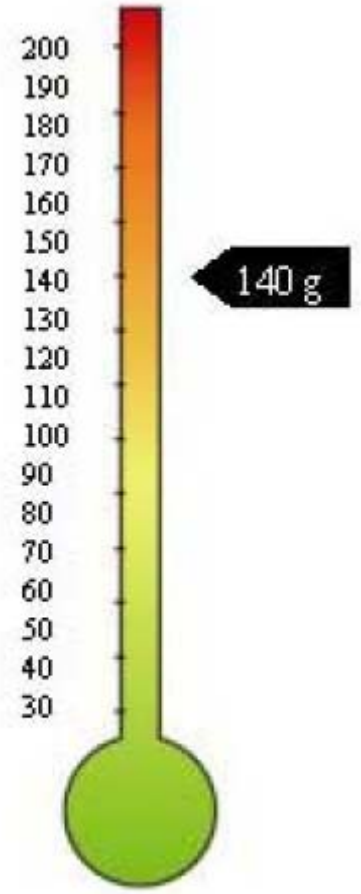
Implementation:	KOVFS 2002:2 as amended by KOVFS 2004:7
Additional or previous regulations	The Swedish Consumer Agency set the first requirement for displaying fuel economy on new cars in 1977. According to the guidelines (the Swedish Consumer Agency can take those to court who do not meet the requirements of guidelines) (KOVFS 1977:2) the information of a cars' energy consumption is displayed via a clearly displayed label. The label shows the fuel consumption based on different driving conditions (city/road). The guidelines where revised in 1979 (KOVFS 1997:11) adding a compulsory reference to the report Fuel consumption in cars by the Swedish Consumer Agency. In 1988 (KOVFS 1988:1) the legislation was changed by now requiring the above report to be available at the point of sale. The revision in 1996 (1996:12) required information of the cars' CO_2 emissions and its environmental class and the report was now called "Fuel Consumption in cars, carbon dioxide and environmental classification". Only minor changes were required to implement the Directive in terms of the label in 2002 (KOVFS 2002:2). These requirements were further amended by KOVFS 2004:7, which allow the use of a display (25cm x 32 cm) as an alternative to a poster.

Label

Label example	 **BRÄNSLEFÖRBRUKNING, KOLDIOXIDUTSLÄPP OCH MILJÖKLASS** För ..... personbilar **Bilmärke** ..... **Modellvariant** ..... **Bränsleförbrukning (1/100 km)** ..... **Bränsletyp** ..... **Utsläpp av koldioxid/CO_2 (g/km)** ..... **Miljöklass** ..... Ju senare årtal miljöklassen anger desto mindre är bilens utsläpp av luftföroreningar. Denna deklaration är främst avsedd för jämförelse mellan olika bilmodeller. Förutom bränsleeffektiviteten har körsättet och andra icke-tekniska faktorer betydelse för att en bils bränsleförbrukning och koldioxidutsläpp skall kunna fastställas. Koldioxid är den växthusgas som bidrar mest till växthuseffekten. En broschyr om bilars bränsleförbrukning och koldioxidutsläpp med uppgift om alla nya personbilsmodeller kan erhållas gratis på varje försäljningsställe. Broschyren utges av Konsumentverket och innehåller även uppgift om miljöklass och ytterligare information. The label indicates: • Car model/type • Fuel consumption • CO_2 emissions • Environmental class
Internet version	Yes, as an Annex in the KOVFS 2002:2, which is available on the net: http://www.konsumentverket.se/Global/Konsumentverket.se/Best%c3%a4lla%20och%20ladda%20ner/kovfs/2002/2002_2.pdf
Format of the label	No information on why the label is so basic but new varieties are currently being developed (see later sections)

Explanation of the label	A study by TemaNord[74] in 2003 found that the significance of environmental labelling as an influencing factor in buying decision to be very low. The study found that there seems to be an overreliance in believing that additional information can change behaviour. Instead the report recommends that their needs to be incentives as well as a network of different actors, with different authorities, in order to cause change.
Label responsibilities and enforcement	The Swedish Consumer Agency is responsible for the production and distribution of brochures/guides.
Additional information provided	140 000 brochures/guides (see next section on guide on fuel economy) are printed each year by the Swedish Consumer Agency but they do not reach the consumer as well as they ought to. Furthermore, the consumers get access to the brochures too late, i.e. when they already have decided to buy a car and are entering the shop.[75]
Running costs	These brochures are expensive to produce and it is suggested that it might be more cost effective to have these available on the internet.[76]
Planned modifications	In September 2006 the Swedish Consumer Agency was requested by the Government to initiate the process for the development of a new and better labelling system on fuel economy and CO_2 emissions for the marketing of new passenger cars. This was to be based on the experiences of the ADAC report "study on the effectiveness of Directive 1999/94/EC relating to the availability of consumer information on fuel economy and CO_2 emissions in respect of marketing of new passenger cars". However, this request was revised in June 2007 to take into consideration possible revisions of the Directive itself. Hence the Government request was changed accordingly: the analysis of different alternatives was now included in the revision. The study included a survey of potential alternatives to the label and a SWOT analysis based on the responses for each label. Some examples of the possible suggestions are shown below:  Strengths: Easy to understand Possibilities: To distinguish between fossil and non-fossil emissions, However, this could increase the risks of making the label more complicated.

[74] TemaNord 2003:540, *Miljöinformation som styrmedel – Förstudie*, Nordiska Ministerrådet, Köpenhamn 2003, ISBN 92-893-0928-8.
[75] Konsumentverket (2007), *Markningssystem vid marknadsforing av nya bilar,* 2007:13
[76] Konsumentverket (2007), *Markningssystem vid marknadsforing av nya bilar,* 2007:13

	 Strengths: Easy to understand and clear Weaknesses: Not possible to distinguish between different fuel types. There are four other (diagrams, arrows, etc.) labels analysed in the same vein. The report then summarises, based on SWOT, what seems to work for CO_2. Emissions and fuel economy, respectively. For many of these there seems to be a trade-off between the clarity of the label and the amount of information provided.
Research initiatives	No
Comments	-
Label violations	A survey[77] in 2003 by the Swedish Consumer Agency found that 33% of sellers had the label visible on or near the car for new cars. In 1981 Ford and Renault were fined for not providing the information required under the guidelines but has not been required since. The fine tends to be 100,000 SEK (€10,000) for small companies and 200,000 SEK (€20,000) for bigger companies.

[77] Konsumentverket (2007), *Markningssystem vid marknadsforing av nya bilar*, 2007:13

Guide on Fuel Economy

Example for Guide on Fuel Economy	Konsumentverket (2009) Nybilsguiden om bransleforbrukning och var miljö,
Internet version	http://www.konsumentverket.se/Global/Konsumentverket.se/Best%c3%a4lla%20och%20ladda%20ner/Broschyrer/Dokument/kov_nybilsguiden_2009.pdf
Version reviewed in case study	The 2009 version.
Frequency of updates	Yearly
Comparison of vehicle models, energy efficiency rating	Divides cars into environmental cars, petrol cars, diesel cars, and then provides a list of the vehicles with the lowest CO_2 emissions. For each make and model the following information is provided: fuel consumption (l/100 km) and CO_2 emissions (l/100 km), "environmental class" gearbox and effect.

Märke	Modell	Bränsleförbrukning och CO_2-utsläpp (l/100 km) (g/km)	Miljö-klass	Växel-låda	Effekt (kW)	Cirkap (kr)

Guide on Fuel Economy responsibilities and enforcement	The Swedish Consumer Agency is responsible for the production and distribution of the guide.
Additional information provided	Includes an introduction on the dangers of climate change.
Running costs	See the above section on labelling
Planned modifications	See the above section on labelling
Research initiatives	A market research on the information of new cars' fuel consumption and CO_2 emissions[78]. Provides an assessment of the labelling in 36 outlets selling new cars.
Comments	-
Guide on Fuel Economy violations	The study on assessing 36 outlets found that only four outlets had the guide easily available. See the corresponding section on labels above.

Poster

Guidance material	No

[78] Konsumentverket (2009), Marknadsundersokning av information om nya bilars bransleforbrukning, koldioxidutslapp och miljoklass m.m, Redovisning av undersokning genomford I februari 2009 av kommunala konsumentvagledare pa uppdrag av konsumentverket. 2009

Comparison of vehicle models, energy efficiency rating	**Information genom annons, broschyr, affisch och andra tryck-saker** Exempel på information vid flera varianter med olika värden. *a) Högst två förbrukningsvärden eller miljöklasser* Bränsleförbrukning, miljöklass och koldioxidutsläpp (CO_2) g/km Volkswagen New Beetle (1,6) 7,5 1/100 km, miljöklass 2005, koldioxidutsläpp (CO_2) g/km 180, (2,0 aut) 9,2 1/100 km, miljöklass 2000, koldioxidutsläpp (CO_2) g/km 221 *b) Fler än två förbrukningsvärden eller miljöklasser* **Alternativ 1. Fullständig modellredovisning** Bränsleförbrukning och miljöklass Volkswagen New Beetle Variant | Bränsleförbrukning 1/100 km | Miljöklass | Utsläpp av koldioxid (CO_2) g/km 1,6 | 7,5 | 2005 | 180 1,8T | 8,1 | 2005 | 194 2,0 | 8,7 | 2005 | 209 2,0 aut | 9,2 | 2000 | 221 **Alternativ 2. Lägsta och högsta förbrukningsvärdena och miljöklass** Bränsleförbrukning, miljöklass och koldioxidutsläpp (CO_2) g/km Volkswagen New Beetle Bränsleförbrukning 7,5 1/100 km (1,6), miljöklass 2005, koldioxidutsläpp (CO_2) g/km 180 – 9,2 1/100 km (2,0 aut), miljöklass 2000, koldioxidutsläpp (CO_2) g/km 221 The poster is divided into two alternatives. The first one is for not more than two "environmental classes" or "fuel consumptions" for models. In cases where there are more than two "environmental classes" or "fuel consumptions" for models, there are two additional alternatives (alternatives 1 and 2 above). All information for each model is displayed or only the highest and lowest fuel consumption and environmental class are displayed.
Explanation of the poster	No explanations given.
Poster responsibilities and enforcement	Producers/agents are responsible for displays and posters.
Additional information provided	No additional info.
Running costs	No info.
Planned modifications	Yes, the ongoing review described in the labelling section. However, no specific measures linked to posters are mentioned.
Research initiatives	No additional studies encountered.

Comments	The amendment KOVFS 2004:7 allows the use of a display as an alternative to a poster.
Poster violations	42% of the sellers, based on a survey[79] in 2003 by the Swedish Consumer Agency, covers "in general" what ought to be included in a poster. However, 41 % of the sellers did not display a poster at all and only 42% of the sellers had updated the poster within the past six months. In none of the cases a poster was being replaced by a display. For additional info see the corresponding section on labels.

Promotional Material

Guidance material	The KOVFS 2002:2 defines promotional material as all printed material used in marketing. This covers "at least" manuals, brochures, adds in papers as well as posters.
Additional information provided	No
Running costs	No info
Balancing advertisements	No info
Planned modifications	Yes, the ongoing review described in the labelling section. However, no specific measures linked to promotional material.
Research initiatives	No
Comments	The Swedish Consumer Agency is planning to issue new restrictions on car advertisements claiming that they are "environmentally friendly". It is not yet clear what these restrictions might be[80]. http://www.miljorapporten.se/431.html
Promotional material violations	See earlier sections on this

References

Konsumentverket (2007), Markningssystem vid marknadsforing av nya bilar, 2007:13

Konsumentverket (2009): Marknadsundersokning av information om nya bilars bransleforbrukning, koldioxidutslapp och miljoklass m.m, Redovisning av undersokning genomford I februari 2009 av kommunala konsumentvagledare pa uppdrag av konsumentverket. 2009.

TemaNord 2003:540, Miljöinformation som styrmedel – Förstudie, Nordiska Ministerrådet, Köpenhamn 2003, ISBN 92-893-0928-8.

http://www.miljorapporten.se/431.html

[79] Konsumentverket (2007), *Markningssystem vid marknadsforing av nya bilar*, 2007:13
[80] http://www.miljorapporten.se/431.html

United Kingdom (UK)

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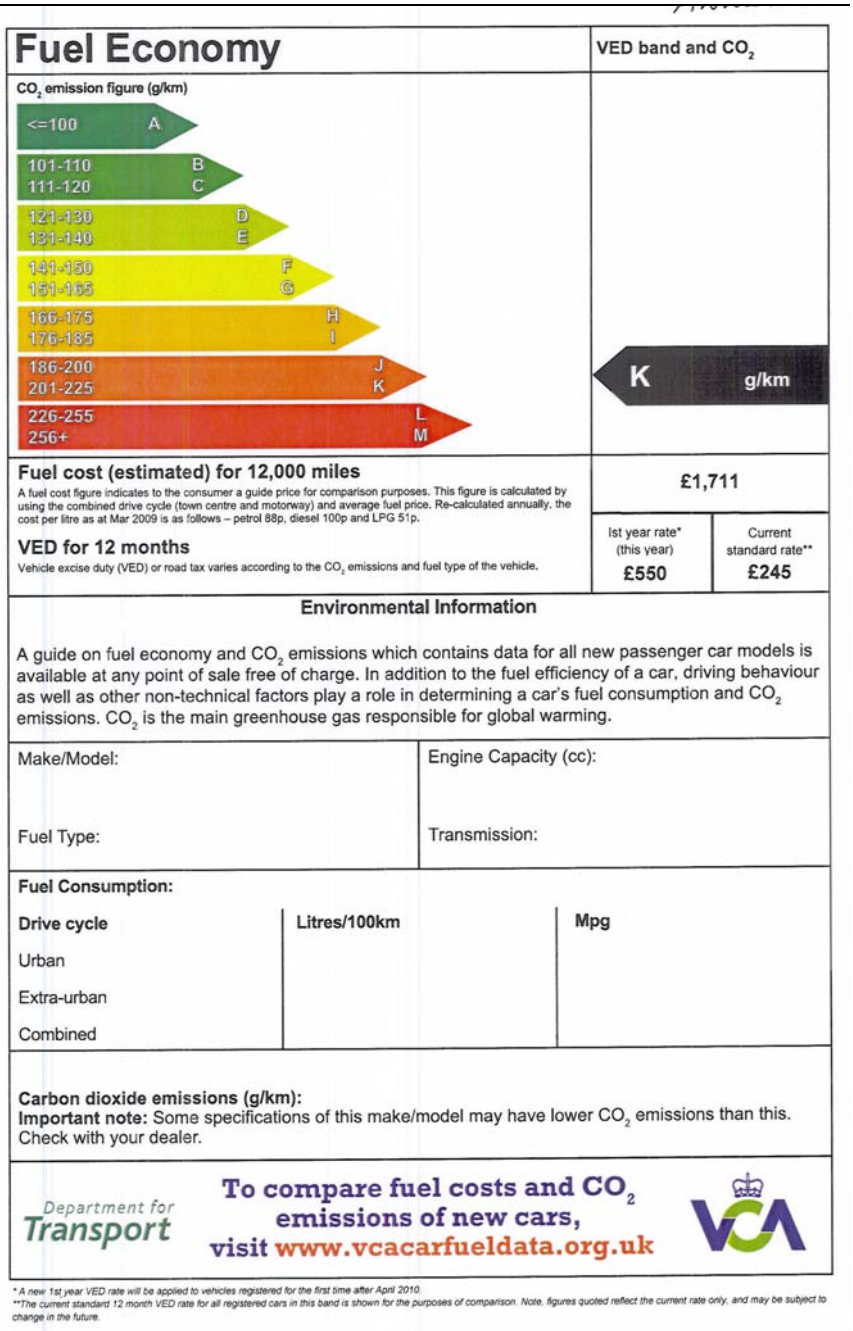
Implementation in Member State

Implementation:	Directive 1999/94/EC was implemented in the UK by **UK S.I. 2001 No. 3523, 'The Passenger Car (Fuel Consumption and CO_2 Emissions Information) Regulations 2001'**. Regulation available at: http://www.opsi.gov.uk/SI/si2001/20013523.htm It was further amended by **UK S.I. 2004 No. 1661, 'The Passenger Car (Fuel Consumption and CO_2 Emissions Information) (Amendment) Regulations 2004'** following the publication of Directive 2003/73/EC to take account of reviews of requirements relating to promotional literature. Regulation available at: http://www.vca.gov.uk/additional/files/fcb--co2/enforcement-on-advertising/si2004.pdf UK transposition does not go beyond the provisions or the scope set out in Directive 1999/94/EC. The key elements of the UK legislation are: • The provision of a fuel economy label, either on or near new cars offered for sale; • The provision of fuel consumption booklets which must be free and available on request; • The provision of a poster, showing cars available at the point of sale, ranked by CO_2. This can be an electronic display; • The provision of fuel consumption and CO_2 information in promotional literature.

Additional or previous regulations	ADDITIONAL **Vehicle Excise Duty** (VED) This system of VED ('road tax'), introduced by the UK Government, brackets together vehicles according to their level of CO_2 emissions. It is intended to provide a signal to motorists of the environmental impacts of their choice of car. Planned modifications to the VED: from April 2010, a new graduated rate will apply in the year of first registration for vehicles first registered after April 2010. Cars that emit high levels of CO_2 will attract a high first year rate of VED. This fiscal measure is intended to incentivise people to choose more efficient and environmentally less damaging vehicles. It is expected that the VED reforms will contribute a cumulative reduction of 1 million tonnes CO_2 by 2020 and encourage greater environmental innovation in the motor industry. PREVIOUS **The Passenger Car Fuel Consumption Order (1993)** Previously, this piece of UK legislation outlined the need for a fuel economy label, and specified the need to show fuel consumption and CO_2 information in promotional literature when claims about fuel economy were made.

Label

Label example	
Internet version	Explanation, history of development and example picture of the label available here: http://www.vcacarfueldata.org.uk/green-label/index.asp

Format of the label	The label features seven colour coded bands in the style of those that appear on white goods in the UK, such as refrigerators and washing machines. The bands indicate the range of CO_2 emissions into which the car in question falls and its corresponding VED band. The exact emissions of CO_2 in g/km for the car are given by the black arrow on the right hand side. The estimated fuel cost per 12,000 miles is given, as well as the cost of VED for 12 months. A short blurb explains that a guide on fuel economy and CO_2 emissions is available free of charge from any point of sale. It also highlights the role of driving behaviour in CO_2 emissions, and states that CO_2 is the main greenhouse gas responsible for global warming. Below this, specifications of the vehicle are given, followed by data on its fuel consumption in litres per 100km and miles per gallon.
Explanation of the label	See 'Format of the label', above.
Label responsibilities and enforcement	Trading Standards Officers are responsible for enforcing: • The provision of a fuel economy label, either on or near new cars in car showrooms; • The provision of a poster, showing cars available at the point of sale, ranked by CO_2 (this can be an electronic display); • The availability of the fuel consumption booklet, which must be free and available on request. The booklet is updated annually. In addition, the use of colour-coded labels such as this has been extended, on a voluntary basis, to used passenger cars.
Additional information provided	In 2005, a colour-coded label was introduced that incorporates the mandatory information required by legislation and additional information on the estimated running costs and the annual rate of VED. It is intended to increase the value of the label from a simple information source to a tool for comparison of different makes and models. This label was introduced under a voluntary agreement between Government agencies and car manufacturers and retailers. It is maintained and updated by the Vehicle Certification Agency (VCA), an agency of the Department for Transport. The VCA also developed an online tool which allows car manufacturers' dealer networks to download labels in the required format populated with the relevant information. The use of this tool is not obligatory – manufacturers may make their own arrangements as long as the correct information is included.
Running costs	The estimated fuel cost per 12,000 miles is given.
Planned modifications	The label is currently being revised to take account of changes to the VED, being introduced in April 2010.

Research initiatives	Research has shown that over 93% of UK car dealerships now use the colour-coded label and consider it to be the most effective method of providing immediate, relevant and useful consumer information relating to the environmental credentials of new passenger cars.
Comments	The UK believes that the use of a colour-coding banding not only effectively complements the mandatory elements required in the label, but is also the simplest and most immediate method of providing consumers with the sort of information that they need when considering purchasing a new car. The UK also believes that the banding lends itself as a platform for other related information, such as linking national vehicle taxation directly to the emissions of a new car.
Label violations	There have been no official/formal violations of the Directive, and as such no proceedings have been brought against any party. Where manufacturers or car dealerships are found to fall short of expectations, the VCA works alongside them to resolve differences. The Department for Transport are keen on this ethic of working with industry, and providing guidance, during the development of the information.

Guide on Fuel Economy

Example for Guide on Fuel Economy	The website http://www.vcacarfueldata.org.uk/downloads/, hosted by the VCA, contains data from 2000-2009. An example of the guide 'New Car Fuel Consumption & Emissions Figures' (the most recent version available online, from May 2009) can be seen here: http://www.vcacarfueldata.org.uk/additional/may2009/VCA-Booklet-text-May-2009.pdf Paper versions can also be ordered from the website.
Internet version	The website http://www.vcacarfueldata.org.uk/ is the official UK information source for figures on car fuel consumption and exhaust emissions. The database http://www.vcacarfueldata.org.uk/search/search.asp can be searched by manufacturer, model, fuel type and specification. The information given (when clicking on 'More Info…') includes fuel consumption, CO_2 emissions, noise level, fuel cost per 12,000 miles and other emissions (CO, HC, NOx, HC+NOx, Particulates). The fuel economy label, like that above, is also given. For example see http://www.vcacarfueldata.org.uk/search/vehicleDetails.asp?id=18577

	Several search options are available, at http://www.vcacarfueldata.org.uk/search/ : by VED band, by running cost, by fuel economy, by make or model, by company car tax percentage and by alternative fuel type. Some comparisons are possible here. Strangely though, the fuel economy label is not displayed for results of a search by fuel economy, as it is when searching by make and model. The website http://actonco2.direct.gov.uk/ provides the same searchable database as the site above, allows comparisons of different makes and models and colour codes the results: http://actonco2.direct.gov.uk/actonco2/home/what-you-can-do/Compare-car-CO2-emissions/new-car-co2-emissions-model-search.html
Version reviewed in case study	May 2009
Frequency of updates	The paper based guide is updated annually. The electronic guide can be updated more regularly. Approximately 150,000 hard copies of the guide are produced and distributed each year. The website, launched in 2000, receives more than 1 million unique visits each year. The website now also offers information on the fuel and emissions data related to light vans.
Comparison of vehicle models, energy efficiency rating	Several different specifications (variants/versions) of a given model may be grouped together in the list – these figures are therefore indicative only. Definitive figures for a given specification will be available at the point of sale. Information is provided for petrol and diesel vehicles with 110g/km CO_2 or less, in the following categories: • Make • Model • Engine capacity (cc) • Transmission • CO_2 (g/km) • Fuel consumption (mpg) • Fuel cost of driving 12,000 miles
Guide on Fuel Economy responsibilities and enforcement	The VCA is responsible for the production and distribution of the guide, though not the enforcement.

Additional information provided	Much additional information is given: • Background information on the relationship between cars, carbon dioxide and climate change is provided, along with an explanation of the policy/legislative context. • The UK 'Act on CO_2' campaign is described, and tips are given on eco-driving. • The other pollutants in car exhaust fumes are described as well as their impacts on the environment and health. • Information about cars and noise • Information about cars and fuel options, including biofuels • The 13 VED bands are described in terms of CO_2 g/km and £ rate • The fuel consumption testing scheme is also described in detail.
Running costs	Information given on fuel cost of driving 12,000 miles.
Planned modifications	None
Research initiatives	None
Comments	It might be useful to consider in any revisions to the Directive how much added value is provided by an annually published booklet containing details of fuel consumption and emissions information. As the paper booklet is published once a year, it quickly becomes out of date. This reduces the value/usefulness of such a booklet, especially as more up to date information is available electronically, as well as the means to search and compare different makes and models. The UK experience is that demand from consumers for the booklet is relatively low, therefore costs (which can be quite heavy) for printing and distribution do not really represent value for money.
Guide on Fuel Economy violations	None.

Poster

Guidance material	Guidance is not provided for posters specifically, but for promotional material in general including posters, so please see section below.
Comparison of vehicle models, energy efficiency rating	-
Explanation of the poster	-
Poster responsibilities and enforcement	-
Additional information provided	-
Running costs	-
Planned modifications	-
Research initiatives	-
Comments	-
Poster violations	None.

Promotional Material

Guidance material	Guidance is provided on the requirements of the UK regulations. It was developed by the Department for Transport, the VCA, the Society of Motor Manufacturers and Traders (SMMT) and other industry stakeholders such as marketing and advertising representatives and national bodies responsible for regulating advertising, such as Trading Standards. The guidance provides recommendations and examples of good (and bad) practice, to assist enforcement authorities as well as industry. Such examples are attached in the Annex.
Additional information provided	The VCA offers a pre-publication screening process for promotional materials, which a number of manufacturers and agencies take advantage of to be sure of proper compliance.
Running costs	-
Balancing advertisements	-
[n.b. Row added] Responsibilities and enforcement	The VCA is responsible for promotional literature, including outdoor advertising on billboards as well as advertising in magazines and other publications. It achieves enforcement by reviewing a range of publications, as well as responding to specific concerns raised by individual consumers or consumer groups.
Planned modifications	None planned at present.
Research initiatives	-
Comments	-
Promotional material violations	None.

References

AECOM (2009): Exploring the Scope for Used Car Fuel Efficiency Labelling. Available: http://www.dft.gov.uk/pgr/roads/environment/research/fuelefficiencylabelling.pdf

Department for Transport (2010): Information request by the Institute for European Environmental Policy (IEEP) on behalf of the Environmental Committee of the European Parliament: Implementation and Enforcement of the New Car Fuel Economy Label as set out in Directive 1999/94/EC.

Ecolane (2010): Car CO_2 Internet Survey How accessible is CO_2 information on car manufacturers' websites? Available: http://www.ecolane.co.uk/projectspublications.php (registration required)

Ecolane (forthcoming): Improved consumer information for cars and vans. Once published will be available: http://www.ecolane.co.uk/projectspublications.php

Low Carbon Vehicle Partnership (LCVP), GfK Automotive, Jim Farrel, 2006, 2007, 2008, 2009, Car Buying Attitudes

LCVP Label Research Programme (2009): ESA Market Research

MORI (2003): Comparative Colour-Coded Labels for Passenger Cars

EUROPEAN PARLIAMENT

DIRECTORATE-GENERAL FOR INTERNAL POLICIES

POLICY DEPARTMENT A
ECONOMIC AND SCIENTIFIC POLICY

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ISBN

Study on consumer information on fuel economy and CO2 emissions of new passenger cars