
ON THE IMPLEMENTATION OF DIRECTIVE 2000/53/EC ON END-OF-LIFE VEHICLES

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1. INTRODUCTION

Directive 2000/53/EC on end-of-life vehicles (the ELV Directive) primarily aims to prevent the production of waste from vehicles and their components so as to reduce the final disposal of waste and its overall environmental impact. Moreover, the measures laid down in the Directive seek to improve the environmental performance of all economic operators involved in a vehicle’s life cycle, especially, the operators directly involved in the treatment of end-of-life vehicles (ELVs). Overall, the ELV Directive follows a circular economy approach by encouraging ecodesign, providing for the elimination of hazardous substances in the vehicles and establishing high reuse/recycling/recovery targets, thus aiming reuse the valuable materials from the ELVs and keep precious resources in the economy.

Article 9 of the ELV Directive obliges Member States to report to the Commission at three-year intervals on the implementation of the Directive based on a questionnaire established by Commission Decision 2001/753/EC. The questionnaire consists of two parts: the first part concerns details on the transposition of the Directive into national law and the second contains information on the actual implementation of the Directive. Based on the information provided by Member States, for each reporting period, the Commission draws up an implementation report.

This is the third report on the implementation of the ELV Directive and it covers two reporting periods: from 21 April 2008 to 20 April 2011; and from 21 April 2011 to 20 April 2014. The first implementation report, which covered 21 April 2002 to 20 April 2005, was published in 2007; the second implementation report, covering 21 April 2005 to 20 April 2008, was published in 2010.

The reporting punctuality and quality for this third implementation report improved compared to previous reporting periods. All Member States provided the Commission with the implementation reports for the 2008-2011 period, whereas two Member States did not send reports for 2011-2014. The information provided was complete and overall of satisfactory quality. It has been complemented by further information available to the Commission, such as from checking the conformity of national measures implanting the ELV Directive.

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1 OJ L 269, 21.10.2000, p. 34.
5 The Netherlands and Spain.
Furthermore, according to Commission Decision 2005/293/EC, data on the Directive’s targets for reuse/recycling and reuse/recovery are to be reported on an annual basis within 18 months after the end of the reference year. This information has also been taken into account in this report.

2. **INFORMATION ON TRANPOSITION OF THE ELV DIRECTIVE**

The ELV Directive has been transposed into the national legislation of each Member State. While the Directive was overall found to have been well transposed, 15 infringement procedures for non-conformity of national implementation measures were still under way in the 2008-2014 period, including cases still open from the previous reporting period. Cases against five Member States were referred to the European Court of Justice, all of which have since been closed. Since October 2015 there have been no open infringements procedures related to the ELV Directive.

More information on the transposition of individual provisions of the Directive is provided in the national reports. Some of the Directive’s requirements (for instance provisions on prevention, collection, reuse and recovery) may be transposed by means of agreement. Belgium, Italy, Luxembourg, Malta and Hungary have used this possibility.

Ireland and the United Kingdom made use of the option to exempt vehicles produced in small series and their producers from the requirements concerning reusability, recyclability and recoverability, coding standards and dismantling information as well as from reporting obligations.

All Member States but one reported that they had adopted measures encouraging vehicle manufacturers, in liaison with material and equipment manufacturers, to limit the use of hazardous substances in vehicles in order to facilitate dismantling, reuse and recovery and to integrate an increasing quantity of recycled materials in vehicles. All Member States indicated that their national legislation restricts the use of lead, mercury, cadmium and hexavalent chromium for materials and components of vehicles put on the market after 1 July 2003, subject to the exemptions listed in Annex II to the Directive.

All Member States that submitted a report confirmed that they had taken the necessary measures to ensure that economic operators in most cases the producers and/or importers of vehicles set up systems for collecting ELVs and (as far as technically feasible) waste used parts removed when repairing passenger cars. They also confirmed having taken measures to ensure the adequate availability of collection facilities; at least six Member States have either defined a maximum distance to the next collection point or set a minimum number of collection points per city/region or per number of inhabitants.

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7. Greece has literally transposed the ELV Directive but reported that ‘no car production takes place in Greece and all cars are imported, therefore no measures pursuant to Article 4(1) and 4(2) need to be taken’ implying that no further implementing measures have been adopted.
8. Belgium; France; Ireland; Lithuania; Romania; Slovenia
All Member States reported having set up a system requiring the presentation of a certificate of destruction as a condition for vehicle deregistration. Fourteen Member States used the option to allow producers, dealers or collectors to issue certificates of destruction on behalf of an authorised treatment facility, provided there is a guarantee that the ELVs are transferred to authorised treatment facilities.

All respondents reported having adopted measures to ensure that ELVs can be delivered to authorised treatment facilities without any cost for the last holder or owner. However, in most Member States, delivery is not free of charge if the vehicle does not contain the essential components or if it contains added waste. This option is in line with the Directive.

All Member States reported that they require certificates of destruction issued in other Member States to be recognised and accepted by the competent authorities.

In all Member States, treatment establishments or undertakings must have a permit from or be registered with the competent authorities. Only Italy and the United Kingdom availed themselves of the derogation from the permit requirements for operations to recover waste from ELVs after they have been properly treated according to the ELV Directive and subject to annual inspection.9

All Member States, except one reported means to encourage treatment establishments or undertakings to introduce certified environmental management systems10 such as the EU Eco-Management and Audit Scheme. Member States have implemented a variety of incentives and supporting measures to that end. These include funding; relieving administrative burden (for example reduced frequency and scope of monitoring, derogation from drawing up waste management plans, facilitated approval as authorised treatment facility, reduced financial guarantees); and support provided by guidance documents, information brochures and training courses.

All Member States which submitted a report confirmed that they had adopted measures in line with the waste hierarchy in order to promote the reuse of components which are suitable for reuse and the recovery of components which cannot be reused, with a preference for recycling.

All reporting Member States had introduced measures to ensure that economic operators achieve the reuse/recovery and reuse/recycling targets set in the ELV Directive. Most Member States transposed the targets set in the Directive literally. The Netherlands adjusted their initially very ambitious date by which the targets of 95% reuse/recovery and 85% reuse/recycling had to be met as early as in 2007 rather than in 2015 as required under the Directive. In Bulgaria, a recovery target of 87% and a recycling target of 81% had to be attained by 31 December 2008; the targets were gradually raised to 95% for recovery and 85% for recycling by 2015. The Czech Republic, Ireland, Greece, Spain, Italy, Latvia, Hungary, Poland, Portugal, Romania, Slovakia and the United Kingdom used the possibility to set lower targets for vehicles produced before 1 January 1980.

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9 Derogation from the permit requirements according to Article 6(2) of the ELV Directive.
10 According to Article 6(5) of the ELV Directive, Member States must encourage treatment operations to introduce certified environmental management systems.
All responding Member States but one\textsuperscript{11} reported having taken measures to ensure that producers, in concert with material and equipment manufacturers, use component and material coding standards and require components manufacturers to make information on dismantling, storage and testing of components available to authorised treatment facilities. In all Member States, producers have to provide dismantling information for each type of new vehicle put on the market. Most Member States pointed to the use of the International Dismantling Information System\textsuperscript{12} which was set up by manufacturers to provide comprehensive and regularly-updated information for treatment operators in order to promote the environmental treatment of ELVs.

All Member States except Sweden reported having obliged economic operators — mostly producers — to publish information concerning vehicle design, environmentally sound treatment, waste prevention and progress achieved with regard to recovery and recycling. Sweden reported that current legislation is directed to the producer and not towards the economic operators, and this is included in an ongoing review of the legislation.

3. **INFORMATION ON PRACTICE IN THE IMPLEMENTATION OF THE ELV DIRECTIVE**

The national reports on the implementation of the ELV Directive also provided information on progress and good practices followed by the economic operators that have contributed positively to the implementation of the ELV Directive.

Member States have achieved the high reuse/recycling/recovery targets mainly due to the development of new post-shredding technologies; the substantial reduction in heavy metals used in new cars (as shown by the amendments of Annex II to the ELV Directive); the implementation of coding standards to facilitate dismantling and better use and reuse and recovery of components and materials; and more and improved treatment facilities following EU environmental standards.

In relation to waste prevention, several Member States referred to automotive sector activities such as the development of the Global automotive declarable substance list, a group which facilitates communication and exchange of information regarding the use of certain substances in automotive products throughout the supply chain.\textsuperscript{13} They also referred to the adaptation of the International Dismantling Information System to show the material composition along the production chain.

Some Member States referred to further measures to improve the treatment process and simplify dismantling and depollution. For instance, Germany reported improved post-shredder technology to extract more recyclable fractions and France reported that some vehicle producers reduce the diversity of materials and the structure of components for easier treatment and had developed their own network for the collection, reclamation and reuse of parts to prevent waste generation. Other measures improving the design for recycling include

\textsuperscript{11} Greece referring to the fact that there are no local vehicle producers.

\textsuperscript{12} http://www.idis2.com/.

\textsuperscript{13} http://www.gadsl.org/.
the development of the on-board diagnosis tool for the simple and safe trigger of pyrotechnic components in cars.

Only limited quantitative information was provided about types and quantities of recycled materials and the market situation. Member States agreed that the metal trade market functions well for ferrous and for non-ferrous metals. This ensures high recycling rates for metals. The plastic recycling market is seen to be more heterogeneous: use of recycled plastic materials in vehicles, though increasing, is still at a relatively low level. At present, the share of recycled plastics used in vehicle manufacturing rarely exceeds a few per cent of the total plastic. Car producers have committed themselves to increasing the use of recycling plastics in vehicles to 20%. Germany stated that reused tyres and products from material recycling (granulates) have a positive market value, whereas sending tyres for treatment and disposal normally requires extra payment.

The majority of Member States observed that ELVs have a positive market value as long as they are delivered complete and are not stripped of essential components. Portugal stated that the value of materials resulting from dismantling and shredding, in particular for ferrous and non-ferrous metals, has remained at levels which ensure the sustainability of the processing chain. Nevertheless, eight countries reported explicitly that even vehicles with no or a negative market value were collected in 2008-2014. In the United Kingdom, the few vehicles with negative market value were mostly collected in remote, rural areas such as certain island communities in Scotland. Poland estimates that the number of ELV with no or negative value equals the number of incomplete cars.

The infrastructure for ELV treatment improved over the 2008-2014 period. In most Member States, the number of authorised treatment facilities increased and the differences between the Member States with regard to the density of the treatment network have diminished. The number of authorised treatment facilities varies from two in Luxembourg to about 1 800 in the United Kingdom. Altogether, there are nearly 13 000 treatment facilities in the EU, which corresponds to approximately one treatment facility per 40 000 inhabitants.

The total number of vehicles transferred to authorised treatment facilities in the EU rose sharply from 6.3 million in 2008 to 9 million in 2009. This increase is to be attributed to the introduction of scrapping incentives schemes in more than 10 Member States in the 2008 and 2009. The main contributors to the significant rise of ELV were Germany (increase of 1.4 million vehicles), France (increase of 0.46 million vehicles), Italy (increase of 0.41 million vehicles) and Spain (increase of 0.2 million vehicles). After 2009, the number of ELVs transferred to the authorised treatment facilities decreased stepwise to 6.2 million vehicles in 2013, which corresponds to the level before 2008-2009.

By no later than 2006, Member States were required to meet the reuse and recycling rate of 80% and the reuse and recovery target of 85% set in Article 7(2) of the ELV Directive. The 2013 rates reported by Member States are shown in Figure 1.\textsuperscript{14} The target for reuse and recycling was achieved by all Member States except Estonia, which reported a

\textsuperscript{14} For Romania and Slovenia the rates refer to 2012 since the data for 2013 were not yet available.
reuse/recycling rate of 78 % but had met the target in 2012. The reuse and recovery target was also met by all countries except for Italy, which achieved 83 %.

Figure 1:   Reuse/recycling rates reported for 2013

Figure 2:   Reuse/recovery rates reported for 2013
Germany and Slovenia reported reuse/recovery rates above 100%. In Germany, stock storage effects caused the seemingly implausible rates since ELVs are not necessarily treated in the year they are delivered to a treatment facility (for example because of capacity limitations). Also, for Germany, this phenomenon can still be attributed to the scrapping incentive scheme for 2008/2009. In Slovenia, the high rate reported appears to be a temporary phenomenon caused by the transition from a public service system to a producer responsibility scheme.

As of 1 January 2015, the ELV Directive raises the reuse/recycling and the reuse/recovery target to 85% and 95% respectively. Figure 1 shows that 17 countries already met this reuse/recycling rate in 2013, and most of the remaining countries are close to the target. More efforts were envisaged to be needed to comply with the 95% reuse/recovery target. However, in 2013 seven Member States had already met this target.\(^{15}\)

Respondents did not in general detect any competition distortions between or within the Member States. Between 2008 and 2011, the vehicle market was strongly influenced by the financial crisis and the scrapping incentives introduced in Member States to stabilise the car market. In Germany, the significant increase in ELVs resulting from the 2008/2009 scrapping incentive scheme resulted in a surplus of spare parts on the market and the market price of stripped vehicles dropped to EUR 10-20/tonne. In 2010-2012, the numbers of ELVs generated and the market prices went back to pre-2009 levels and the temporary storage of ELVs has been reduced. Other countries, such as Estonia, reported a drastic decrease in new car sales and a lower number of ELVs. Hungary reported that the average age of vehicles on the market rose from 10 years in 2006 to 13 years in 2013.

4 \textbf{UNKNOWN WHEREABOUTS AND ILLEGAL DISMANTLING OF ELVS}

While the Directive’s legal provisions have been fully transposed into national legislation, there is evidence of implementation and enforcement deficits across the EU. Assessments on behalf of the Commission suggest that there may be 3.5 to 4.5 million vehicles per year with ‘unknown whereabouts’.\(^ {16}\) These ‘missing cars’ are deregistered in the Member States but are not reported to the Commission as legally treated ELVs and are also not found in the data of legal exports of second-hand vehicles in the Foreign Trade Statistics. Possible reasons for the inadequate follow-up may be inadequate follow-up of deregistered cars within Member States or in the case of intra-EU trade, ELVs being dismantled within the EU in non-authorised treatment facilities, or the unregistered export of used cars or ELVs. A study and related stakeholder consultations are being carried out to assist the Commission in investigating the causes for the unknown whereabouts and identifying additional effective measures to be put in place to improve the situation. This is part of the Commission’s initiative to assess the implementation of the ELV Directive and promote compliance.

The Member States’ implementation reports and additional information provided show that some countries (such as Ireland, France, Portugal, Sweden and the United Kingdom) have taken repressive action against illegal treatment and/or have intensified controls on ELV

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\(^{16}\) For the reference years 2012 and 2013: Preliminary results of an assessment currently being carried out on behalf of the Commission.
dismantling/treatment facilities. Portugal has successfully reduced the illegal treatment of ELVs through a package of measures, including an annual road tax, a scrappage incentive programme, increased taxation and a national plan for the eradication of illegal scrapping. It has also considerably increased the number of authorised treatment facilities. In the United Kingdom, the Environment Agency launched a coordinated national campaign to tackle illegal ELV and scrap metal sites. It introduced harsh penalties, as a result of which about half of the illegal sites closed or were brought into regulation within 12 months.\footnote{See also, End-of-life vehicles: Legal aspects, national practices and recommendations for future successful approach (study for the European Parliament’s Committee on Environment, Public Health and Food Safety, 2010) at: http://ec.europa.eu/environment/waste/pdf/study/elv.pdf} Ireland increased the number of authorised treatment facilities from 53 in 2003 to 173 in 2013.

In some Member States, such as the United Kingdom, the car owner is responsible for the vehicle and is liable to pay taxes until a certificate of destruction is produced. Portugal has introduced a centralised computer system for issuing certificates of destruction for ELVs which enables the national waste authority to have better control over the total number of certificates of destruction and the respective issuing authorities and to produce statistics relating to ELV management more quickly.

Spain reported for the 2008-2011 period that the majority of non-authorised treatment facilities had closed because they could not issue certificates of destruction. Denmark addresses the trade and illegal treatment of ELVs by paying a premium that only the last registered owner can receive. In contrast, Hungary reports that the number of its authorised treatment facilities has decreased and illegal dismantling is on the rise. Whereas several countries, including Belgium, Germany and the Netherlands, pointed out that vehicle exports from their countries to the Eastern European countries, but also to Africa and the Middle East, are still high, Poland drew attention to its specific situation where the number of imported used cars is twice as high as the number of new cars sold in Poland.

Some Member States have conducted studies to assess the problem in their countries and find ways to address it. In 2016, Germany also conducted a study aiming to analyse the reasons for the high number of ‘missing’ vehicles, to identify the whereabouts of these vehicles and to develop measures and instruments to effectively improve the coverage of ELV statistics.

To date, different steps have been taken at EU level to address the problem of missing vehicles. In 2011, Guidelines for waste vehicles\footnote{Waste Shipments Correspondents’ Guidelines No 9 on shipment of waste (http://ec.europa.eu/environment/waste/shipments/guidance.htm).} were worked out. These Guidelines represent the common understanding of the Member States on how Regulation (EC) No 1013/2006 on shipments of waste should be interpreted in providing criteria to differentiate between waste vehicles and used vehicles. Two Member States\footnote{Austria and Belgium’s Wallonia region.} made the Correspondents’ Guidelines for waste vehicles part of the inspection documents.
Furthermore, the Commission (Eurostat) has revised the guidelines on the annual reporting on the ELV targets in order to improve the data it uses to assess the situation. The revised guidelines now also request Member States to annually report vehicles registered and de-registered in the national market, in addition to reporting the number of certificates of destruction required.

5. **CONCLUSIONS**

The assessment concludes that the ELV Directive has been fully transposed by the Member States. Some cases of non-conformity became subject to infringement procedures and were solved as Member States brought their ELV legislation in line with the Directive.

The implementation of the ELV Directive is mainly positive with the notable exception of the issue of the ELV of unknown whereabouts. Member States have reported good practices working with manufacturers on the composition of materials and the reuse of materials and components, ecodesign is continuously improving, hazardous substances used in cars are almost eliminated, and targets for reuse/recycling/recovery are largely met. Most Member States also recognise the positive value of the ELVs when delivered intact to the authorised treatment facilities.

Member States have also reported qualitative improvements. The infrastructure for the treatment of ELVs has improved, more Member States have post-shredding facilities and the overall number of authorised treatment facilities has increased.

Statistics on the ELV targets show how implementation of the Directive has improved over time. By 2013, almost all Member States had reached the 2006 ELV targets of 80% reuse/recycling and 85% reuse/recovery. 9 Member States had already reached the 2015 targets of 95% for reuse/recovery and 17 Member States had reached those of 85% for reuse/recycling per vehicle. The remaining Member States are close to the targets applicable as of January 2015, although achieving the reuse and recovery target of 95% is challenging for several Member States.

Illegal collection and trafficking of ELVs remain a challenge for the effectiveness of the Directive. Sub-standard treatment of ELVs has a negative impact on health and the environment and leads to a loss of valuable resources. The Commission will work together with the Member States to identify the causes of illegal collection and trafficking of ELVs and measures that need to be taken to address this issue at different levels. At EU level, the Waste Shipment Correspondents’ Guidelines on waste vehicles agreed on 8 July 2011 are a helpful tool for national authorities. However, further measures may be required, such as reviewing Commission Decision 2005/293/EC to reinforce the monitoring of the national vehicle market.

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21 According to Article 3 of Commission Decision 2005/293/EC, Member States have to report within 18 months of the end of the relevant year.

22 Article 1(3)(a) of Commission Decision 2005/293/EC.
The ELV Directive is a proven example of the circular economy: the extended producers' responsibility scheme is applied from the conception of the vehicle to the end-of-life treatment, ecodesign is continuously improving and hazardous substances used in the cars are almost eliminated in line with technical and scientific progress, as required by the Directive. The ELV Directive is also driving innovative research for the substitution of the hazardous substances and the best treatment of the ELVs so to valorise the positive value of this waste stream.

Nevertheless, the quality of monitoring data for the targets set in the Directive is a continuing challenge. Issues relating to the data quality and comparability of reporting have already been addressed, but require further attention. Reporting obligations were addressed in the recent review of EU waste legislation in which the Commission proposed to repeal provisions obliging Member States to produce triennial implementation reports. These reports have not proven effective for verifying compliance with the Directive, its implementation and its impact, being in addition, resource-intensive and burdensome. The Commission instead proposed to base compliance monitoring exclusively on statistical data that Member States must provide the Commission with annually.

In conclusion, improved annual reporting on the ELV targets, accompanied by national reporting methodologies, will help improve the monitoring of the implementation of the ELV Directive.