End-of-life vehicle statistics

This article provides an overview of statistical information on end-of-life vehicles in the European Union, covering the period from 2008 to 2016. Information and data are based on the Directive 2000/53/EC on end-of-life vehicles and the Commission Decision 2005/293/EC, which lays down rules on the monitoring of the reuse/recovery and reuse/recycling targets for end-of-life vehicles. Every year, EU Member States and EEA/EFTA countries report data on the total vehicle weight, the total number of end-of-life vehicles and rates for 'total reuse and recycling' and 'total reuse and recovery'.

Total number of end-of-life vehicles

Table 1 shows the total number of end-of-life vehicles from 2008 to 2016. The total number of end-of-life vehicles reported in the EU-28 rose sharply, from 6.3 million in 2008 to 9.0 million in 2009. Germany was the primary contributor to this rise with an increase of 1.4 million vehicles, while other major contributors included France with 0.46 million more vehicles, Italy with 0.41 million more vehicles and Spain with 0.20 million more vehicles. This increase can be mostly attributed to the presence of national scrapping schemes introduced in the context of the financial crisis in 2008 and 2009. In 2009, 13 countries established scrapping schemes, compared with only 3 in 2008. From 2009 to 2016 the number of reported end-of-life vehicles fell sharply by 34%, to 6 million vehicles. This reduction was mostly due to numbers decreasing after the scrapping schemes had ended, especially in Germany (1.4 million), Italy (0.6 million), France (0.5 million), Spain (0.3 million) and the United Kingdom (0.2 million). In 2016, the number of end-of-life vehicles in these five countries made up 69.1% of the EU-28 total.

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Compliance with targets

In 2015-2016, EU Member States were required to meet rates for reuse and recycling of ≥ 85 % and for reuse and recovery of ≥ 95 % by an average weight per vehicle. The reported rates are shown in Table 2 and Table 3. As displayed in Figure 1, the rates calculated for the EU-28 for reuse and recycling stood at 87 % and for reuse and recovery at 92.7 % in 2016. However, 3 EU Member States (Finland, Portugal, and Italy) did not meet the minimum rate of 85 % for reuse and recycling in order to comply with the Directive 2000/53/EC in 2016. As regards the reuse and recovery target, while 15 Member States were in compliance with the Directive 2000/53/EC in 2016, 10 EU Member States (France, Sweden, Latvia, Spain, Cyprus, Ireland, the United Kingdom, Portugal, Estonia, Slovenia, Romania, Malta and Italy) failed to meet the minimum reuse and recovery rate of 95 %. While 25 Member States complied with at least one of the two targets, 3 Member States (Portugal, Italy and Malta) failed to meet any of them. When remaining stocks from previous years were treated in the following years due to capacity limitations, e.g. in Greece, values of more than 100 % reuse and recycling/recovery rates can occur in Tables 2 and 3 respectively.
Table 2: Total recycling and reuse rate of end-of-life vehicles, 2008–2016 (%)Source: Eurostat (env_waselvt)

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Note: Figures in red show where the target rate (80 % for 2008-2014, 85 % for 2015-2016) was not met.


(2) Eurostat estimate.

Source: Eurostat (online data code: env_waselvt)

Table 3: Total recovery and reuse rate of end-of-life vehicles, 2008–2016 (%)Source: Eurostat (env_waselvt)

Total weight of end-of-life vehicles

Two sources can be considered for the total weight: the vehicle weight derived from the registration documents or similar (called ‘W1’) in the Commission Decision on the monitoring of end-of-life vehicles and the sum of the volumes reported for de-pollution and dismantling, and for shredding and export (see reporting Tables 1 to 3 of the same Commission Decision 2005/293/EC ). These sources do not necessarily match perfectly but should show a similar order of magnitude.
Table 4 shows the reported total vehicle weight (W1) since 2008. Over the period 2008 – 2016, the EU total vehicle weight increased by 8.1 % to 6.5 million tonnes.

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Table 5 provides the specific weight per vehicle for the period 2008–2016, calculated from registration documents or similar (W1) and the reported total number of end-of-life vehicles. The reported figures for 2008–2016 vary from around 700 kg to more than 1300 kg. For the EU the average weight of end-of-life vehicle (mean 2008–2016) is 1002 kg.

Table 5: Specific weight of end-of-life vehicles, 2008–2016(kg per vehicle)Source: Eurostat (env_waselvt)
Reuse and recycling rates as a share of total weight

Figure 2 provides reuse/recycling rates as reported in Tables 1 to 3 of the Commission Decision 2005/293/EC. The percentages given refer to the total vehicle weight (W1).

This shows how much of the reuse/recycling rate is contributed by reuse (e.g. as spare parts), by recycling from de-pollution and dismantling activities, by recycling from shredding activities and by recycling in other countries (export). The share of these contributions depends on the availability of national shredder installations, the demand for spare parts for old vehicles and other national conditions, as well as different reporting options as described in the section above. In 2016, the total reuse and recycling rates ranged from 78% in Malta to 101% in Greece (see Figure 2).

![Figure 2: Reuse and recycling rates in percent of total vehicle weight (W1), 2016(%) Source: Eurostat (env_waselv)](image)

Source data for tables and graphs

- End-of-life vehicles Excel file

Data sources

In order to monitor the implementation of waste policy, in particular the implementation of the management of end-of-life vehicles, the Directive 2000/53/EC on end-of-life vehicles stipulates the requirements and targets for the reporting countries.

The Commission Decision 2005/293/EC provides the details for the reporting required. Data are submitted on a yearly basis and have been available with a good coverage since 2006. The due date for the submission is 18 months after the end of the reporting year. The Commission Decision requires data from the EEA countries (European Economic Area), thus all EU Member States as well as Liechtenstein, Norway and Iceland are obliged to submit the requested data.

Comparability

A guidance document aimed at harmonising the reporting and improving comparability is available; however, some inconsistencies remain and not all detailed figures reported are directly comparable. Some selected aspects regarding comparability are highlighted in the following section.

Different methodological approaches: 'Metal content assumption’ or all data based on reports of the operators

The Commission Decision 2005/293/EC on monitoring of the reuse/recovery and reuse/recycling targets for end-of-life vehicles enables different approaches to demonstrate that the targets are met. One possibility to meet the relevant targets is to have reporting based on files provided by the operators. Alternatively, some countries apply the so-called 'metal content assumption’ (MCA) approach and report all metals in reporting Table 2 only, regardless of whether metals are separated during de-pollution and dismantling (reporting Table 1), or shredding (reporting Table 2), or whether metals are exported (reporting Table 3).
Reporting export data

Data on export of end-of-life vehicles and parts of them shall be reported in Table 3 of Commission Decision 2005/293/EC. The term 'end-of-life vehicles and parts of end-of-life vehicles' does not only cover entire end-of-life vehicles but also de-polluted/pre-treated end-of-life vehicles (hulks) and waste from treatment such as material and components arising from dismantling and shredder output. However, in practice not all countries have been able to distinguish whether the outputs of dismantling and de-pollution or the outputs of shredders are exported or not.

Context
History

During the course of the late 1980s and early 1990s a broad range of activities were carried out by the EU Member States to deal with the following challenges concerning end-of-life vehicles:

- Remuneration for scrap metal did not cover the expenses of recycling and disposal. Therefore, the market conditions turned from a free of charge recycling service to expenditures for the last owner, which provided limited motivation for the last owner to abide by the law.

- Environmental harm resulting from car bodies that are not appropriately de-polluted and disposed of.

- High volumes of residues from the shredder process. Disposal of the shredder light fraction (SLF) and the shredder heavy fraction (SHF) was estimated to be around 1.9 million tonnes per year in the EU-15 (Institute for European Environmental Policy, 1996). The residues of the shredder process are difficult to treat due to their varying characteristics and high shares of pollutants and organic chemicals. Thus both land-filling and (co-)incineration without pre-treatment have their limitations.

- High share of import/export of end-of-life vehicles inside the EU due to varying disposal conditions in different EU Member States.

As a consequence, Directive 2000/53/EC on end-of-life vehicles was established setting clear targets for mandatory de-pollution, and quantified targets for reuse, recycling and recovery of vehicles and their components, and which pushes producers to manufacture new vehicles with a view to their recyclability. The Directive also provides the opportunity for producers/importers to bear the expenditure of end-of-life treatment when the processes necessary to meet the established targets are not economically viable.

Coverage and targets

Type of vehicles covered:

- Passenger cars with up to 8 places + driver
- Vehicles for transport of goods up to a weight of 3.5 tonnes

(see more details in Article 2(1) of the Directive 2000/53/EC on end-of-life vehicles)

Regional coverage:

- European Economic Area (EEA): EU + Iceland, Norway, Liechtenstein
- As a new Member State (from 1 July 2013) Croatia has reported data for 2012 for the first time

Targets:

- According to the Directive 2000/53/EC on end-of-life vehicles the countries have to introduce systems to ensure that the following targets are attained by economic operators:

  2008-2014:
  - reuse/recovery rate: 85 %
  - reuse/recycling rate: 80 %
2015 - 2016:

- reuse/recovery rate: 95%
- reuse/recycling rate: 85%

No exemptions or transitional periods are in place, thus countries of the EEA have to comply with the targets.

Other articles

- Environment statistics introduced
- Municipal waste statistics
- Packaging waste statistics
- Waste shipment statistics
- Waste statistics
- Recycling – secondary material price indicator
- Waste shipment statistics based on the European list of waste codes
- Waste statistics - electrical and electronic equipment

Database

- Waste (env_was), see:
  
  Waste statistics (env)
  
  Waste streams (env_wasst)
  
  End-of-life vehicles by waste operations: Detailed data (env_waselv)
  
  End-of-life vehicles: Reuse, Recycling and Recovery, Totals (env_waselvt)

Dedicated section

- Eurostat’s dedicated website on waste statistics
- End-of-life vehicles homepage

External links

- DG Environment: End-of-life vehicles
- GHK / BIOIS: A study to examine the benefits of the End of Life Vehicles Directive and the costs and benefits of a revision of the 2015 targets for recycling, re-use and recovery under the ELV Directive, May 2006
- Study on end-of-life vehicles: Legal aspects, national practices and recommendations for future successful approach by the European Parliament