

End-of Life of Vehicle management

Content

This document presents an indicator that was considered to be included in the 2018 Raw Materials Scoreboard, but which was set aside for the moment mostly due to the current limitations of the data (as explained hereafter).

Why considering this topic?

- **Relevance:** End of Life Vehicles (ELV) are a major waste stream in the EU, with about 6 million tonnes treated in nearly 13 000 facilities¹. Waste vehicles can cause some environmental impacts (e.g. due to the treatment of components containing hazardous substances), but can also represent a valuable source of secondary raw materials, including various critical raw materials (CRMs). ELV contain e.g. cobalt (in lithium-ion batteries), Platinum Group Metals (in auto-catalysts and particulate filters), niobium (as an alloying agent in high-strength steel), graphite (in brake linings, exhaust systems, motors, clutch materials, gaskets and batteries) and Rare Earth Elements (in magnets and electronic components). Electric vehicles are particularly rich in such raw materials².
- **Indicator:** An indicator that measures ELV generation, reuse and recycling is proposed here.
- **Data source:** ELV are regulated by European Directive 2000/53/EC³, which includes targets for “reuse and recovery” and “reuse and recycling”. Statistics on ELVs are compiled yearly by Eurostat.
- **Limitations:** ELV statistics may underestimate the actual waste flows. According to a Commission Staff Working Document⁴, “doubts remain about the reliability and comparability of statistics across Member States due to different reporting systems and calculation methods, which may benefit from further harmonisation”. In addition, a recent study⁵ found that up to one third of cars disappear from the market, probably as result from illegal activities (e.g. illegal export, treatment plants not complying with minimum standards, etc.). See more details in the section ‘The search for suitable data’.

¹ Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the Implementation of Directive 2000/53/EC on End-of-Life Vehicles for the Periods 2008 - 2011 And 2011 – 2014 (COM(2017) 98 final).

² <http://rmis.jrc.ec.europa.eu/?page=mobility-7c1c33>.

³ Directive 2000/53/EC of the European Parliament and of the Council on end-of life vehicles, <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:121225>

⁴ SWD(2014) 209 final, Commission Staff Working Document “Ex-post evaluation of Five Waste Stream Directives” , <http://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52014SC0209>.

⁵ Oeko Institute, “Assessment of the implementation of Directive 2000/53 /EC on end-of life vehicles (the ELV Directive) with emphasis on the end-of life vehicles of unknown whereabouts”, Oeko-Institut e.V. – Institute for Applied Ecology. Darmstadt (Germany), 2016.

Key points

- ELV is one of the major waste stream in the EU.

Doubts remain about the reliability and comparability of statistics of ELV across Member States due to different reporting systems and calculation method.

Facts and figures

- Figure CE&R-1.1 shows the trends of ELV waste generated, reused and recycled in the EU-28 between 2012 and 2016. Statistics are not clear on what is considered as “reuse” (e.g. remanufacturing, preparation for reuse or harvesting and reuse of second-hand components)⁶.
- Overall, ELV waste generated remained almost unaltered during this time frame, while reuse and recycled ELV remained substantially unaltered, except for a reduction of recycling registered in 2016. The reuse flows remain, anyway, quite low compared to ELV generated (<10%).

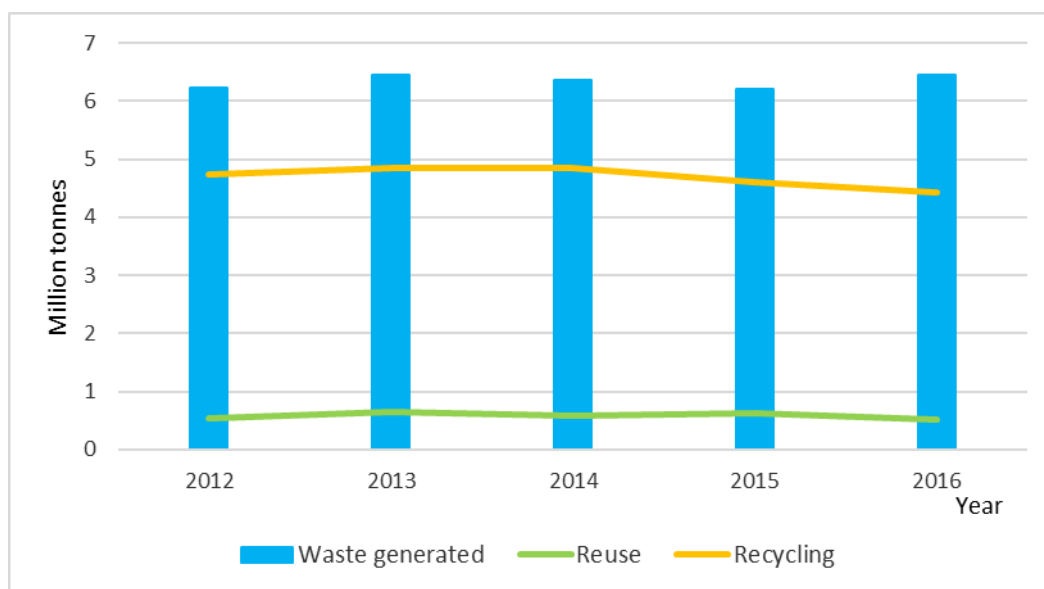


Figure CE&R-1.1: ELV generation, reuse and recycling (EU-28, 2012-2016)⁷.

The search for suitable data...

- Eurostat reports the statistics of ELV waste as declared by Member States in compliance with the European Directive 2000/53/EC on ELV. This dataset is subject to some limitations and conclusions should be drawn with caution. As stated in a 2014 Commission Staff Working

⁶ See methodological notes.

⁷ Source: <http://rmis.jrc.ec.europa.eu/?page=mobility-7c1c33>. JRC elaboration based on Eurostat data “End-of-life vehicles - reuse, recycling and recovery, totals”, Eurostat code env_waselvt.

Document⁸, “doubts remain about the reliability and comparability of statistics across Member States due to different reporting systems and calculation methods, which may benefit from further harmonisation”.

- It is not always clear to which ELV statistics category (generation, reuse, recycling) certain waste management processes are allocated. In particular, it is somehow uncertain what reporting countries might interpret as waste generated, waste recovered and waste recycled. For instance, according to the 2014 Commission Staff Working Document, “the use of plastic streams obtained by post-shredder treatment in a blast furnace is counted as recycling by some Member States and thermal recovery by others”⁹. It is also unclear what is included as reused waste (e.g. remanufactured parts, preparation for reuse, spare parts harvesting, etc.).
- European research projects could contribute in the long term to improve the information about ELV in the EU-28. For example, the recent project ProSUM¹⁰ developed a centralised database of available data and information on stocks, flows and treatment of ELV. However, in order to complement official statistics, data from research projects will require a periodical update.

Methodological notes

- **Name of indicator:** ELV generation, reuse and recycling in EU-28.
- **Organization (data provider):** Eurostat.
- **Website (URL):**
http://appsso.eurostat.ec.europa.eu/nui/show.do?lang=en&dataset=env_waselvt
- **Definition, description of data:** ‘waste generated’ (i.e. total amount of ELV reported), ‘total recycling and reuse’ (i.e. total amount of ELV that is recycled¹¹ or reused¹²), ‘recycling’ (i.e. total amount of ELV that is recycled).
- **Update frequency:** annual.
- **Data format:** downloadable online in xls, cvs and many other formats.
- **Geographic coverage:** EU-28. The database covers also some non-EU countries.
- **JRC processing methodology for the indicator:** Data on ELV “reuse” have been calculated as the difference between the amount of ‘total recycling and reuse’ minus the amount of waste for ‘recycling’.

⁸ Commission Staff Working Document “Ex-post evaluation of Five Waste Stream Directives” SWD(2014) 209 final (<http://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52014SC0209>).

⁹ SWD(2014) 209 final, Commission Staff Working Document “Ex-post evaluation of Five Waste Stream Directives”, <http://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52014SC0209>.

¹⁰ Prospecting Secondary raw materials in the Urban mine and Mining wastes, <http://www.prosumproject.eu/>

¹¹ ‘Recycling’ means “the reprocessing in a production process of the waste materials for the original purpose or for other purposes but excluding energy recovery” (source: Directive 2000/53/EC).

¹² ‘Reuse’ means “any operation by which components of end-of life vehicles are used for the same purpose for which they were conceived” (source: Directive 2000/53/EC).