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Development of proposals, including legal instruments, to improve the data situation on the whereabouts of end-of-life vehicles

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Abstract

Around 8 million passenger cars are decommissioned annually in Germany. 3 million of those cars are permanently decommissioned. From the available statistical sources, it was not possible to account for the whereabouts of about 1 million of the permanently decommissioned passenger cars in Germany each year. With this background the subject-matter of the research project was the closure of this 'statistical gap' to the maximum extent possible. For this, the status quo and the reasons for the statistical gap have been analysed in depth based on expert discussions, workshops, field research, evaluation of data bases and literature research and systemised in scenarios.

As a result the number of decommissioning has been increased by 0.36 million cars due to missing N1-vehicles in recent reporting. The correct calculation of permanent decommissioning reduced the gap by about 0.52 million cars. Gaps in the information flow from foreign customs have been responsible for a gap of 0.21 million cars. In combination with additional findings it has been possible to close the gap largely. Systematically the highest data uncertainties are with the whereabouts in non-certified dismantling.

Proposals to optimise the current situation have been elaborated for each of the identified reasons for the statistical gap. Future improvements of the data basis shall be achieved by measures in two areas:

- ▶ Measures to improve statistics and information flows,
- ▶ Measures to steer vehicles in better documented whereabouts. This is for example strengthening of the enforcement against non-certified dismantling of vehicles, improving the differentiation between end of life vehicles and second hand cars and the strengthening of the certificate of destruction.

Kurzbeschreibung

Jährlich werden in Deutschland rund 8 Millionen Personenkraftwagen (Pkw) außer Betrieb gesetzt, von denen rund 3 Millionen als endgültig außer Betrieb gesetzt betrachtet wurden. Aus den verfügbaren statistischen Quellen ließ sich der Verbleib von jährlich gut 1 Million der endgültig außer Betrieb gesetzten Pkw in Deutschland nicht belegen. Gegenstand des Forschungsvorhabens war die möglichst weitgehende Schließung dieser ‚statistischen Lücke‘. Hierfür wurden der Status Quo sowie die Ursachen der statistischen Lücke intensiv über Expertengespräche, Workshops, Primärerhebungen, Datenbankauswertungen und Literaturrecherchen analysiert und die Verbleibswege in Szenarien systematisiert.

Im Ergebnis zeigte sich, dass die Anzahl der zugrunde gelegten Außerbetriebsetzungen erhöht werden musste, da N1-Fahrzeuge bisher nicht erfasst wurden (0,36 Mio. Fz.). Die korrigierte Berechnung der Anzahl endgültig außer Betrieb gesetzter Fahrzeuge ergab eine Minderung der Lücke um 0,52 Mio. Fahrzeuge. Lücken im Informationsfluss ausländischer Zollausgangsstellen waren die Ursache für eine Lücke von rund 0,21 Mio. Fahrzeugen. Vor dem Hintergrund dieser und der weiteren Ergebnisse konnte die statistische Lücke weitestgehend geschlossen werden. Datenunsicherheiten bestehen insbesondere bei den Verbleibswegen der nicht-anerkannten Demontage im In- und Ausland.

Die Studie entwickelt unter Berücksichtigung der aufgezeigten Ursachen der statistischen Lücke Empfehlungen und Maßnahmenvorschläge zur Optimierung der Situation. Die zukünftige Verbesserung der Datenlage soll mit Maßnahmen auf zwei Ebenen erreicht werden:

- ▶ Maßnahmen zur Verbesserung der Statistiken und Informationsflüsse,

- ▶ Maßnahmen zur Steuerung der Fahrzeuge in besser dokumentierte Verbleibswegen. Hierzu gehören beispielsweise die Stärkung des Vollzugs gegen nicht anerkannte Demontage, die Verbesserung der Abgrenzung zwischen Altfahrzeug und Gebrauchtwagen sowie die Stärkung des Verwertungsnachweises.

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List of abbreviations

| Abbreviation | Description |
|----------------|--|
| AAIC | Association of Austrian Insurance Companies |
| AbfallR | Waste legislation journal |
| AC | Administrative court |
| ACSO | Austrian Central Statistical Office |
| AES | Automated Export System |
| ANSFA | Act on the NATO Status of Forces Agreement and Additional Agreements |
| AOA | Administrative Offences Act |
| ARN | Auto Recycling Nederlande, a company in the Netherlands that specialises in recycling end-of-life vehicles |
| ASYS | Data processing system for waste monitoring |
| ATLAS | Automated tariff and local customs processing system |
| BCLS | Building Code of Lower Saxony |
| BeckOK | Beck'scher OnlineKommentar (journal) |
| BeckRs | Beck Rechtsprechung (case law service) |
| BL | Basic Law |
| C2C | Customer to customer |
| CAA | Customs Administration Act |
| CBTSIA | Ordinance on the Implementation of the Act Statistics on Cross-Border Trade |
| CC | Customs Code |
| CCIO | Customs Code Implementing Ordinance |
| CG9 | Correspondents' Guidelines No 9 |
| CIAct | Compulsory Insurance Act |
| CIS | Commonwealth of Independent States |
| CoD | Certificate of Destruction |
| COExit | Customs office of exit |
| COExp | Customs office of export |
| CRR | Dutch Central Register of Residents |
| CSCA | Closed Substance Cycle Act |
| CSCWMA | Closed Substance Cycle and Waste Management Act |
| CVRFMTA | Central Vehicle Register of the Federal Motor Transport Authority |
| d.o. | dissenting opinion |
| DAST | Decree on the application of turnover tax |
| decom. | decommissioning |

| | |
|----------------------|--|
| DIN | German Institute for Standardisation |
| DPALS | Data Protection Act of Lower Saxony |
| DS | Der Sachverständige (journal) |
| DVA | Dutch Vehicle Authority |
| EC | European Community |
| ed. | Editor |
| EDIFACT | United Nations Electronic Data Interchange For Administration, Commerce and Transport |
| EEA | European Economic Area |
| EFTA | European Free Trade Association |
| EIAA | Environmental Impacts Assessment Act |
| EJLE | European Journal of Law and Economics |
| ELV | End-of-life vehicle |
| ELV Ordinance | End-of-Life Vehicle Ordinance |
| EMAS | Eco-Management and Audit Scheme |
| EReg | Association of European Vehicle and Driver Registration Authorities |
| ESA | Environmental Statistics Act |
| EU | European Union |
| EU MS | EU Member State |
| EUCARIS | European Car and Driving License Information System |
| EUR.1/ATR.1 | The EUR.1 movement certificate is used in commodity traffic conducted with countries that the EC has concluded free trade, preferential and cooperation agreements with, as well as countries and territories associated with the EC. The ATR.1 movement certificate is used in commodity traffic conducted with Turkey. |
| FAC | Federal Administrative Court |
| FASRMWM | Federal Association for Secondary Raw Materials and Waste Management |
| FBC | Federal Building Code |
| FC | The Fiscal Code of Germany |
| FCC | Federal Constitutional Court |
| FCDP | Federal Commissioner for Data Protection (and Information Technology) |
| FDPA | Federal Data Protection Act |
| FEA | Federal Environmental Agency |
| FFSA | Federal Financial Supervisory Authority |
| FICA | Federal Immission Control Act |
| FLG | Federal Law Gazette |
| FMEAE | Federal Ministry for Economic Affairs and Energy |

| | |
|---------------------------------------|--|
| FMENCBNS | Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety |
| FMF | Federal Ministry of Finance |
| FMTA | Federal Motor Transport Authority |
| FMTDI | Federal Ministry of Transport and Digital Infrastructure |
| FMTR | German Federation for Motor Trades and Repairs |
| FOGT | Federal Office for Goods Transport |
| FTPO | Foreign Trade and Payments Ordinance |
| FWA | Federal Water Act |
| GAR | General administrative regulation |
| gen. | Generally |
| GIA | German Insurance Association |
| GL | Guideline |
| GLO | Gazette of Laws and Ordinances |
| HAC | Higher Administrative Court |
| HAC | Higher Administrative Court |
| i.c.w. | In conjunction with |
| ICA | Insurance Contract Act |
| ICO | Information Coordinating Office for Waste Management Data Processing Systems |
| IED | Industrial Emission Directive (2010/75/EU) |
| INPOL | German police information system |
| Intrastat | Intra-Community trade statistics pursuant to Regulation (EC) No 638/2004 |
| IO | Implementing ordinance |
| IPCO | Ordinance by the State Government (of Baden-Württemberg) and the Ministry of the Environment, Nature Protection and Transport on competences relating to emission issues (Immission Protection Competence Ordinance) |
| ISA | Insurance Supervision Act |
| J Mater Cycles Waste Manag | Journal for Material Cycles and Waste Management |
| JAEVLV | Joint Agency for End-of-Life Vehicles |
| L | Lorry |
| LS | Lower Saxon(y) |
| LSAPSO | Lower Saxon Act on Public Security and Order |
| M1 | Vehicle class for category M vehicles (designed and constructed mainly for the transport of passengers and their luggage) with a maximum of eight passenger seats in addition to the driver's seat. |

| | |
|--|--|
| MEFCP | Ministry for Environment, Forestry and Consumer Protection (Rhineland-Palatinate) |
| MP | Member of Parliament |
| MS | Member State |
| MV | Motor vehicle |
| MVTC | Motor Vehicle Tax Code |
| n.d. | No date |
| n/a | Not applicable |
| N1 | Vehicle class for category N vehicles (designed and constructed mainly for the transport of goods) with a maximum total weight of 3.5 tonnes. |
| NID | New identity card |
| NJW | Neue Juristische Wochenschrift (journal) |
| No. | Number |
| NuR | Natur und Recht (journal) |
| NVwZ-RR | Neue Zeitschrift für Verwaltungsrecht-Rechtsprechungsreport (journal) |
| NZV | Neue Zeitschrift für Verkehrsrecht (journal) |
| OECD | Organisation for Economic Co-operation and Development |
| OHS | Ordinance on Hazardous Substances |
| OIFICA | Ordinance on the Implementation of the Federal Immission Control Act |
| OIHSW | Ordinance on Installations for Handling Substances Hazardous to Water |
| OISH | Ordinance on Industrial Safety and Health |
| OJ | Official Journal of the EU |
| Ord. | Ordinance |
| Ord. Resp. Envir. Occ. Saf. | Ordinance on the Responsibilities in the Areas of Occupational Safety Pursuant to Laws Related to Immission Control, Explosive materials, Genetic Engineering, Radiation Protection and other Fields |
| Ord. Resp. Transp. | Ordinance on the Responsibilities in the Field of Transportation |
| ORRFCC | Official Reports of the Rulings of the Federal Constitutional Court |
| OSCRTM | Ordinance on the Scale of Charges for Road Traffic Measures |
| OWRDR | Ordinance on Waste Recovery and Disposal Records (Record Ordinance) |
| p. | Page |
| Para. | Paragraph |
| Pass. car | Passenger car |
| PC | Penal Code |
| PCB | Polychlorinated biphenyl |
| PCS | Police Crime Statistics |
| poss. | Possibly |

| | |
|--------------------------|---|
| R&D | Research and development |
| RAC | Regional appeal court |
| RALS | Roads Act of Lower Saxony |
| RC | Regional court |
| ref. no. | Reference number |
| REGINA | Registration and Information Agreement (international information exchange database on the re-registration of exported and imported vehicles) |
| Research ref. no. | Research reference number |
| RIS | Reference and Information System |
| RSW | Regulation (EC) No 1013/2006 of the European Parliament and of the Council on shipments of waste |
| RTA | Road Traffic Act |
| RTO | Road Traffic Ordinance |
| RVRO | Road Vehicle Registration Ordinance |
| SACA | Supreme Administrative Court of Austria |
| SANSFA | Supplementary Agreement to the NATO Status of Forces Agreement |
| SOT | State Office of Transport |
| STA | Turnover Tax Code |
| STIO | Turnover Tax Implementing Ordinance |
| t | Tonne(s) |
| TFEU | Treaty on the Functioning of the European Union |
| TI | Technical Instructions |
| UCC | Union Customs Code |
| VerArch | Verwaltungsarchiv (journal) |
| VIN | Vehicle identification number |
| VL | Value limit |
| VRO | Vehicle Registration Ordinance |
| WALS | Water Act of Lower Saxony |
| Waste Manag Res | Waste Management & Research (journal) |
| WCO | Waste Catalogue Ordinance |
| WG | Working group |
| WGFSW | Working Group of the Federal States on Waste |
| WMA | Waste Management Act of Lower Saxony |
| WP | Work package |
| WSA | Waste Shipment Act |
| WwO | Wastewater Ordinance |

Summary

Approximately 8 million passenger cars (pass. cars) are decommissioned annually in Germany, of which around 3 million were considered to be permanently¹ out of operation. From the available statistical sources, it was not possible to account for the whereabouts of about 1 million of the permanently decommissioned pass. cars in Germany each year. The subject-matter of the research project was the closure of this ‘statistical gap’ to the maximum extent possible. The detailed objectives of the project were as follows:

- ▶ Identification of the possible reasons underlying the ‘statistical gap’;
- ▶ determination, itemisation and, to the maximum extent possible, quantification of information on the actual whereabouts of permanently decommissioned vehicles; and
- ▶ development of measures and instruments that can be used to permanently improve the data situation.

The structure of the project followed the assignment of the tasks and included in particular the following work packages (WPs) described in Figure 1.

Figure 1: Project structure overview



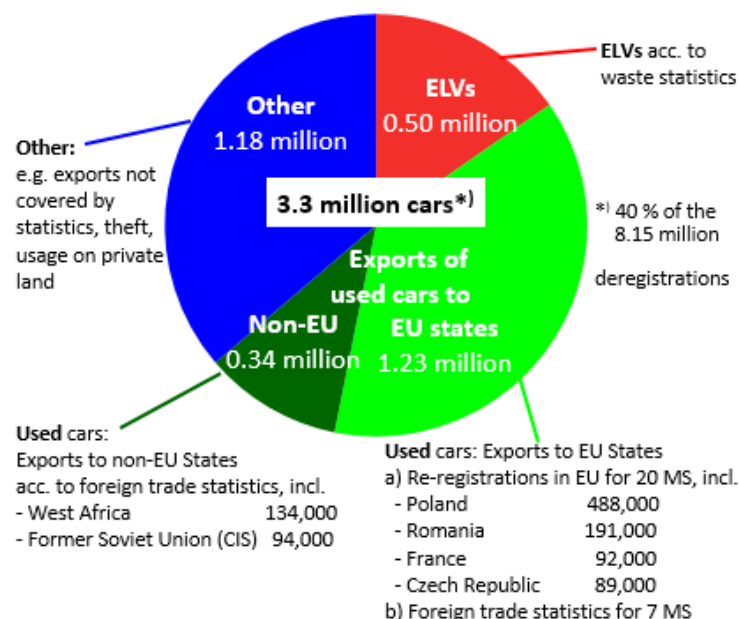
In addition to the analysis on the basis of data and the source literature, the relevant fields of motor vehicle registration law, closed substance cycle law, road and road traffic law, waste shipment law, customs and foreign trade law, industrial site regulations, insurance law, data protection law and the basic legal principles of data collection are also presented and analysed. Workshops were conducted (e.g. with state authorities, the FMTA, the ARN, the DVA, the FMTR, relevant stakeholders on the topic of the distinction of second-hand and end-of-life vehicles and the topic of the Certificates of Destruction, as well as with Member States [Czech Republic] compiled primary data [questionnaires for dismantling facilities], and on-site sessions [e.g. shredding and dismantling facilities in Antwerp, Hamburg, Essen and the Czech Republic]), expert discussions and conference calls were held and the results were incorporated into the report.

Figure 2 below summarises the initial situation regarding the whereabouts of decommissioned vehicles in 2013 as set out, for example, in the FEA report to the European Commission on monitoring the

¹ In this context, ‘permanently’ means that the respective vehicles were not registered again. German registration laws do not differentiate between ‘permanent’ and ‘temporary’ decommissioning. In this respect, the term should not be interpreted in the legal sense, but rather as the description of the actual situation. ‘Permanently’ only refers to decommissioning in Germany. Such vehicles may be recommissioned abroad.

recovery of end-of-life vehicles. It should be noted that the above-mentioned FEA report did not take the available data basis for each life-cycle or the data on M1 and N1 vehicles into account.

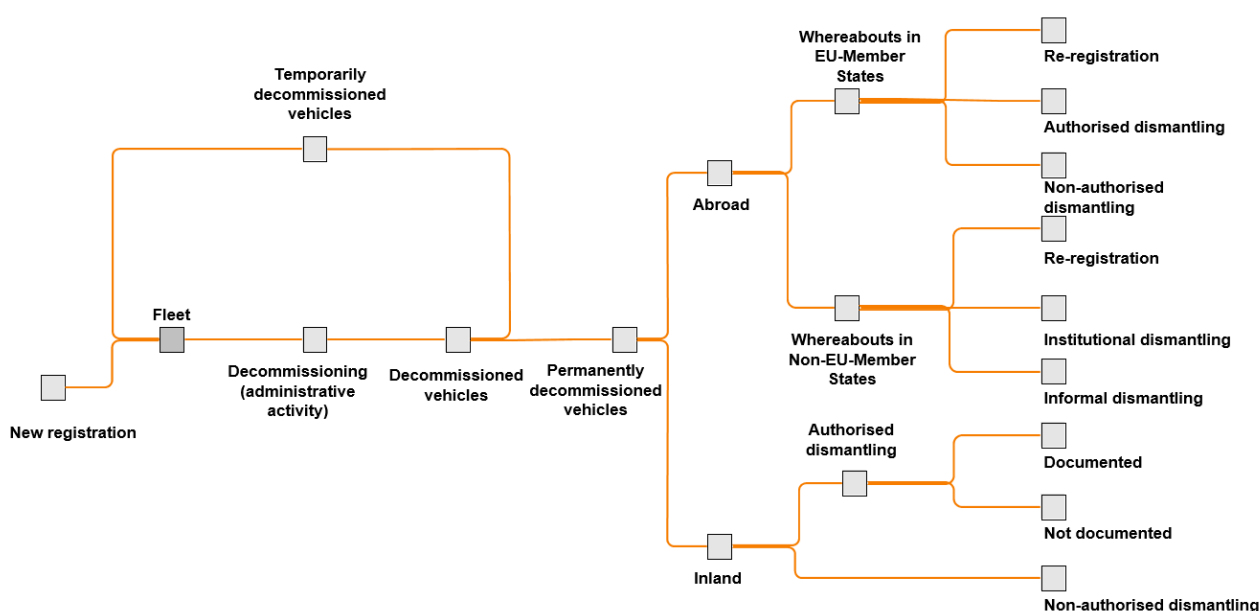
Figure 2: Whereabouts of passenger cars considered to be permanently decommissioned in Germany in 2013, in million units



Source: FMENCBNS and FEA (2015); Note: In case of the number of permanently decommissioned vehicles, the delta calculation does not correspond exactly to the statistical gap due to rounding differences. The actual number of permanently decommissioned vehicles is 3.26 million ($8.15 \text{ million} \times 0.4$). 'Permanently decommissioned' only refers to decommissioning in Germany. Such vehicles may be recommissioned abroad.

For the structuring of the analysis as well as the presentation of results, the fates of the vehicles were arranged into scenarios. Figure 3 provides a brief overview of these scenarios.

Figure 3: Schematic overview of scenarios concerning the whereabouts of vehicles



Each scenario identified the players, the information flow regarding whereabouts, the statistical databases, the relevant legal norms and the monitoring processes in the status quo and presented the existing gaps as well. Subsequently, the whereabouts of decommissioned vehicles that expired in 2013 were analysed.

Table 1 presents the updated data basis in a differentiated form based on the available data sources and shows the data situations for the respective vehicle flows.

Table 1: Overview of the updated data regarding the whereabouts of vehicles with the respective data sources

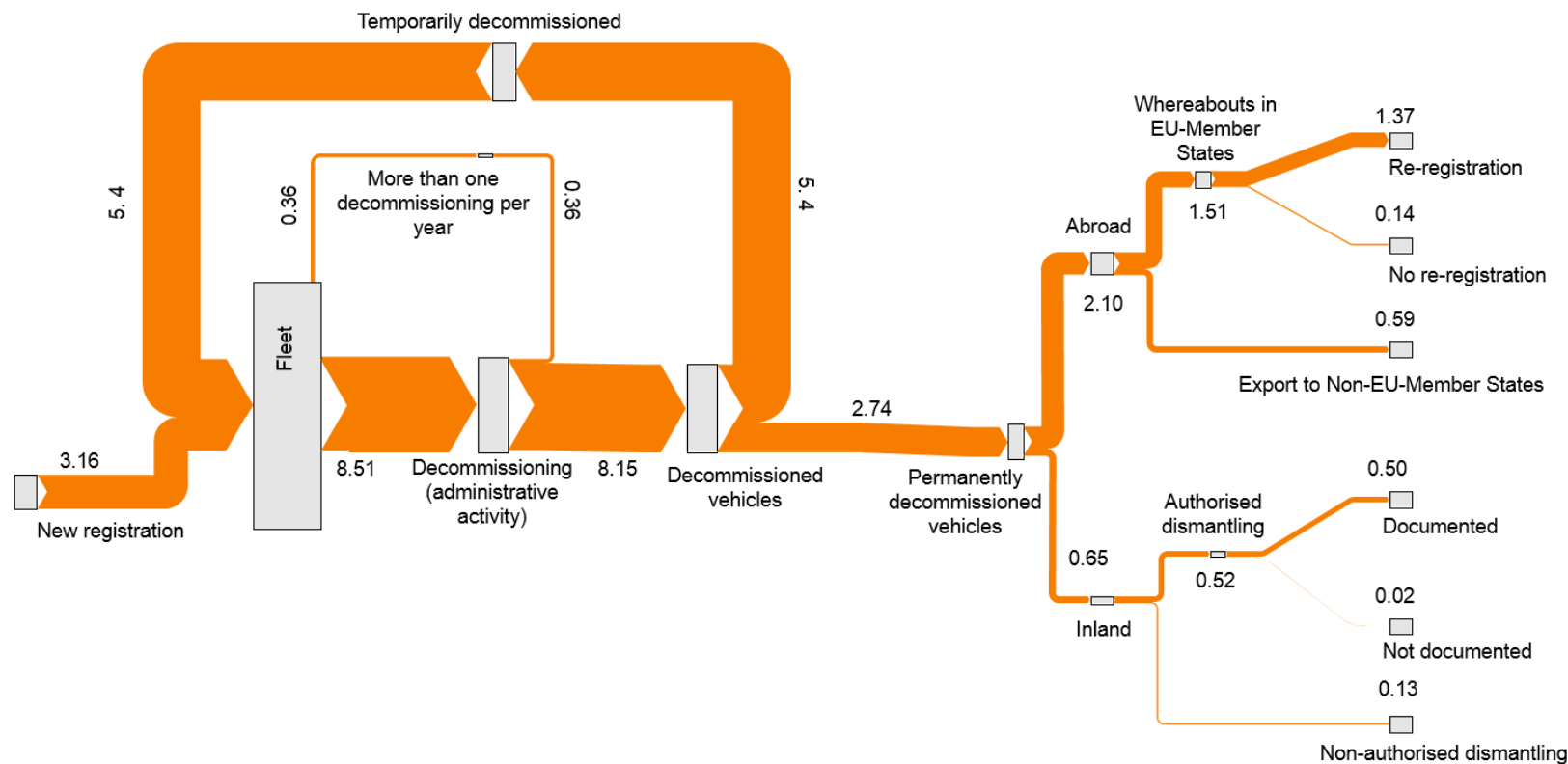
| Data area | Subarea | Number of vehicles (2013) |
|--|--|--|
| Total number of decommissionings | No subdivision | 8,511,472 (*1) |
| Total number of decommissioned vehicles | No subdivision | 8,146,925 |
| Total number of permanently decommissioned vehicles | No subdivision | 2,743,665 |
| Number of end-of-life vehicles recycled in authorised dismantling facilities in Germany | Statistically proven number of end-of-life vehicle | 500,322 (*2) |
| | Statistically recorded Certificates of Destruction | 47,973 vehicles with CoDs (overlap with the Federal Statistical Office) |
| | Estimate for non-documented ELV dismantling | 20,000 |
| | Total including the estimate | 520,000 |
| End-of-life vehicles registered in Germany for recycling abroad | No subdivision | 0 (*3) |
| Number of end-of-life vehicles treated by not authorised dismantling facilities in Germany | No subdivision | Estimate: 130,000 |
| Second-hand vehicle transferred to EU MSs for re-registration | >VL (*4) | 145,349 (*5) |
| | Re-registration in EU MSs | 1,215,945 |
| | Statistically proven, total | 1,232,987 (partial overlaps) (*6) |
| | Estimate | 137,000 |
| | Total including the estimate | 1,370,000 |
| Whereabouts in EU MSs without re-registration | End-of-life vehicles recycled in EU MSs with CoDs (e.g. after an accident) | 10,092 (*7) |
| | Estimate (e.g. non-authorised dismantling) | 130,000 |
| | Total including the estimate | 140,000 |

| Data area | Subarea | Number of vehicles (2013) |
|--|---|---|
| Second-hand vehicles exported from Germany to non-EU countries | Exports recorded by German customs authorities | 374,030; thereof <ul style="list-style-type: none"> number of vehicles with a statistical goods value above EUR 3,000: 158,102 (*8) number of vehicles with a statistical goods value below EUR 3,000: 215,928 (*8) |
| | Total of statistically proven exports in German statistics | 385,708 (*9) |
| | Second-hand vehicles from Germany that are registered in other EU MSs under the single-stage export procedure for exporting to non-EU countries | Available , but without being recorded in German foreign trade statistics: approx. 116,000 M1 vehicles throughout Belgium (*10) |
| | | Estimate (for all exit points from the customs territory): 93,000 vehicles |
| | Total estimate | 250,000 (*11) |
| | Total number of second-hand vehicle exports to non-EU countries including the estimate | Approx. 590,000 |
| Theft ('Theft' does not constitute end-use in the context of the project. The data on theft are only shown here for information purposes.) | Subset with comprehensive insurance | (20,690) (*12) |
| | Police/Federal Criminal Police Office: INPOL property search | (21,103) |

Note: The number of vehicles remaining in non-public areas (no end-use) is not known; (*1) FMTA 2014; (*2) Federal Statistical Office 2015d; (*3) FEA 2013; (*4) For transfers within the EU, the value limit (vl) is relevant for the declaration of turnover tax and applies to companies subject to turnover tax that imported or exported goods with a value of at least EUR 500,000 (value limit relevant for 2013) to or from Germany in the previous year (see Chapter 4.8.3). Based on data from June 2016; (*5) Since the weight limits of the commodity codes for foreign trade statistics differ from the EU vehicle class system, there is a possibility that other N vehicles with a weight exceeding 3.5 t are recorded here. However, it is assumed that the majority of the recorded vehicles belong to vehicle class N1 (see also Chapter 5.2.1 and footnote 241); (*6) FMENCBNS and FEA 2015; (*7) FMTA 2015d; (*8) Evaluation of data supplied by German customs authorities regarding the export of second-hand vehicles from Germany to non-EU countries in 2013; (*9) FMENCBNS and FEA 2015; Federal Statistical Office 2015c; The distribution of the number of vehicles with a statistical goods value above EUR 3,000 and below EUR 3,000 is not known; (*10) Personal communication with Belgian customs authorities, General Administration of Customs and Excise department, 23/10/2015; (*11) The total is obtained from the number of N1 vehicles previously not taken into account (41,157), the single-stage exportation via Belgium (116,000) and an estimate for all additional exit points from the customs territory (93,000); (*12) GIA 2014.

Figure 4 summarises the data basis, updated with the findings of the project, on the whereabouts of decommissioned vehicles and on the statistical gap.

Figure 4: Flows of M1 and N1 class vehicles in 2013 specified in million units – update



Data basis: Own calculations and research; FMTA; german customs authority; Federal Statistical Office; FEA; belgian customs authority. Due to rounding differences the summations do not correspond completely. 'Permanently decommissioned' only refers to decommissioning in Germany. Such vehicles may be recommissioned abroad.

The following Table 2 summarises the effects on the statistical gap.

Table 2: Effects of the updated data on the statistical gap (M1 and N1 vehicles)

| No. | Statistical area | Initial value | New value | Effect on the statistical gap |
|-----|---|-----------------------|-----------------------|-------------------------------|
| A | Total number of permanently decommissioned vehicles | 3.26 million vehicles | 2.74 million vehicles | 0.52 million vehicles |
| B | Exports out of the EU | 0.34 million vehicles | 0.59 million vehicles | 0.25 million vehicles |
| C | Second-hand vehicles transferred to other EU MSs for re-registration | 1.23 million vehicles | 1.37 million vehicles | 0.14 million vehicles |
| D | Vehicles transferred to or remaining in other EU MSs without the renewal of approval (partly non-authorized dismantling, recycling after local accident with CoD) | n/a | 0.14 million vehicles | 0.14 million vehicles |
| E | Non-authorized dismantling in Germany | n/a | 0.13 million vehicles | 0.13 million vehicles |
| F | Non-documented dismantling in authorised dismantling facilities in Germany | n/a | 0.02 million vehicles | 0.02 million vehicles |
| G | Authorised dismantling in Germany | 0.50 million vehicles | 0.50 million vehicles | 0.00 million vehicles |
| H | Unknown whereabouts [A-(B+C+D+E+F+G)] | 1.18 million vehicles | 0.00 million vehicles | n/a |

Note: The initial values of the annual FEA report did not always include N1 vehicles. A comparison of the flows is illustrated in Figure 6 and Figure 8.

The summarised representation shows that the statistical gap could be closed to the maximum extent possible. About 0.29 million statistically unrecorded vehicles² remain under non-authorized or non-documented dismantling. Consequently, the largest data uncertainties lie in the illegal whereabouts, specifically non-authorized dismantling both within and outside of Germany.

In order to support the development of recommendations and action proposals aimed at improving the data situation in the future, the respective causes of the statistical gaps were subsequently analysed. Throughout the development of recommendations and action proposals, it was taken into consideration that the implementation expenses for meeting the action objectives should preferably be kept as low as possible.

Measures are discussed on two levels:

- ▶ enhancing information flows and
- ▶ creating impetus where necessary in order to ensure the better documentation of vehicle life-cycles.

The players/addressees, the implementation scope and the binding character were presented for each proposal. The recommendations are assessed with regard to the following aspects:

² 0.13 vehicles undergoing non-authorized dismantling in Germany, 0.14 million vehicles transferred to EU countries without re-registration and 0.02 million vehicles undergoing non-documented dismantling in authorised dismantling facilities in Germany.

- ▶ expected effect on the statistical gap,
- ▶ expected effect on the distribution of the vehicle flows,
- ▶ expected expenses,
- ▶ legal implementation,
- ▶ practical implementation,
- ▶ acceptance.

The substantial recommendations are as follows:

For the determination of the proportion of permanently decommissioned vehicles, a tri- or quadrennial FMTA calculation or alternatively, a simplified calculation based on the available data, is recommended.

In the context of exports to non-EU countries, it is recommended that:

- ▶ an information flow from foreign customs authorities to trade statistics in a single-stage procedure is established;
- ▶ a correction factor is applied for the adjustment of statistically reported figures to the real situation, as long as the information flow has not yet been established;
- ▶ customs control on incorrect/missing declarations is tightened and the search profile for undeclared or incorrectly declared vehicles is optimised; and
- ▶ an information flow between customs authorities and the FMTA is established.

In the context of transferring second-hand vehicles to other EU Member States for re-registration, it is recommended that:

- ▶ the information flow with the REGINA system is enhanced; and
- ▶ the REGINA data is corrected by way of a correction factor, as long as the information flow has not yet been enhanced.

To minimise dismantling carried out in not authorised facilities, it is recommended that:

- ▶ a work group that functions across the federal states is created;
- ▶ technical expertise to support activities against non-authorised dismantling is financed;
- ▶ support to previously non-authorised dismantling activities is provided in terms of application and approval as authorised dismantling facility;
- ▶ an enforcement aid for carrying out seizures is developed;
- ▶ second-hand spare parts are used as a starting point for the identification of non-authorised dismantling activities; and
- ▶ the exchange of experiences in connection with enforcement is organised via the IMPEL network.

In order to improve the Certificates of Destruction, it is recommended that:

- ▶ an information flow from the dismantling facilities to the CVRFMTA is established,
- ▶ the fees for disassembly with and without Certificate of Destruction (CoD) are brought into alignment,
- ▶ CoDs and information on whereabouts through registration offices are consistently collected,
- ▶ the non-disclosure of CoDs is penalised as an administrative offence,
- ▶ online decommissioning with CoDs is enabled, and
- ▶ a ban on the re-registration of end-of-life vehicles at the VRO is established.

For the distinction between second-hand vehicles and end-of-life vehicles:

- ▶ analogous to the Waste Electrical and Electronic Equipment Directive (WEEE Directive) legally binding criteria and procedures should be established EU-wide in connection with the distinction (taking into account the technical criteria according to the safety criteria set out in Directive 2014/45/EU);
- ▶ the approaches regarding the distinction of second-hand and end-of-life vehicles should be operationalised for the day-to-day implementation; and
- ▶ the options in connection with shifting the burden of proof should be applied.

In the area of salvage exchanges and online trade, a better identification of end-of-life vehicles should be enabled and ensured that they are only available to qualified buyers.

The following table 6 provides a summary on the recommendations and their assessments.

Table 3: Overview of the recommendations for closing the statistical gap

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Expenses and costs | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|---|---|---|---|--|--|---|--------------------------|---|
| Proportion of the permanently decommissioned vehicles | No differentiated data on temporary and permanent decommissioning, previously: estimation | R1a: Determination by FMTA | Very high in the 1st year; in case of regular calculation: presumably lower in the subsequent years | Not relevant | Low | Not necessary | Simple | FEA, FMTA: available |
| | | R1b (an alternative to 1a): Simplified calculation by FEA | | | Low | Not necessary | Simple | |
| Exports to non-EU countries | | R2a: Establishing the flow of information between customs authorities | High | N/a | Relatively high: Data collection and coordinated transfer to MSs | Possible and apparently planned at the EU level | Yes | Available |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Expenses and costs | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|---|---|--|---|--|-------------------------------|--------------------------|--|
| | Second-hand vehicle exports from Germany to non-EU countries registered for export at foreign exit points from the customs territory under a single-stage procedure are not recorded in German foreign trade statistics | R2b: Correction factor | High | N/a | None in the short term, low in the case of new calculations | Not necessary | Immediately | FEA: available EU COM: Improvement of the status quo |
| | Second-hand vehicle exports are not recorded due to false declaration or non-declaration at customs | R3: Tighter enforcement and (customs) control | Effective against incorrect/missing declarations Potential: lower in ports, higher for export by land | Relevance if end-of-life vehicle is not identified due to false declaration | High to very high expenses for additional controls and personnel requirement | Legal basis already available | Possible | Countries: currently questionable due to additional personnel requirement. Hauliers, consignors and consignees of transports: not available due to time delay |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Expenses and costs | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|-------------------------------|---|---|---|-----------------------|--|--------------------------|---|
| | | R4: Information flow between customs authorities and the FMTA | Limited direct effect, possible impact: improved knowledge of vehicles with unclear whereabouts | Controlling effect on vehicles with a CoD that are to be exported nonetheless | Low to medium | Possible as long as data protection is ensured | Possible | FMTA, customs: limited due to additional expenses |
| | | R5a: Improvement of the information flow via REGINA | High | None | High for affected MSs | Sufficient legal basis | Yes, possibly lengthy | MSs: Probably |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Expenses and costs | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|---|--|--|-------------------------------|--|------------------------------------|---|---|---|
| Transferring second-hand vehicles to other EU Member States for re-registration | No 100% complete data transmission via REGINA for the re-registration in other EU Member States | R5b-1: Correction based on VIN | High | None | High for affected MSs and the FMTA | Clarification of data protection issues necessary | Technically possible. Data protection where necessary. Possible with cooperation of the MSs | Affected MSs: to be clarified; FMTA: to be clarified; EU COM: available |
| | | R5b-2: Correction factor | High | None | Low | Available | Possible | EU COM: improvement to status quo |
| | Transferring vehicles to other Member States without re-registering them as a second-hand vehicle and without registering them as an end-of-life vehicle | These items are primarily addressed under R11 through R14 and under R17. | | | | | | |
| | | Recommendations 6 (on the distinction between end-of-life vehicles and second-hand vehicles), 7 (on tighter enforcement) and 8 (on eliminating obstacles related to decommissioning) are addressed further under R11 through R17 | | | | | | |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Expenses and costs | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|--|--|--|--|--|--|--------------------------|--|
| Non-authorised dismantling in other EU Member States | Permanently de-commissioned vehicles are transferred from Germany and not registered again in the destination country, instead, they are dismantled as end-of-life vehicles in non-authorised dismantling facilities. This means that no records are created in the REGINA re-registration statistics or in cross-border waste statistics. | R10: IMPEL exchange regarding non-authorised dismantling of end-of-life vehicles | No immediate impact; effect only on the basis of actions taken subsequently by the MSs | No immediate impact; effect only on the basis of actions taken subsequently by the MSs | The IMPEL experience exchange is not very complicated. The implementation of the discussed measures in the MSs may be costly | No change in legislation required; voluntary | Yes | IMPEL: no clear direction – low due to additional expenses, high due to comparable approaches to the problem in many MSs |
| | | R11a: Supra-regional work groups | High | High | High | No change in legislation required | Yes | Regional authorities: limited due to high expenses |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Expenses and costs | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|---|---|--|-------------------------------|--|--------------------|--|--------------------------|--|
| Dismantling in facilities other than authorised dismantling facilities in Germany | In Germany, permanently decommissioned vehicles are dismantled in non-authorised dismantling facilities | R11b: Pool for technical expertise | | | High | Could be problematic (co-financing of sovereign tasks) | To be investigated | Economic operators: questionable due to partially external co-financing of sovereign tasks |
| | | R11c: Supporting in transition of non-authorised dismantling facilities to authorized dismantling facilities | | | Medium | Available | Yes | Regional authorities: limited due to expenses |
| | | R11d: Enforcement aid for carrying out seizures in unauthorised facilities | | | Medium | To be investigated | To be investigated | Regional authorities: available |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Expenses and costs | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|-------------------------------|---|-------------------------------|--|--------------------|--|--------------------------|---|
| | | R12: Monitoring second-hand spare part sales | | | Medium | Available | Available | Regional authorities: limited due to expenses |
| | | R13: Counting/weighing campaigns at stripped vehicle shredding facilities | | Indirect effect | Medium | Implementation in end-of-life vehicle GL | Yes | Economic operators of the ELV Ordinance: Cost-bearing should be clarified |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Expenses and costs | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|---|--|--|-------------------------------|--|--|-------------------------------|--|---|
| Dismantling at authorised dismantling facilities in Germany | Incomplete records of partially dismantled end-of-life vehicles from legally grey sources, transmission of incomplete data to the state statistical offices for Certificates of Destruction, incomplete data records from authorised dismantling facilities, deliberate omission of dismantled end-of-life vehicles when inquired by the state statistical offices | R14: More intensive examination of authorised dismantling facilities | Low | No | Low (if standardised plausibility checks are utilised) to medium | Legal basis already available | Available with regard to vehicle-related input/output checks, limited with regard to the availability of plausibility checks | Dismantling facilities and enforcement authorities: low |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Expenses and costs | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|--|---|-------------------------------|--|--------------------|--|--------------------------|---|
| Certificate of Destruction | Only about 10% of recycled end-of-life vehicles have Certificates for Destruction at the CVRFMTA (note: other end-of-life vehicles are reported to the state statistical offices without specifying the VIN) | R15a: Information flow between dismantling facilities and the CVRFMTA | Low | Low/medium | Medium | If necessary, legal bases are to be adjusted and data protection requirements are to be examined | Possible | Dismantling facilities: not available; MV registration offices: high; 'head offices' (e.g. FMTA, JA-ELV, FEA) additional personnel and financial expenses |
| | | R15b: Harmonisation of de-commissioning fees | Low to medium | Low to medium | Low | Generally possible (within the scope or with the participation of the federal states) | Possible | High for last holders, available at MV registration offices |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Expenses and costs | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|-------------------------------|--|-------------------------------|--|--------------------|-----------------------------------|---|---|
| | | R15c: Consistent collection of CoDs and information on whereabouts through registration offices | Low | Low | Medium | Applicable laws already available | Yes, as applicable laws already available | Low for MV registration offices |
| | | R15d: Failure to observe obligation regarding the presentation of a CoD for decom. constitutes an administrative offence | Low | Low | Medium | Possible | Possible | n/a |
| | | R15e: Online decommissioning with CoDs | Low | Low | n/a | Possible | Possible | High for MV registration offices |
| | | R16: Ban on re-registration | Low | None/medium | None | Possible | Possible | High for the FMTDI |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Expenses and costs | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|--|--|-------------------------------|--|--------------------|--|--------------------------|--|
| Distinction of second-hand vehicles and end-of-life vehicles | Depending on the classification, different statistics or monitoring procedures would be relevant | R17: Legally binding criteria and procedures in connection with the distinction EU-wide | High | High | Medium to high | Complex | Available, but complex | EU COM: unclear; exporting players: available to low |
| | | R17a: Technical criteria according to the safety criteria set out in Directive 2014/45/EU | | | Medium | Complex | Available, but complex | EU COM: unclear; national authorities: unclear; exporting players: available to low |
| | | R17b: Operationalisation of approaches regarding the distinction of second-hand and end-of-life vehicles | | | Medium | Available if distinction criteria are made to be legally binding | Available | EU COM: unclear; enforcement authorities: available; exporting players: available to low |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Expenses and costs | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|---|---|-------------------------------|--|---------------------------------|--------------------------------|--------------------------|---|
| | | R17c: Apply the shifting of the burden of proof | | | Countries: low; exporters: high | Available | Available | Countries: available; exporters: low |
| Online trade | Often no information on vehicle whereabouts | R18a: End-of-life vehicles only sold to qualified buyers via salvage exchanges | High | High | Medium | To be investigated | Expensive | Insurance: not available Salvage exchange operators: not available |
| | | R18b: End-of-life vehicles only sold to dismantling facilities via online trading platforms | | | Medium | To be investigated | Expensive | Online trading platforms: not available |
| Further platforms: Expert system | Missing identification of non-documented dismantling in authorised dismantling facilities | R19: Adjustment of the expert system when inspecting end-of-life vehicle recycling facilities | Low | Low | Low to medium | Amendment of the ELV Ordinance | Available | FMENCBNS: no available information |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Expenses and costs | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|--|------------------------------|-------------------------------|--|--------------------|----------------------|--------------------------|---|
| Further platforms: JAEV list | Uncertainty regarding the completeness and correctness of the data | R20: Review of the JAEV list | Low | Low | Medium | Available | Available | Federal states: available |

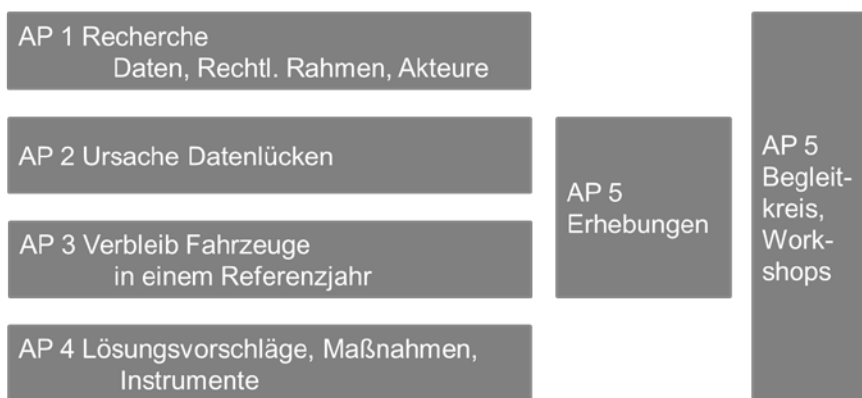
Zusammenfassung

Jährlich werden in Deutschland rund 8 Millionen Personenkraftwagen (Pkw) außer Betrieb gesetzt, von denen rund 3 Millionen als endgültig³ außer Betrieb gesetzt betrachtet wurden. Aus den vorliegenden statistischen Quellen ließ sich der Verbleib von jährlich gut 1 Million der endgültig außer Betrieb gesetzten Pkw in Deutschland nicht belegen. Gegenstand des Forschungsvorhabens war die möglichst weitgehende Schließung dieser ‚statistischen Lücke‘. Die Ziele des Projektes bestanden im Einzelnen in der

- ▶ Identifikation möglicher Ursachen der ‚statistischen Lücke‘,
- ▶ Ermittlung, Aufschlüsselung und möglichst weitgehenden Quantifizierung von Informationen zum tatsächlichen Verbleib der endgültig außer Betrieb gesetzten Fahrzeuge,
- ▶ Erarbeitung von Maßnahmen und Instrumenten, mit denen eine dauerhafte Verbesserung der Datenlage erreicht werden kann.

Die Struktur des Vorhabens folgte der Aufgabenstellung und beinhaltete im Einzelnen die in **Fehler! Verweisquelle konnte nicht gefunden werden.** dargestellten Arbeitspakete (AP).

Abbildung 5: Übersicht über die Projektstruktur



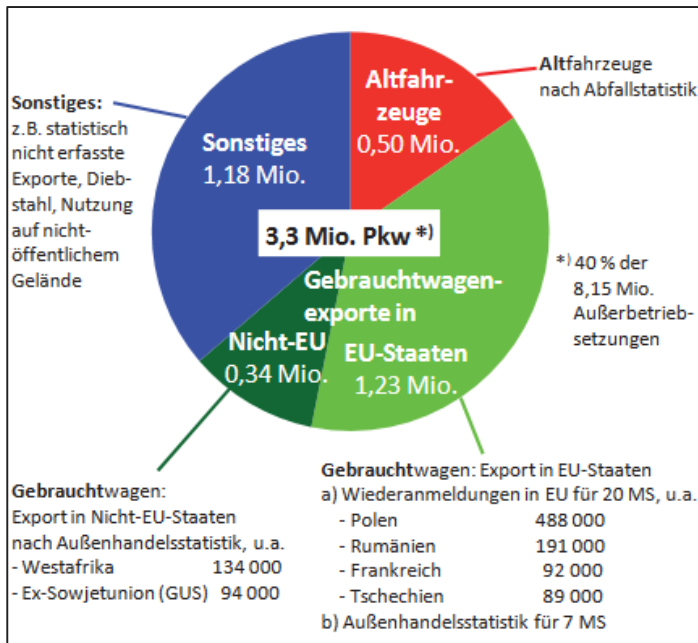
Methodisch wurden neben der Analyse von Datengrundlagen und Literaturquellen die relevanten Bereiche des Zulassungsrechts für Kraftfahrzeuge, des Kreislaufwirtschaftsrechts, des Straßenverkehrsrechts und Straßenrechts, des Abfallverbringungsrechts, des Zoll- und Außenhandelsrechts, des Anlagenrechts, des Versicherungsrechts, des Datenschutzrechts sowie der rechtlichen Grundlagen der statistischen Erhebungen dargestellt und analysiert. Es wurden Workshops durchgeführt (z. B. mit Länderbehörden, dem KBA, ARN/RDW, dem ZDK, mit relevanten Stakeholdern zum Thema „Abgrenzung Gebrauchte-/Altfahrzeug“ sowie zum Thema „Verwertungsnachweis“ und mit Mitgliedstaaten (Tschechien)) und Primärdaten erhoben (Fragebogen Demontagebetriebe), Vor-Ort-Termine (z. B. Antwerpen, Hamburg, Essen, Schredder, Demontagebetriebe, Tschechien), Expertengespräche und Telefonkonferenzen durchgeführt, deren Ergebnisse in den Bericht eingeflossen sind.

Die Ausgangslage zum Verbleib von außer Betrieb gesetzten Fahrzeugen für das Jahr 2013, wie sie z. B. im Bericht des UBA an die EU-Kommission zum Monitoring der Altfahrzeugverwertung enthalten war, ist in der folgenden Abbildung 6 zusammengefasst. Anzumerken ist, dass der genannte

³ Der Begriff „endgültig“ bedeutet in diesem Kontext, dass die jeweiligen Fahrzeuge nicht wieder angemeldet wurden. Das deutsche Zulassungsrecht kennt keine Unterscheidung zwischen „endgültig“ und „vorübergehend“ außer Betrieb gesetzt. Es ist insofern nicht im rechtstechnischen Sinne zu verstehen, sondern ist eine Beschreibung der realen Situation. „Endgültig“ bezieht sich dabei nur auf die Außerbetriebsetzung in Deutschland. Es ist möglich, dass solche Fahrzeuge ggf. im Ausland wieder in Betrieb gesetzt werden.

UBA-Bericht entsprechend der dafür verfügbaren Datengrundlage nicht für jeden Pfad sowohl Daten zu M1-Fahrzeugen als auch N1-Fahrzeuge berücksichtigt.

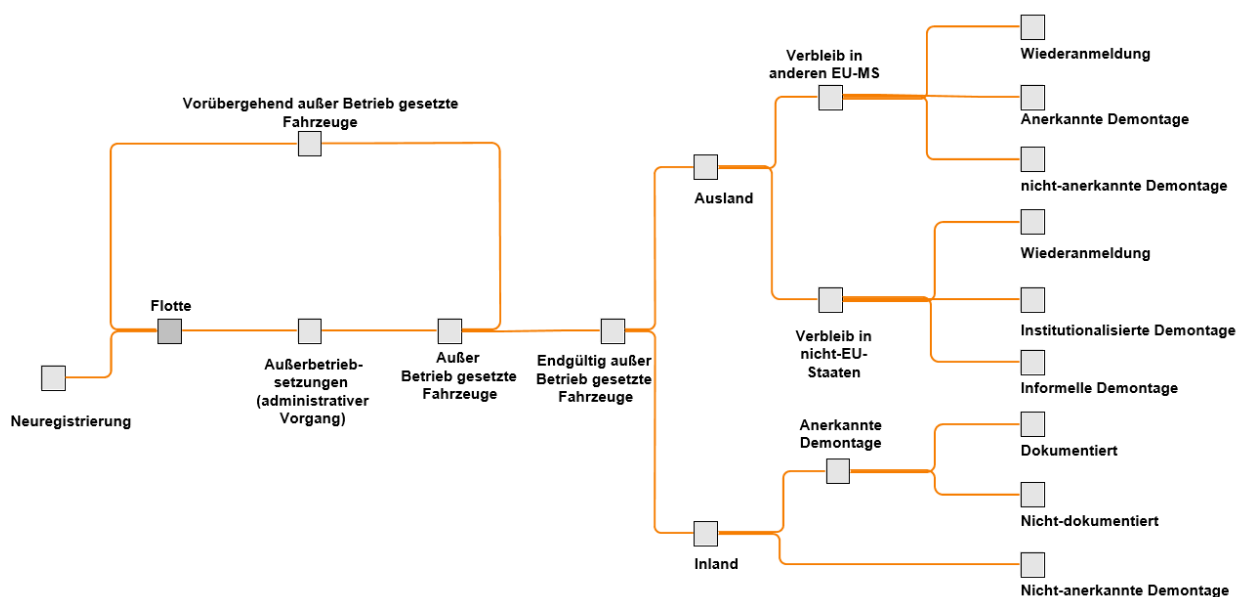
Abbildung 6: Verbleib von als endgültig außer Betrieb gesetzt betrachteter Pkw in Deutschland im Jahr 2013 in Mio. Stück



Quelle: BMUB und UBA (2015); Anmerkung: Durch Rundungsdifferenzen bei der Anzahl der endgültig außer Betrieb gesetzten Fahrzeuge geht die Delta-Rechnung zu der statistischen Lücke nicht genau auf. Die eigentliche Anzahl der endgültig außer Betrieb gesetzten Fahrzeuge beträgt 3,26 Mio. Fahrzeuge (8,15 Mio.*0,4). „Endgültig außer Betrieb gesetzt“ bezieht sich dabei nur auf die Außerbetriebsetzung in Deutschland. Es ist möglich, dass solche Fahrzeuge ggf. im Ausland wieder in Betrieb gesetzt werden.

Zur Strukturierung der Untersuchung sowie der Ergebnisdarstellungen erfolgte die Systematisierung der Verbleibswegen von Fahrzeugen in Szenarien, die in **Fehler! Verweisquelle konnte nicht gefunden werden.** im Überblick dargestellt sind.

Abbildung 7: Schematischer Überblick über Szenarien zum Verbleib von Fahrzeugen



Für jedes Szenario wurden die Akteure, die Informationsflüsse über den Verbleib, die statistischen Datenbasen, relevante Rechtsnormen und Vorgänge der Überwachung im Status Quo identifiziert und bestehende Lücken dargestellt. Im Anschluss wurde der Verbleib von außer Betrieb gesetzten Fahrzeugen für das Stichjahr 2013 analysiert.

Tabelle 4 stellt die aktualisierte Datengrundlage nach verfügbaren Datenquellen differenziert dar und zeigt die Datensituation der jeweiligen Fahrzeugströme auf.

Tabelle 4: Übersicht über die aktualisierten Daten zum Fahrzeugverbleib mit den jeweiligen Datenquellen

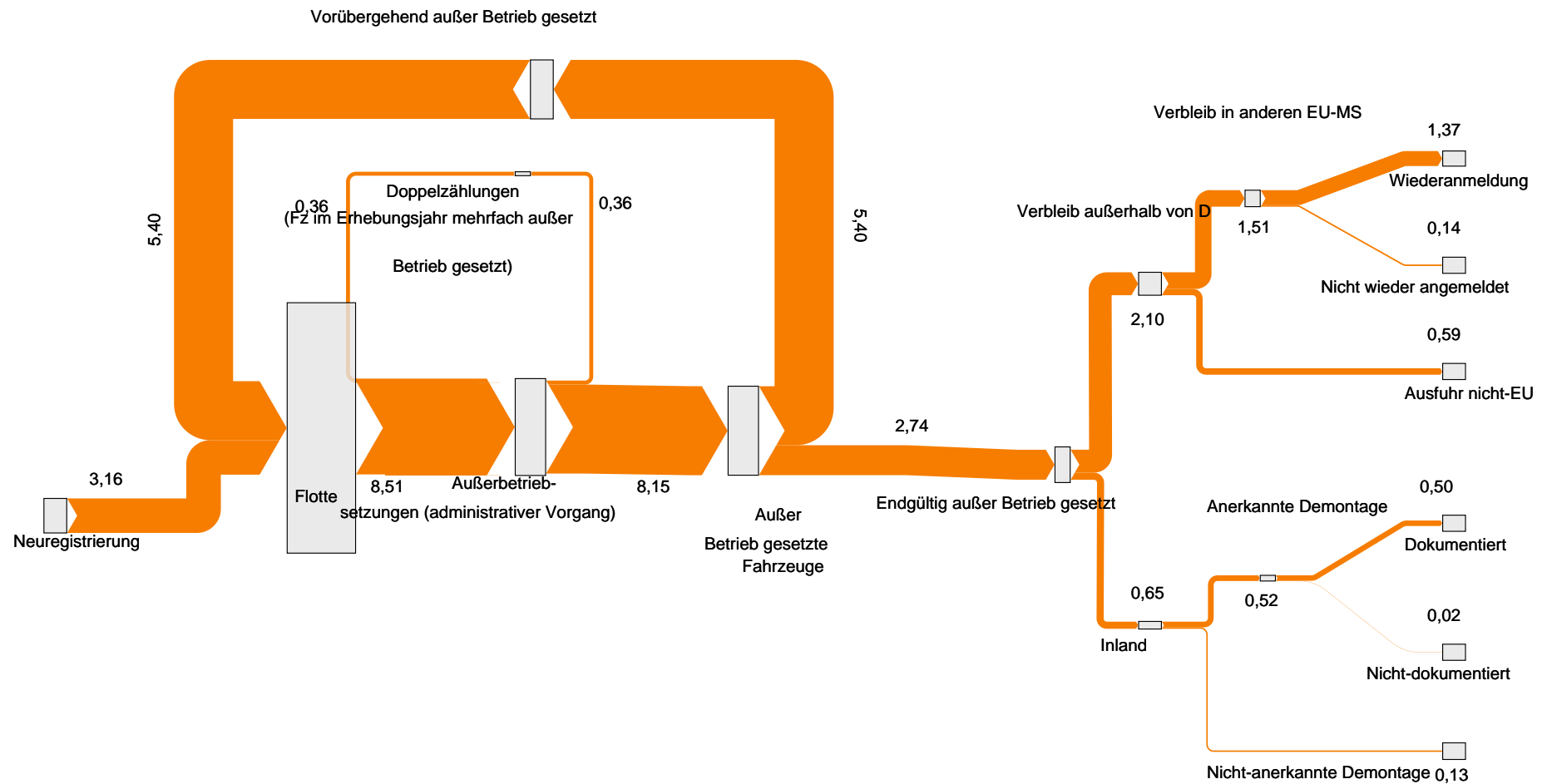
| Datenbereich | Teilbereich | Anzahl Fahrzeuge (2013) |
|---|---|--|
| Gesamtanzahl Außerbetriebsetzungen | Keine Unterteilung | 8.511.472 (*1) |
| Gesamtanzahl außer Betrieb gesetzter Fahrzeuge | Keine Unterteilung | 8.146.925 |
| Gesamtanzahl endgültig außer Betrieb gesetzter Fahrzeuge | Keine Unterteilung | 2.743.665 |
| Anzahl verwertete Altfahrzeuge in anerkannten Demontagebetrieben in Deutschland | Statistisch belegte Anzahl Altfahrzeuge | 500.322 (*2) |
| | Statistisch erfasste Verwertungsnachweise | 47.973 Fz mit VN (Überschneidung mit Destatis) |
| | Zuschätzung für nicht dokumentierte AFZ-Demontagen | 20.000 |
| | Gesamt inklusive Zuschätzung | 520.000 |
| Notifizierte Altfahrzeuge aus Deutschland zur Verwertung im Ausland | Keine Unterteilung | 0 (*3) |
| Anzahl der in nicht-anerkannten Betrieben in Deutschland behandelten Altfahrzeuge | Keine Unterteilung | Zuschätzung: 130.000 |
| Verbrachte Gebrauchtfahrzeuge in EU-MS zur Wiederanmeldung | >WG (*4) | 145.349 (*5) |
| | Wiederanmeldungen in EU-MS | 1.215.945 |
| | Statistisch belegt, Summe | 1.232.987 (tlw. Überschneidungen) (*6) |
| | Zuschätzung | 137.000 |
| | Gesamt inklusive Zuschätzung | 1.370.000 |
| Verbleib in EU-MS ohne Wiederanmeldung | In EU-MS verwertete Altfahrzeuge mit VN (z. B. nach Unfall) | 10.092 (*7) |
| | Zuschätzung (z. B. nicht-anerkannte Demontage) | 130.000 |
| | Gesamt inkl. Zuschätzung | 140.000 |
| Ausgeführte Gebrauchtfahrzeuge aus Deutschland in Nicht-EU-Staaten | Vom dt. Zoll erfasste Ausfuhren | 374.030; davon <ul style="list-style-type: none"> Fz mit statistischem Warenwert >3.000 €: 158.102 (*8) |

| Datenbereich | Teilbereich | Anzahl Fahrzeuge (2013) |
|--|--|--|
| | | <ul style="list-style-type: none"> Fz mit statistischem Warenwert <3.000 €: 215.928 (*8) |
| | Summe statistisch belegter Ausfuhren in deutscher Statistik | 385.708 (*9) |
| | Gebrauchtfahrzeuge aus Deutschland, die in anderen EU-MS im einstufigen Ausfuhrverfahren zur Ausfuhr in Nicht-EU-Staaten angemeldet werden | Bekannt, doch ohne Erfassung in dt. Außenhandelsstatistik; ca. 116.000 M1-Fahrzeuge über Belgien (*10) |
| | | Zuschätzung (für alle Zollassgangsstellen): 93.000 Fz. |
| | Zuschätzung insgesamt | 250.000 (*11) |
| | Gesamtanzahl Gebrauchtfahrzeugausfuhren in Nicht-EU-Staaten inklusive Zuschätzung | Ca. 590.000 |
| Diebstahl („Diebstahl“ stellt im Kontext des Vorhabens keinen Endverbleib dar. Die Daten zum Diebstahl werden hier nur informatorisch aufgezeigt.) | Diebstahlstatistik kaskoversicherter Fahrzeuge | (20.690) (*12) |
| | Polizei/BKA: Inpol Sachfahndung | (21.103) |

Anmerkung: Die Anzahl der Fahrzeuge, die auf nicht-öffentlichem Gelände verbleiben (kein Endverbleib), ist nicht bekannt; (*1) KBA 2014; (*2) Destatis 2015d; (*3) UBA 2013; (*4) Bei Intra-EU-Verbringungen ist die Wertgrenze (WG) relevant für die Meldung zur Umsatzsteuer und gilt für umsatzsteuerpflichtige Unternehmen, die im Jahr zuvor Waren im Wert von mindestens 500.000 Euro (für 2013 relevante Wertgrenze) nach Deutschland ein- oder ausgeführt haben (siehe Kapitel 4.8.3). Stand der Daten Juni 2016; (*5) Aufgrund der unterschiedlichen Gewichtsabgrenzung der Warennummern für die Außenhandelsstatistik im Vergleich zur EU-Fahrzeugklassensystematik besteht die Möglichkeit, dass auch andere N-Fahrzeuge mit einem Gewicht über 3,5 t hier erfasst sind. Es wird jedoch davon ausgegangen, dass der Großteil der erfassten Fahrzeuge der Fahrzeugklasse N1 zuzuordnen ist (siehe auch Kapitel 5.2.1 und Fußnote 241); (*6) BMUB und UBA 2015; (*7) KBA 2015d; (*8) Auswertung der vom deutschen Zoll bereitgestellten Daten über Ausfuhren von Gebrauchtfahrzeugen aus Deutschland in Nicht-EU-Staaten im Jahr 2013; (*9) BMUB und UBA 2015.; Destatis 2015c.; die Verteilung der Anzahl von Fz. mit statistischem Warenwert >3.000 € und <3.000 € ist nicht bekannt; (*10) Pers. Komm mit dem belgischen Zoll, Abteilung General Administration of Customs and Excise, am 23.10.2015; (*11) Die Summe ergibt sich aus den bisher nicht berücksichtigten N1-Fahrzeugen (41.157), den einstufigen Ausfuhren über Belgien (116.000) und einer Zuschätzung für alle weiteren Zollassgangsstellen (93.000); (*12) GDV 2014.

Abbildung 8 fasst die durch die Erkenntnisse des Projekts aktualisierte Datengrundlage über den Verbleib außer Betrieb gesetzter Fahrzeuge und zur statistischen Lücke zusammen.

Abbildung 8: Fahrzeugströme der Klassen M1 und N1 im Jahr 2013 in Mio. Stück – Aktualisierung



Datengrundlagen: Eigene Berechnungen und Recherchen; KBA; Deutscher Zoll; Destatis; UBA; Belgischer Zoll; Aufgrund von Rundungsdifferenzen stimmen die Aufsummierungen nicht vollständig überein. „Endgültig außer Betrieb gesetzt“ bezieht sich dabei nur auf die Außerbetriebsetzung in Deutschland. Es ist möglich, dass solche Fahrzeuge ggf. im Ausland wieder in Betrieb gesetzt werden.

Die folgende Tabelle 5 fasst die Effekte auf die statistische Lücke zusammen.

Tabelle 5: Effekte der aktualisierten Daten auf die statistische Lücke (M1- und N1-Fahrzeuge)

| Nr. | Statistikbereich | Ausgangswert | Neuer Wert | Effekt auf die statistische Lücke |
|-----|--|---------------|---------------|-----------------------------------|
| A | Gesamtanzahl endgültig außer Betrieb gesetzte Fahrzeuge | 3,26 Mio. Fz. | 2,74 Mio. Fz. | 0,52 Mio. Fz. |
| B | Ausfuhr aus der EU | 0,34 Mio. Fz. | 0,59 Mio. Fz. | 0,25 Mio. Fz. |
| C | Verbringung von Gebrauchtfahrzeugen in andere EU-MS mit Wiederanmeldung | 1,23 Mio. Fz. | 1,37 Mio. Fz. | 0,14 Mio. Fz. |
| D | Verbringung bzw. Verbleib von Fahrzeugen ohne Wiederzulassung in anderen EU-MS (tlw. nicht-anerkannte Demontage, Verwertung nach dortigem Unfall mit VN) | n.a. | 0,14 Mio. Fz. | 0,14 Mio. Fz. |
| E | Nicht-anerkannte Demontage in Deutschland | n.a. | 0,13 Mio. Fz. | 0,13 Mio. Fz. |
| F | Nicht-dokumentierte Demontage in anerkannten Demontagebetrieben in Deutschland | n.a. | 0,02 Mio. Fz. | 0,02 Mio. Fz. |
| G | Anerkannte Demontage in Deutschland | 0,50 Mio. Fz. | 0,50 Mio. Fz. | 0,00 Mio. Fz. |
| H | Unklarer Verbleib (A-(B+C+D+E+F+G)) | 1,18 Mio. Fz. | 0,00 Mio. Fz. | n.a. |

Anmerkung: Die Ausgangswerte des UBA-Jahresberichtes bezogen nicht immer N1-Fahrzeuge ein. Ein Vergleich der Mengenströme ist in **Fehler! Verweisquelle konnte nicht gefunden werden.** und **Fehler! Verweisquelle konnte nicht gefunden werden.** veranschaulicht.

Die zusammenfassende Darstellung zeigt auf, dass die statistische Lücke weitestgehend geschlossen werden konnte. Es bleibt ein statistisch nicht erfasster Anteil von rund 0,29 Mio. Fahrzeugen⁴, die in nicht-anerkannter bzw. nicht-dokumentierter Demontage verbleiben. Systematisch bedingt bestehen somit die größten Datenunsicherheiten bei den nicht-legalen Verbleibswegen der nicht-anerkannten Demontage im In- und Ausland.

Für die Entwicklung von Empfehlungen und Maßnahmenvorschlägen, mit denen für die Zukunft eine Verbesserung der Datenlage erreicht werden kann, wurde zunächst eine Analyse der jeweiligen Ursachen der statistischen Lücken durchgeführt. Bei der Entwicklung der Empfehlungen und Maßnahmenvorschläge wurde berücksichtigt, dass der Aufwand für den Vollzug – bei Erreichung des Maßnahmenziels – nach Möglichkeit so gering wie möglich gehalten werden sollte.

Es werden Maßnahmen auf zwei Ebenen diskutiert:

- ▶ Informationsflüsse vervollständigen und
- ▶ ggf. Impulse setzen, durch die Fahrzeuge in besser dokumentierte Verbleibswegen gesteuert werden.

⁴ Jeweils 0,13 bzw. 0,14 Mio. Fahrzeuge in nicht-anerkannter Demontage in Deutschland und Verbringung ohne Wiederanmeldung im EU-Ausland und 0,02 Mio. Fahrzeuge in nicht-dokumentierter Demontage in anerkannten Demontagebetrieben in Deutschland.

Zu den Vorschlägen werden jeweils die Akteure/Adressaten, der Umsetzungshorizont sowie die Verbindlichkeit dargestellt. Zu den Empfehlungen erfolgt eine Bewertung in Hinblick auf folgende Aspekte:

- ▶ erwartete Wirkung auf die statistische Lücke,
- ▶ erwartete Wirkung auf die Verteilung der Fahrzeugströme,
- ▶ erwarteter Aufwand,
- ▶ rechtliche Umsetzbarkeit,
- ▶ praktische Umsetzbarkeit,
- ▶ Akzeptanz.

Wesentliche Empfehlungen sind:

Zur Bestimmung des Anteils der endgültig außer Betrieb gesetzten Fahrzeuge wird eine drei- bis vierjährige Bestimmung durch das KBA oder alternativ eine vereinfachte Berechnung auf der Grundlage verfügbarer Daten empfohlen.

Im Zusammenhang mit der Ausfuhr in Nicht-EU-Staaten wird empfohlen

- ▶ einen Informationsfluss von ausländischem Zoll in die Handelsstatistik bei einstufigem Verfahren zu etablieren und
- ▶ einen Korrekturfaktor zur Anpassung der statistisch berichteten Zahlen an die reale Situation anzuwenden, solange der Informationsfluss noch nicht etabliert ist,
- ▶ die verstärkte Zollkontrolle auf Fehl-/ Nichtdeklaration sowie optimierte Suchprofile zur Identifikation nicht oder nicht richtig deklarerter Fahrzeuge,
- ▶ die Etablierung eines Informationsflusses zwischen Zollbehörden und KBA.

Im Kontext der Verbringung von Gebrauchtfahrzeugen zur Wiederanmeldung in anderen EU-Mitgliedstaaten wird empfohlen

- ▶ den Informationsfluss über das System REGINA zu verbessern und
- ▶ eine Korrektur der REGINA-Daten durch einen Korrekturfaktor vorzunehmen, solange der Informationsfluss noch nicht verbessert wurde.

Um die Demontage in nicht-anerkannten Betrieben zu minimieren wird empfohlen,

- ▶ eine bundesländerübergreifende Arbeitsgruppe einzurichten,
- ▶ eine Finanzierung von technischem Sachverstand zur Unterstützung von Aktivitäten gegen die nicht-anerkannte Demontage zu erreichen,
- ▶ bisher nicht anerkannter Demontage Unterstützung bei der Antragstellung und Anerkennung als Demontagebetrieb anzubieten,
- ▶ eine Vollzugshilfe zur Beschlagnahme zu entwickeln,
- ▶ den Verkauf gebrauchter Ersatzteile als Ansatzpunkt für die Identifizierung nicht-anerkannter Demontagen zu nutzen,
- ▶ über das IMPEL-Netzwerk einen Austausch über Erfahrungen beim Vollzug zu organisieren.

Zur Stärkung des Verwertungsnachweises wird empfohlen,

- ▶ einen Informationsfluss von Demontagebetrieben zum ZFZR zu etablieren,
- ▶ die Gebühren bei Außerbetriebsetzung mit und ohne verwertungsnachweis (VN) anzugleichen,
- ▶ VN oder Verbleibsangabe durch Zulassungsstellen konsequent einzufordern,
- ▶ die Nichtangabe des VN als Ordnungswidrigkeit zu ahnden,
- ▶ die Online-Außerbetriebsetzung mit VN zu ermöglichen und
- ▶ ein Wiederzulassungsverbot für Altfahrzeuge in FZV zu etablieren.

Für die Abgrenzung zwischen Gebrauchtfahrzeug und Altfahrzeug sollten

- ▶ analog zur Elektroaltgeräte-Richtlinie (WEEE-Richtlinie) EU-weit rechtsverbindliche Kriterien und Vorgehensweisen zur Abgrenzung etabliert werden (wobei technische Kriterien nach Sicherheitskriterien der FL 2014/45/EU berücksichtigt werden sollten),
- ▶ Operationalisierungen der Ansätze zur Abgrenzung von Gebrauchtfahrzeugen und Altfahrzeugen für den täglichen Vollzug erarbeitet werden und
- ▶ Möglichkeiten der Beweislastumkehr genutzt werden.

Im Bereich der Restwertbörsen und des Online-Handels sollte eine bessere Identifikation von Altfahrzeugen ermöglicht werden und sichergestellt werden, dass diese nur an qualifizierte Bieter abgegeben werden können.

Die folgende Tabelle 6 fasst die Empfehlungen und ihre Bewertungen zusammen.

Tabelle 6: Überblicksdarstellung der Empfehlungen zur Schließung der statistischen Lücke

| Bereich, in dem die statistische Lücke beeinflusst wird | Einfluss auf die statistische Lücke | Empfehlung | Wirkung stat. Lücke | Steuerung Fahrzeugströme / Umweltrelevanz | Aufwand, Kosten | Rechtl. Umsetzbarkeit | Praktische Umsetzbarkeit | Hauptakteur/ Akzeptanz bzw. Aspekte die Auswirkung auf die Akzeptanz haben können |
|---|--|---|---|---|---|---|--------------------------|---|
| Anteil der endgültig außer Betrieb gesetzten Fahrzeuge | Keine differenzierten Daten zur vorübergehenden und endgültigen Außerbetriebsetzung, bisher: Schätzung | E1a: Bestimmung durch das KBA | 1. Jahr: sehr hoch, bei regelmäßiger Berechnung: Folgejahre vermutl. geringer | Nicht relevant | Gering | Nicht erforderlich | Leicht | UBA, KBA: gegeben |
| | | E1b (alternativ zu 1a): Vereinfachte Berechnung durch das UBA | | | Gering | Nicht erforderlich | Leicht | |
| Ausfuhr in Nicht-EU-Staaten | | E2a. Informationsfluss zwischen Zollbehörden aufbauen | Groß | Entfällt | Relativ hoch: Datenerfassung und abgestimmter Transfer mit MS | Möglich und offenbar geplant auf EU-Ebene | Ja | Gegeben |

| Bereich, in dem die statistische Lücke beeinflusst wird | Einfluss auf die statistische Lücke | Empfehlung | Wirkung stat. Lücke | Steuerung Fahrzeugströme / Umweltrelevanz | Aufwand, Kosten | Rechtl. Umsetzbarkeit | Praktische Umsetzbarkeit | Hauptakteur/ Akzeptanz bzw. Aspekte die Auswirkung auf die Akzeptanz haben können |
|---|---|----------------------|---------------------|---|--|-----------------------|--------------------------|---|
| | Gebrauchtfahrzeugausfuhren aus Deutschland in Nicht-EU-Staaten, die an einer ausländischen Zolldurchgangsstelle im einstufigen Verfahren zur Ausfuhr angemeldet werden, werden nicht in der deutschen Außenhandelsstatistik erfasst | E2b. Korrekturfaktor | Groß | Entfällt | Kurzfristig keiner, bei Neuberechnung gering | Nicht erforderlich | Sofort | UBA: gegeben EU-KOM: Verbesserung zum Status quo |

| Bereich, in dem die statistische Lücke beeinflusst wird | Einfluss auf die statistische Lücke | Empfehlung | Wirkung stat. Lücke | Steuerung Fahrzeugströme / Umweltrelevanz | Aufwand, Kosten | Rechtl. Umsetzbarkeit | Praktische Umsetzbarkeit | Hauptakteur/ Akzeptanz bzw. Aspekte die Auswirkung auf die Akzeptanz haben können |
|---|---|--|---|---|--|--------------------------------------|--------------------------|---|
| | Ausfuhren von Gebrauchtfahrzeugen werden aufgrund von Fehldeklaration bzw. der Nichtanmeldung beim Zoll nicht erfasst | E3: Vollzug stärken und (Zoll-) Kontrollen ausweiten | Wirksam gegen Fehl-/ Nicht-Deklaration. Potenzial geringer bei Häfen, höher bei Ausfuhr über Land | Relevanz, wenn Altfahrzeug wegen Fehldeklaration nicht erkannt wird | hoher bis sehr hoher Aufwand für zusätzlich Kontrollen, Personalbedarf | Rechtl. Grundlagen bereits vorhanden | Möglich | Länder: derzeit fraglich wg. zusätzlichem Personalbedarf. Spediteure, Absender, Empfänger der Transporte: nicht gegeben wg. Zeitverzögerung |

| Bereich, in dem die statistische Lücke beeinflusst wird | Einfluss auf die statistische Lücke | Empfehlung | Wirkung stat. Lücke | Steuerung Fahrzeugströme / Umweltrelevanz | Aufwand, Kosten | Rechtl. Umsetzbarkeit | Praktische Umsetzbarkeit | Hauptakteur/ Akzeptanz bzw. Aspekte die Auswirkung auf die Akzeptanz haben können |
|---|-------------------------------------|---|---|---|------------------------|-----------------------------------|--------------------------|---|
| | | E4: Informationsfluss zwischen Zollbehörden und KBA | Geringe direkte Wirkung, ggf. Wirkung über bessere Kenntnisse über Fahrzeuge, bei denen der Verbleib unklar ist | Steuerungswirkung bei Fahrzeugen, für die ein VN ausgestellt wurde und die dennoch ausgeführt werden sollen | Gering bis mittel | Wenn Datenschutz gewahrt, möglich | Möglich | KBA, Zoll: eingeschränkt wg. zusätzlichem Aufwand |
| | | E5a: Informationsfluss REGINA verbessern | Groß | Keine | Für betroffene MS hoch | Rechtsgrundlage ausreichend | Ja, ggf. langwierig | MS: wahrscheinlich |

| Bereich, in dem die statistische Lücke beeinflusst wird | Einfluss auf die statistische Lücke | Empfehlung | Wirkung stat. Lücke | Steuerung Fahrzeugströme / Umweltrelevanz | Aufwand, Kosten | Rechtl. Umsetzbarkeit | Praktische Umsetzbarkeit | Hauptakteur/ Akzeptanz bzw. Aspekte die Auswirkung auf die Akzeptanz haben können |
|---|--|---|---------------------|---|--------------------------------|--|---|---|
| Verbringung von Gebrauchtfahrzeugen zur Wiederanmeldung in anderen EU-Mitgliedstaaten | Noch keine 100%ige Vollständigkeit der Datenübermittlungen zu den Wiederanmeldungen in anderen EU-Mitgliedstaaten über REGINA | E5b-1: Korrektur auf FIN-Basis | Groß | Keine | Hoch für betroffene MS und KBA | Klärung datenschutzrechtlicher Fragen erforderlich | Technisch möglich. Ggf. Datenschutz. Möglich bei Kooperation der MS | Betroffene MS: zu klären; KBA: zu klären; EU-KOM: gegeben |
| | | E5b-2: Korrekturfaktor | Groß | Keine | Gering | Gegeben | Möglich | EU-KOM: Verbesserung zum Status quo |
| | Verbringung von Fahrzeugen in andere Mitgliedstaaten ohne dortige Wiederanmeldung als Gebrauchtfahrzeug und ohne Notifizierung als Altfahrzeug | Diese Punkte werden schwerpunktmäßig in den Empfehlungen E11 bis E14 und E17 behandelt. | | | | | | |
| | | Die hier relevanten Empfehlung 6 (Abgrenzung von Altfahrzeugen und Gebrauchtfahrzeugen definieren), Empfehlung 7 (Vollzug stärken) sowie Empfehlung 8 (Beseitigung von Hemmnissen bei der Außerbetriebsetzung) werden weiter unten im Bereich E11 bis E17 behandelt | | | | | | |

| Bereich, in dem die statistische Lücke beeinflusst wird | Einfluss auf die statistische Lücke | Empfehlung | Wirkung stat. Lücke | Steuerung Fahrzeugströme / Umweltrelevanz | Aufwand, Kosten | Rechtl. Umsetzbarkeit | Praktische Umsetzbarkeit | Hauptakteur/ Akzeptanz bzw. Aspekte die Auswirkung auf die Akzeptanz haben können |
|--|---|--|--|--|--|---|--------------------------|---|
| Nicht-anerkannte Demontage in anderen EU-Mitgliedstaaten | In Deutschland endgültig außer Betrieb gesetzte Fahrzeuge werden verbracht und im Zielland nicht wieder angemeldet, sondern anschließend als Altfahrzeuge in nicht-erkannten Demontagebetrieben demontiert. Es erfolgt somit keine Erfassung in der Wiederanmeldungsstatistik REGINA und keine Erfassung in der grenzüberschreitenden Abfallstatistik | E10: IMPEL-Austausch über nicht-erkannte Altfahrzeug-Demontage | Keine unmittelbare Wirkung; Wirkung erst aufgrund von Maßnahmen, die MS anschließend ergreifen | Keine unmittelbare Wirkung; Wirkung erst aufgrund von Maßnahmen, die MS anschließend ergreifen | IMPEL-Erfahrungsaustausch nicht sehr aufwändig. Umsetzung der besprochenen Maßnahmen in den MS kann aufwändig sein | Keine Rechtsänderung erforderlich, freiwillig | Ja | IMPEL: keine klare Richtung: gering wg. Zusatzaufwand, hoch wg. vergleichbarer Problemstellung in vielen MS |

| Bereich, in dem die statistische Lücke beeinflusst wird | Einfluss auf die statistische Lücke | Empfehlung | Wirkung stat. Lücke | Steuerung Fahrzeugströme / Umweltrelevanz | Aufwand, Kosten | Rechtl. Umsetzbarkeit | Praktische Umsetzbarkeit | Hauptakteur/ Akzeptanz bzw. Aspekte die Auswirkung auf die Akzeptanz haben können |
|--|---|---|---------------------|---|-----------------|--|--------------------------|--|
| Demontage in anderen als anerkannten Demontagebetrieben in Deutschland | In Deutschland endgültig außer Betrieb gesetzte Fahrzeuge werden in nicht-erkannten Demontagebetrieben demontiert | E11a: Überregionale Arbeitsgruppe | Groß | Hoch | Hoch | Keine Rechtsänderung erforderlich | Ja | Regionalbehörden: eingeschränkt wg. hohem Aufwand |
| | | E 11b: Pool für technischen Sachverstand | | | Hoch | Ggf. problematisch (Ko-Finanzierung hoheitlicher Aufgaben) | Zu prüfen | Wirtschaftsbeteiligte: fraglich wg. teilweise externer Ko-Finanzierung hoheitlicher Aufgaben |
| | | E 11c: Unterstützung bei Übergang nicht anerkannter Demontagebetriebe zu anerkannten Demontagebetrieben | | | Mittel | Gegeben | Ja | Regionalbehörden: eingeschränkt wg. Aufwand |

| Bereich, in dem die statistische Lücke beeinflusst wird | Einfluss auf die statistische Lücke | Empfehlung | Wirkung stat. Lücke | Steuerung Fahrzeugströme / Umweltrelevanz | Aufwand, Kosten | Rechtl. Umsetzbarkeit | Praktische Umsetzbarkeit | Hauptakteur/ Akzeptanz bzw. Aspekte die Auswirkung auf die Akzeptanz haben können |
|---|-------------------------------------|--|---------------------|---|-----------------|----------------------------------|--------------------------|---|
| | | E 11d: Vollzugshilfe zur Beschlagnahme aus nicht anerkannten Betrieben | | | mittel | Zu prüfen | Zu prüfen | Regionalbehörde: gegeben |
| | | E 12: Monitoring des Verkaufs gebrauchter Ersatzteile | | | Mittel | Gegeben | Gegeben | Regionalbehörden: eingeschränkt wg. Aufwand |
| | | E 13: Zähl-/Wiegekampagnen bei Schreddern für Restkarossen | | Indirekte Wirkung | Mittel | In Altfahrzeug-RL implementieren | Ja | Wirtschaftsbeteiligte der AltfahrzeugV: Kostentragung müsste geklärt sein |

| Bereich, in dem die statistische Lücke beeinflusst wird | Einfluss auf die statistische Lücke | Empfehlung | Wirkung stat. Lücke | Steuerung Fahrzeugströme / Umweltrelevanz | Aufwand, Kosten | Rechtl. Umsetzbarkeit | Praktische Umsetzbarkeit | Hauptakteur/ Akzeptanz bzw. Aspekte die Auswirkung auf die Akzeptanz haben können |
|--|--|--|---------------------|---|---|-------------------------------------|---|---|
| Demontage in anerkannten Demontagebetrieben in Deutschland | Unvollständige Erfassung teilerlegter Altfahrzeuge aus grauen Quellen, lückenhafte Übermittlung der Daten zu Verwertungsnachweisen an die Statistischen Landesämter, unvollständige Erfassung von Daten aus anerkannten Demontagebetrieben, wesentliche Unterschlagen von demontierten Altfahrzeugen bei der Abfrage durch die Statistischen Landesämter | E14: Intensivere Prüfung der anerkannten Demontagebetriebe | Gering | Nein | Gering (bei Nutzung von standardisierten Plausibilitätschecks) bis mittel | Gesetzesgrundlage bereits vorhanden | Gegeben in Hinblick auf fahrzeugbezogene Input-/Output-Checks, eingeschränkt in Hinblick auf die Verfügbarkeit von Plausibilitätschecks | Demontagebetriebe und Vollzugsbehörden: gering |

| Bereich, in dem die statistische Lücke beeinflusst wird | Einfluss auf die statistische Lücke | Empfehlung | Wirkung stat. Lücke | Steuerung Fahrzeugströme / Umweltrelevanz | Aufwand, Kosten | Rechtl. Umsetzbarkeit | Praktische Umsetzbarkeit | Hauptakteur/ Akzeptanz bzw. Aspekte die Auswirkung auf die Akzeptanz haben können |
|---|--|---|---------------------|---|-----------------|---|--------------------------------|--|
| Verwertungsnachweis | Nur von ca. 10 % der verwerteten Altfahrzeugen liegen Verwertungsnachweise im ZFZR vor (Anmerkung: zu den anderen Altfahrzeugen erfolgen Meldungen über die Stat. Landesämter ohne Nennung konkreter FIN). | E15a: Informationsfluss Demontagebetriebe - ZFZR | Gering | Gering/ mittel | Mittel | Ggf. Anpassung gesetzlicher Grundlagen erforderlich, Datenschutzrechtliche Anforderungen sind zu prüfen | Möglich | Bei Demontagebetrieben nicht bekannt; hoch bei Kfz-Zulassungsstellen, bei „Kopfstelle“ (z. B. KBA, GESA, UBA) personeller und finanzieller Zusatzaufwand |
| | | E15b: Gebührenangleichung bei Außerbetriebsetzung | Gering bis mittel | Gering bis mittel | Gering | Grds. möglich (Angelegenheit/ Beteiligung der Bundesländer) | Möglich | Hoch bei Letzthaltern, gegeben bei Kfz-Zulassungsstellen |
| | | E15c: Konsequentes Einfordern von VN oder Verbleibsangabe durch ZLS | Gering | Gering | Mittel | Bereits geltendes Recht | Ja, da bereits geltendes Recht | Gering bei Kfz-Zulassungsstellen |

| Bereich, in dem die statistische Lücke beeinflusst wird | Einfluss auf die statistische Lücke | Empfehlung | Wirkung stat. Lücke | Steuerung Fahrzeugströme / Umweltrelevanz | Aufwand, Kosten | Rechtl. Umsetzbarkeit | Praktische Umsetzbarkeit | Hauptakteur/ Akzeptanz bzw. Aspekte die Auswirkung auf die Akzeptanz haben können |
|---|---|---|---------------------|---|-----------------|-----------------------|--------------------------|---|
| | | E15d: Verstöße gegen die Pflicht zur AuBS unter Vorlage des VN als Ordnungswidrigkeit | Gering | Gering | Mittel | Möglich | Möglich | Nicht bekannt |
| | | E15e: Online-Außerbetriebsetzung mit VN | Gering | Gering | Nicht bekannt | Möglich | Möglich | Bei Kfz-Zulassungsstellen hoch |
| | | E16: Wiederzulassungsverbot | Gering | Keine/ mittel | Keine | Möglich | Möglich | Hoch bei BMVI |
| Abgrenzung Gebrauchtfahrzeug - Altfahrzeug | Je nach Einstufung werde unterschiedliche Statistiken bzw. Monitoringverfahren relevant | E17: EU-weit rechtsverbindliche Kriterien und Vorgehensweisen zur Abgrenzung | Groß | Groß | Mittel bis groß | Komplex | Gegeben, aber komplex | EU-KOM: unklar, Akteure des Exports: gegeben bis gering |

| Bereich, in dem die statistische Lücke beeinflusst wird | Einfluss auf die statistische Lücke | Empfehlung | Wirkung stat. Lücke | Steuerung Fahrzeugströme / Umweltrelevanz | Aufwand, Kosten | Rechtl. Umsetzbarkeit | Praktische Umsetzbarkeit | Hauptakteur/ Akzeptanz bzw. Aspekte die Auswirkung auf die Akzeptanz haben können |
|---|--|--|---------------------|---|----------------------------------|---|--------------------------|---|
| | | E17a: Technische Kriterien nach Sicherheitskriterien der RL 2014/45/EU | | | Mittel | Komplex | Gegeben, aber komplex | EU-KOM: unklar, Nationale Behörden: unklar, Akteure des Exports: gegeben bis gering |
| | | E17b: Operationalisierung der Ansätze zur Abgrenzung von Gebrauch- und Altfahrzeugen | | | Mittel | Gegeben, wenn Abgrenzungskriterien verbindlich gemacht wurden | Gegeben | EU-KOM: unklar, Vollzugsbehörden: gegeben, Akteure des Exports: gegeben bis gering |
| | | E17c: Beweislastumkehr praktizieren | | | Länder: gering; Exporteure: hoch | Gegeben | Gegeben | Länder: gegeben; Exporteure: gering |
| Online-Handel | Oftmals keine Informationen zum Verbleib des Fahrzeugs | E18a: Altfahrzeuge über Restwertbörsen nur an qualifizierte Bieter | Groß | Groß | Mittel | Zu prüfen | Aufwändig | Versicherungen: nicht gegeben Betreiber von Restwertbörsen: nicht gegeben |

| Bereich, in dem die statistische Lücke beeinflusst wird | Einfluss auf die statistische Lücke | Empfehlung | Wirkung stat. Lücke | Steuerung Fahrzeugströme / Umweltrelevanz | Aufwand, Kosten | Rechtl. Umsetzbarkeit | Praktische Umsetzbarkeit | Hauptakteur/ Akzeptanz bzw. Aspekte die Auswirkung auf die Akzeptanz haben können |
|---|--|---|---------------------|---|-------------------|---------------------------|--------------------------|---|
| | | E18b: Altfahrzeuge über Online-Handelsplattformen nur an Demontagebetriebe | | | Mittel | Zu prüfen | Aufwändig | Online-Handelsplattformen: nicht gegeben |
| Sonstige Ansatzpunkte: Sachverständigen-System | Fehlende Identifizierung nicht-dokumentierter Demontagen in anerkannten Demontagebetrieben | E19: Änderung des Sachverständigen-Systems bei der Überprüfung der Altfahrzeugverwerter | Gering | Gering | Gering bis mittel | Änderung der AltfahrzeugV | Gegeben | BMUB: hierzu liegen keine Informationen vor |
| Sonstige Ansatzpunkte: GESA-Liste | Unsicherheit über Vollständigkeit und Richtigkeit der Angaben | E20: Überprüfung der GESA-Liste | Gering | Gering | Mittel | Gegeben | Gegeben | Bundesländer: gegeben |

1 Introduction

Approximately 8 million passenger cars (pass. cars) are decommissioned annually in Germany, of which around 3 million are considered to be permanently⁵ out of operation. From the available statistical sources, it was not possible to account for the whereabouts of about 1 million of the permanently decommissioned pass. cars in Germany each year.

The subject-matter of the ‘Whereabouts of end-of-life vehicles’ project was the closure of this ‘statistical gap’ to the maximum extent possible. The detailed objectives of the project were as follows:

- ▶ identification of the possible reasons underlying the ‘statistical gap’;
- ▶ determination, itemisation and, to the maximum extent possible, quantification of information on the actual whereabouts of permanently decommissioned vehicles,
- ▶ development of measures and instruments that can be used to permanently improve the data situation.

1.1 Applied methodology

The structure of the project followed the assignment of the tasks and included in particular the following work packages (WPs), with the following contents:

Figure 9: Project structure overview



1.1.1 WP1: Research – available data, legal framework and involved players

In the scope of WP1, the following particular aspects were researched, which served as the basis for further analyses and studies within the framework of the project:

- ▶ **Available data:** Presentation and assessment of currently available data sources on the whereabouts and the underlying data flows with particular regard to data origins, legal bases, data quality and completeness.
- ▶ **Reasons for decommissioning** and their recording in statistics.
- ▶ **Legal framework:** Presentation of legal bases applicable in Germany in connection with the whereabouts of motor vehicles.

⁵ ‘Permanently’ only refers to decommissioning in Germany. Such vehicles may be recommissioned abroad.

- ▶ **Involved players:** Analysis of the players involved in decommissioning, end-of-life vehicle recycling and second-hand vehicle exportation (and in activities related to other reasons for decommissioning) and their contribution to vehicle flows.

1.1.2 WP2: Causes of the data gaps

For each reason of decommissioning identified in WP 1, the life-cycles of the vehicles were monitored and the share under which the vehicles were entered into the statistics was presented. The reasons for the established data gaps were thoroughly researched, analysed, assessed and presented. The data gaps were quantified to the maximum extent possible. In addition, the role of the players identified in WP 1 (e.g. interests, regulatory incentives) was also discussed.

1.1.3 WP 3: Vehicle whereabouts in a reference year

The goal of this work package was to use research data to determine and itemise to the maximum extent possible the actual whereabouts of permanently decommissioned vehicles in the reference year of 2013 based on analyses conducted in the scope of WP 2 in connection with the reasons underlying the data gaps.

1.1.4 WP 4: Possible solution proposals, actions and instruments

WP 4 encompassed solution proposals that may be used to permanently improve the data situation in the future, including legal instruments derived from and developed with regard to the results obtained from the previous work packages. Suggestions from other EU Member States were also researched and included. Each solution proposal was evaluated (e.g. with regard to their effect on the statistical gaps, to their costs, etc.).

1.1.5 WP 5: Practical research, workshops, advisory groups

In order to support the work conducted within the scope of the remaining work packages, practical research was carried out on identified focal points and workshops were conducted as a means of information collection and assessment.

The project was characterised by a high level of complexity due to the diverse factors involved (diverse players; relevant fields of law; diverging interests; technical, economic and environmental parameters). Therefore, a multi-method approach involving a significant number of players was needed to achieve the goal and to process the individual work packages. The findings summarised in this report were generated and verified using the following methods (among others):

- ▶ Numerous workshops with players, stakeholders and authorities working on a national and international level (e.g. on the following topics: ‘Certificates of Destruction’, ‘Distinction of second-hand and end-of-life vehicles’);
- ▶ analysis and evaluation of literature;
- ▶ analysis of legal norms and judgements;
- ▶ on-site sessions (at the Port of Hamburg, the Port of Antwerp, the Essen vehicle market, and at authorised dismantling and shredding facilities);
- ▶ research and discussion with players from EU Member States (e.g. Czech Republic, France, Poland, Netherlands, Belgium, Lithuania);
- ▶ expert interviews with economic operators as well as national and international authorities;
- ▶ evaluation of primary data; and
- ▶ standardised questionnaires.

This methodologically diverse approach made possible the effective processing of the identified problems and the generation of new insights and data used to close the statistical gaps. It also provided in-depth knowledge about correlations and dependencies that go beyond pure data.

1.2 Report structure

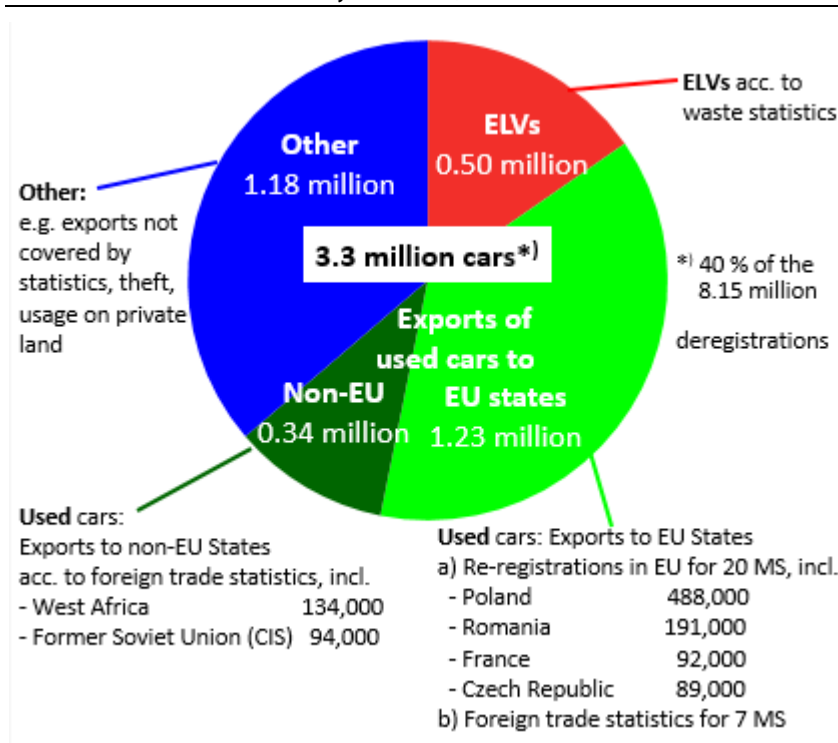
This report provides a summary on the insights gained in this manner. The report is divided into four main parts. Following the brief description of the currently available data (Chapter 2), Chapter 3 describes the possible reasons underlying the lack of statistical records by utilising the scenarios developed within the scope of the project in connection with the possible whereabouts of decommissioned vehicles and with the relevant players. Chapter 4 defines the legal framework and the relevant questions related to it, which plays a key role in processing the project. Based on the description of these issues, Chapter 5 presents the actual whereabouts of the decommissioned vehicles for the reference year of 2013 and tackles the possible reasons for the statistical gaps identified in chapter 3. The report is concluded with recommendations and action proposals (Chapter 6) aimed at the permanent improvement of the future data situation regarding the whereabouts of decommissioned vehicles.

2 Currently available data – status quo of the recording of decommissioned vehicles in Germany

Chapter 2 presents the currently available data on decommissioned vehicles and its whereabouts. Although the basis of statistical data has been steadily expanding in the past years, it still remains incomplete.

According to the Federal Motor Transport Authority (FMTA), 8.15 million pass. cars were decommissioned in Germany in 2013. Of this, 4.85 million vehicles were estimated to be temporarily decommissioned and 3.3 million to be permanently⁶ decommissioned (FMENCBNS and FEA 2015, p. 27). 1.57 million vehicles were recorded as exported. 0.34 million of these vehicles were exported to non-EU countries, while 1.23 million pass. cars were transported to other EU MSs. According to waste statistics, half a million vehicles were recycled in Germany. Deducting these vehicles from the total shows that 1.18 million vehicles with unrecorded whereabouts remained in 2013 (FMENCBNS and FEA 2015; see Figure 10).

Figure 10: Whereabouts of passenger cars considered to be permanently decommissioned in Germany in 2013, in million units

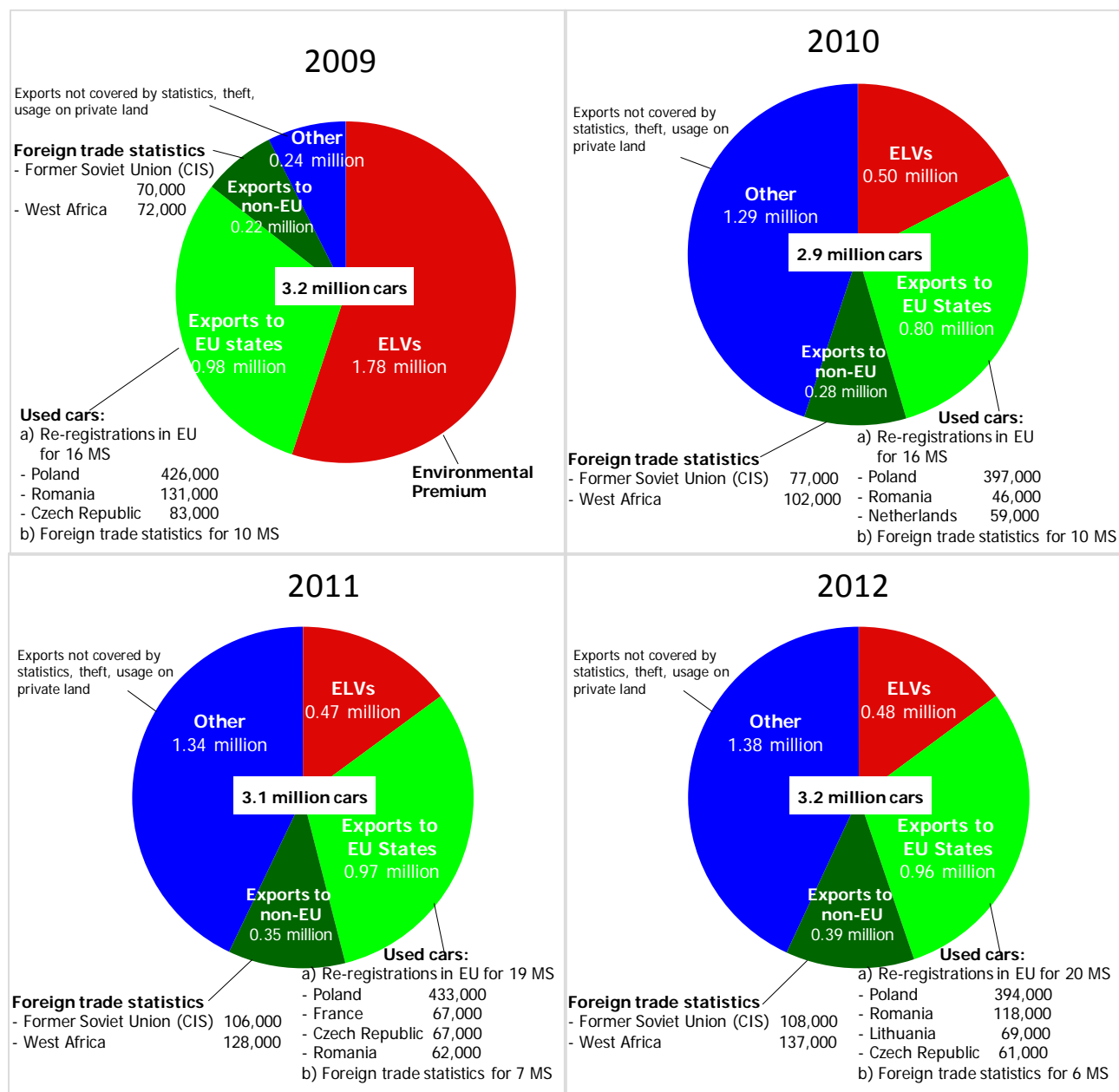


Source: FMENCBNS and FEA (2015); Note: In case of the number of permanently decommissioned vehicles, the delta calculation does not correspond exactly to the statistical gap due to rounding differences. The actual number of permanently decommissioned vehicles is 3.26 million (8.15 million * 0.4). 'Permanently decommissioned' only refers to decommissioning in Germany. Such vehicles may be recommissioned abroad.

⁶ In this context, 'permanently' means that the respective vehicles were not registered again. German registration laws do not differentiate between 'permanent' and 'temporary' decommissioning. In this respect, the term should not be interpreted in the legal sense, but rather as the description of the actual situation. 'Permanently' only refers to decommissioning in Germany. Such vehicles may be recommissioned abroad.

The number of statistically absent decommissioned vehicles paints a similar picture with regard to the previous years (see Figure 11). In 2009, the statistical gap was significantly lower due to the environmental bonus.

Figure 11: Whereabouts of passenger cars considered to be permanently decommissioned between 2009 and 2012



Source: FMENCBNS and FEA (2014) (modified)

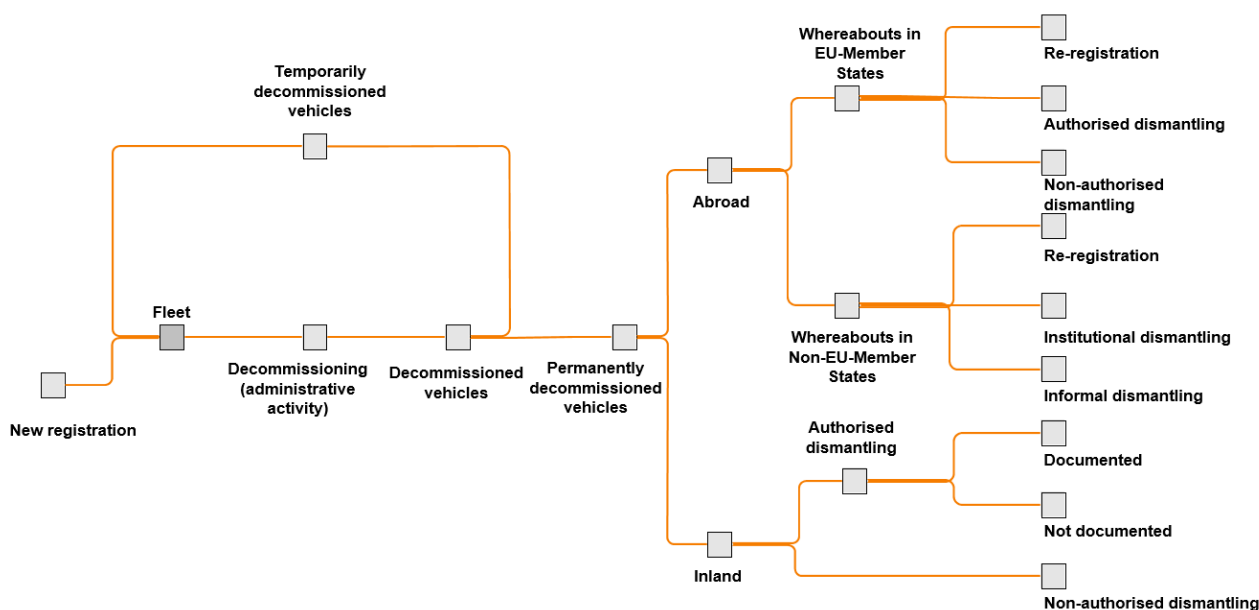
The statistics forming the basis of this data and their legal bases are described in more detail in Chapter 4.8.

3 Scenarios on the whereabouts of decommissioned vehicles

The whereabouts of decommissioned and end-of-life vehicles is an extremely complex issue in reality, as there are different possible eventualities. In order to illustrate these eventualities and to enable the improved analysis of the whereabouts and the statistical gap, the possible whereabouts were arranged into scenarios based on expert information⁷. These scenarios provide information on the possible whereabouts of vehicles decommissioned in Germany. The **physical whereabouts** of the vehicles are presented as the starting point. Following this, the **involved players**, the **information flows** underlying the process, the potentially available **bases of data** and the **legal norms** relevant to the research project that have an impact on the actual whereabouts or the statistical record-keeping of vehicles are listed in table form. Each table characterises the chronologically successive activities of the given scenario in its columns. The column on the left represents the starting point of the process, while the column on the far right describes the last activity of the scenario dealing with the whereabouts.

Figure 12 displays the schematic overview of the possible scenarios regarding the whereabouts of decommissioned vehicles. Following their decommissioning, the vehicles can either be re-registered, meaning that the decommissioning is only temporary (see Chapter 3.1.1), or undergo different life-cycles within and outside of Germany. The scenarios in connection with vehicles located within Germany are described in Chapters 3.1 and 3.4.1. The scenarios in connection with vehicles located in a foreign country within the EU are presented in Chapters 3.2 and 3.4.3, while Chapter 3.3 deals with those located in non-EU countries.

Figure 12: Schematic overview of scenarios concerning the life-cycle of vehicles



In addition to the systematic presentation of life-cycles and the involved players, data sources and information flows, this chapter also discusses the potential reasons that can lead to the lack of statistical records in each scenario. The goal was to identify the data gaps, as well as their causes and underlying reasons on the basis of the level of knowledge available at the beginning of the project, and to describe the involved players and their interests. The shares under which the vehicles are currently recorded in the statistics via their respective life-cycles is also described.

⁷ Basis: Appraiser expertise, literature research, discussions with various experts.

During the research conducted on the reasons of the lack of statistical records, an analysis was carried out on the contributing economic factors (e.g. price and cost structures pertaining to the life-cycles) where necessary. The actual processes involved in the decommissioning and in the vehicles' actual whereabouts were also analysed. The basic legal conditions that have an impact on the statistical gap are discussed in Chapter 4. The quantification of the lack of statistical records per life-cycle regarding 2013 is presented in Chapter 5.

3.1 Scenarios regarding whereabouts within Germany

The scenarios in this subchapter deal with vehicles that remain within the country after decommissioning. The various life-cycles are presented in a distinct manner.

3.1.1 Scenario 1: Subsequent re-registration of the vehicle in Germany

Brief description of the scenario: The vehicle in this scenario is not an end-of-life vehicle (i.e. it does not constitute waste). Therefore, it is decommissioned by the last holder without a Certificate of Destruction and could be registered again by the last holder or another holder in Germany at a MV registration office to participate in road traffic (see Table 7).

Table 7: Vehicle decommissioning (Decom.) with subsequent re-registration in Germany

| Viewing area | Decom. without CoD | Re-registration in Germany |
|--|--|--|
| Player | Last holder | Last holder/new holder |
| Information flow regarding the whereabouts | Last holder → MV registration office → FMTA | Last holder/new holder → MV registration office → FMTA |
| Statistical data pool | The vehicle is registered at the CVRFMTA for decom., but without a CoD | CVRFMTA |
| Legal norms | Vehicle Registration Ordinance (VRO) | Vehicle Registration Ordinance (VRO) |
| Monitoring | MV registration offices | MV registration offices |

The proportion of permanently decommissioned vehicles with regard to the total number of decommissionings is currently estimated to be 40% (FMENCBNS and FEA 2015, see footnote 13). Applying this to 2013 results in 3.26 million vehicles (see Chapter 2). Such an estimation is necessary as the statistics of the FMTA do not differentiate between temporarily and permanently decommissioning since the 2007 introduction of the Vehicle Registration Ordinance (VRO) for the simplification of vehicle decommissioning. However, this distinction is important to close the statistical gaps, since the calculations on vehicle whereabouts take the permanently decommissioned vehicles into consideration.

Potential gaps: The determined proportion of permanently decommissioned vehicles is outdated.

The 40% proportion is based on and older calculated figures from before 2007 and on estimations. This results in uncertainties regarding the current calculations (FMTA 2015a). The potential impact on the statistical gap is underlined by the fact that a 1% difference of the proportion would amount to about 80,000 vehicles (ibid.).

3.1.2 Dismantling in authorised dismantling facilities in Germany

In the case of the life-cycle encompassing the dismantling of the vehicle in an authorised dismantling facility within Germany, the vehicle is decommissioned by (or on behalf of) the last holder at the MV

registration office and is recycled at an authorised dismantling facility. In such events, two scenarios can be conceived: one where a Certificate of Destruction is issued and another where it is not.

3.1.2.1 Scenario 2: Recycling end-of-life vehicles in Germany at authorised dismantling facilities with a Certificate of Destruction

Brief description of the scenario: The vehicle in question is an end-of-life vehicle (i.e. waste), and after it has been handed over to a German authorised dismantling facility, it is decommissioned and recycled there (see Figure 13).

Figure 13: Scenario 2: recycling vehicles in Germany at authorised dismantling facilities with a Certificate of Destruction

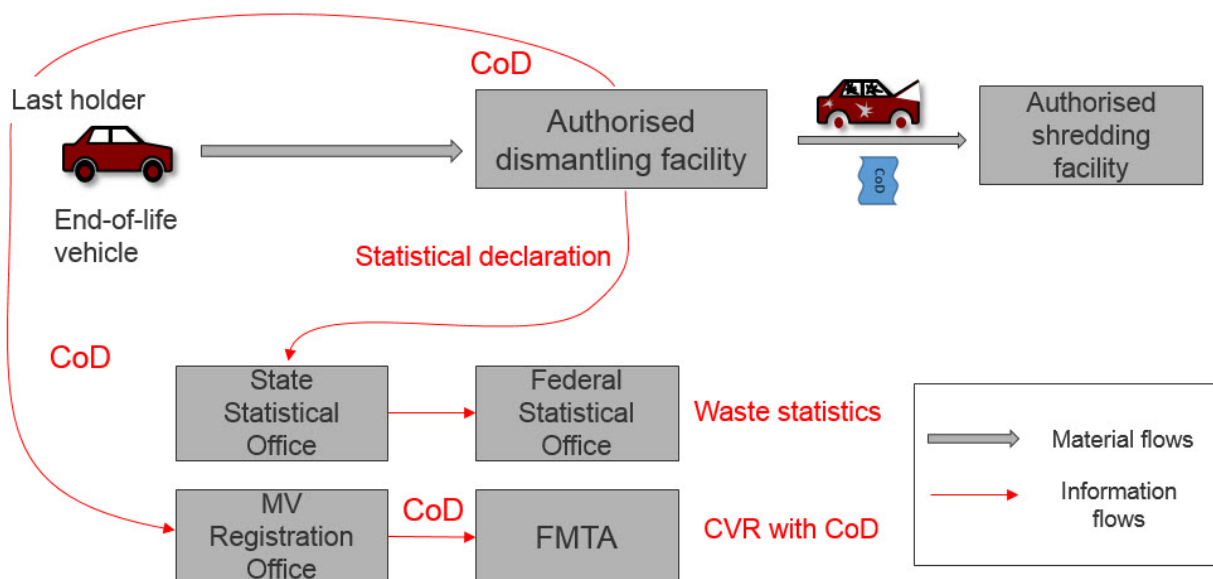


Table 8: Recycling end-of-life vehicles in Germany at authorised dismantling facilities with a Certificate of Destruction

| Viewing area | Handing the vehicle over to an authorised dismantling facility | Decom. with CoD | Authorised dismantling | Authorised shredding |
|--|--|--|--|--|
| Player | Last holder | Last holder | Authorised dismantling facility | Authorised shredding facility |
| Information flow regarding the whereabouts | Certificate of Destruction: dismantling facility → last holder | Last holder → MV registration office → CVRFMTA | Waste statistical data entry form: authorised dismantling facility → state statistical office → Federal Statistical Office | Waste statistical data entry form: authorised shredding facility → state statistical office → Federal Statistical Office |

| Viewing area | Handing the vehicle over to an authorised dismantling facility | Decom. with CoD | Authorised dismantling | Authorised shredding |
|------------------------------|--|---|--|--|
| Statistical data pool | Operation log of the authorised dismantling facility with the number of CoDs specified | Number of cases: CVRFMTA, 'Decom. with CoD' case scenario (presentation of CoD at the same time with or after the decom.) | Number of end-of-life vehicles and their total weight: Federal Statistical Office, waste statistics | Number of stripped vehicles and their total weight: Federal Statistical Office, waste statistics |
| Legal norms | End-of-Life Vehicle Ordinance | Vehicle Registration Ordinance (VRO), End-of-Life Vehicle Ordinance | Environmental Statistics Act, facility permit laws, FICA, CSCA, End-of-Life Vehicle Ordinance, Ordinance on Hazardous Substances, Explosives Act, water laws | Environmental Statistics Act, facility permit laws, FICA, CSCA, End-of-Life Vehicle Ordinance, Ordinance on Hazardous Substances |
| Monitoring | Within the framework of certification | MV registration offices | Within the framework of certification; supervisory authorities of the federal states | Within the framework of certification; supervisory authorities of the federal states |

The potential gaps and their reasons relevant for this scenario are described under Subchapter 3.1.2.3.

3.1.2.2 Scenario 3: Recycling end-of-life vehicles in Germany at authorised dismantling facilities without a Certificate of Destruction or without subsequently presenting the Certificate of Destruction at the MV registration office

Brief description of the scenario: The end-of-life vehicle is decommissioned without a Certificate of Destruction and is subsequently recycled at an authorised dismantling facility in Germany. In practice, on the one hand, the authorised dismantling facility may neglect to issue a Certificate of Destruction despite the legal requirements (see Figure 14), or, on the other hand, the authorised dismantling facility may fill in the Certificate of Destruction, but it might not be forwarded (generally by the last holder) to the MV registration office (see Figure 15).

Figure 14: Scenario 3: recycling end-of-life vehicles in Germany at authorised dismantling facilities without issuing a Certificate of Destruction

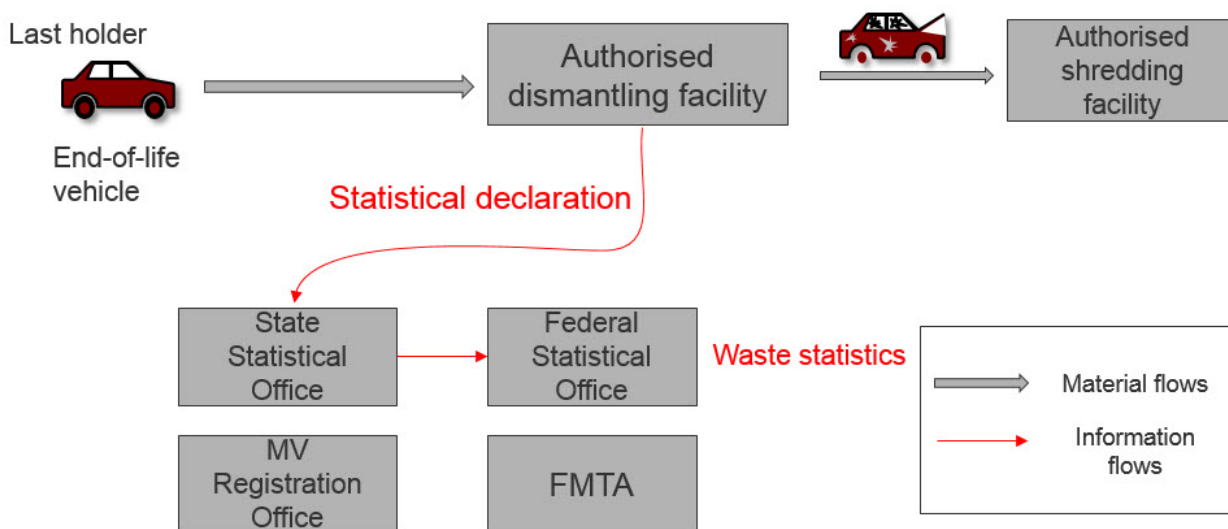
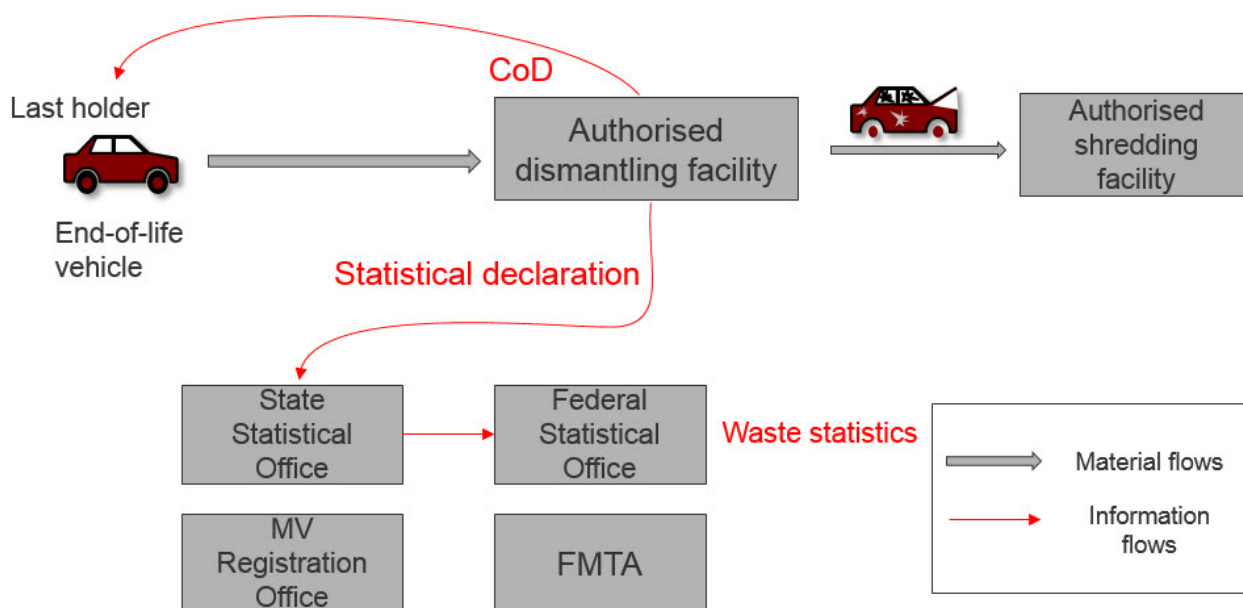


Figure 15: Scenario 3: recycling end-of-life vehicles in Germany at authorised dismantling facilities with an issued Certificate of Destruction that has not been forwarded to the MV registration office



The scenarios shown in Figure 14 and Figure 15 have the following alternatives: after the decommissioning, the vehicle is transported to a workshop, which passes it on to an authorised dismantling facility as an end-of-life vehicle, and no Certificate of Destruction is issued for the vehicle (Figure 16, Alternative a)), or the vehicle is transported to a multi-purpose facility (functioning as a dealer, workshop and authorised dismantling facility) after the decommissioning (Figure 16, Alternative b)), and no Certificate of Destruction is issued.

Figure 16: Alternatives to Scenario 3: recycling end-of-life vehicles in Germany at authorised dismantling facilities without a Certificate of Destruction

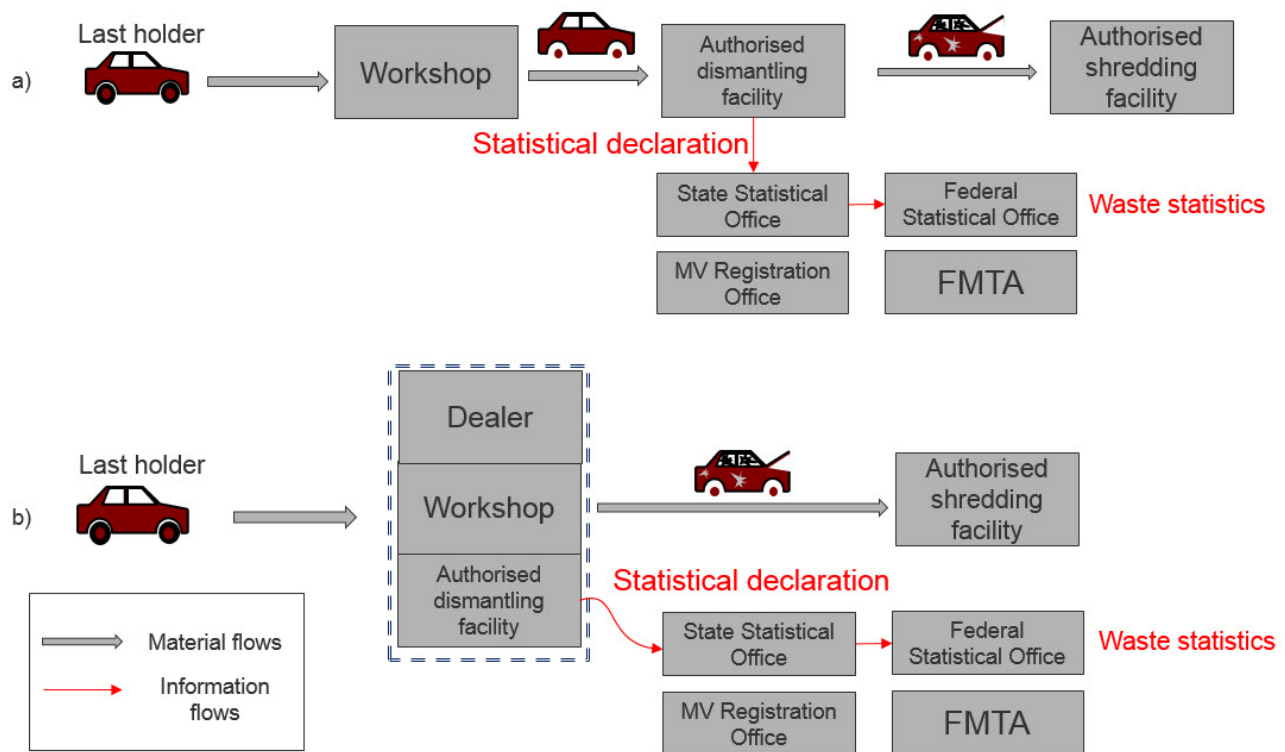


Table 9: Decommissioning end-of-life vehicles without a Certificate of Destruction and recycling them within Germany at an authorised dismantling facility

| Viewing area | Decom. without CoD | Potential sale to a dealer or repairing in a workshop | Authorised dismantling without CoD | Authorised shredding |
|---|---|---|--|--|
| Player | Last holder | Dealer/workshop | Authorised dismantling facility | Authorised shredding facility |
| Information flow regarding the whereabouts | No CoD issued: decom. without CoD → MV registration office → CVR/FMTA without CoD | n/a | Waste statistical data entry form: Authorised dismantling facility → state statistical office → Federal Statistical Office | Waste statistical data entry form: Authorised shredding facility → state statistical office → Federal Statistical Office |

| Viewing area | Decom. without CoD | Potential sale to a dealer or repairing in a workshop | Authorised dismantling without CoD | Authorised shredding |
|------------------------------|--|---|---|--|
| Statistical data pool | The vehicle is registered at the CVRFMTA for decom., but without a CoD | n/a | Number of end-of-life vehicles and their total weight: Federal Statistical Office, waste statistics: State statistical office (end-of-life vehicles only incorporated in waste statistics, as long as the authorised dismantling facility reports them) | Number of stripped vehicles and their total weight: Federal Statistical Office, waste statistics |
| Legal norms | Vehicle Registration Ordinance (VRO) | End-of-Life Vehicle Ordinance | Environmental Statistics Act, facility permit laws, FICA, CSCA, End-of-Life Vehicle Ordinance, Ordinance on Hazardous Substances, Explosives Act, water laws | Environmental Statistics Act, facility permit laws, FICA, CSCA, End-of-Life Vehicle Ordinance, Ordinance on Hazardous Substances |
| Monitoring | MV registration offices | Supervisory authorities of the federal states | Supervisory authorities of the federal states | Supervisory authorities of the federal states |

Vehicles that are dismantled at authorised dismantling facilities in Germany can currently be tracked with the waste statistics of the Federal Statistical Office and the data provided by the Federal Motor Transport Authority on Certificates of Destruction presented by the last holder upon or after the decommissioning of the vehicle.

The waste statistics of the Federal Statistical Office are more extensive regarding the number of vehicles statistically recorded at authorised dismantling facilities. In 2013, the FMTA recorded a total of 46,263 Certificates of Destruction presented upon or after vehicle decommissioning (FMTA 2015b). The waste statistics encompass 500,322 vehicles recycled in 2013 at authorised dismantling facilities (see Chapter 2) (FMENCBNS and FEA 2015). It can be assumed that the Certificates of Destruction in the Central Vehicle Register (CVRFMTA) are incorporated in the reports made to the Federal Statistical Office. Thus, the waste statistics represent a reference source for monitoring the life-cycle of vehicles. Of the Certificates of Destruction registered in 2013, 11,836 were presented subsequently and 9,040 were submitted from abroad (FMTA 2015b).

Authorised dismantling facilities received input through different means. Quantitatively speaking, the most relevant method was the following: the last owner of the vehicle left it to the facility or at the collection/disposal point collaborating with the facility. The last owners received a varying amount of money for the vehicle (where applicable). Sometimes, this was a symbolic amount of EUR 1.

It is questionable whether vehicles which have been transferred by their last owner to an authorised dismantling facility (waste disposal facility) are automatically and mandatorily regarded as end-of-life vehicles, which are to be recycled (see Chapter 4.2.2).

In addition, damaged and second-hand vehicles are purchased from various sources (online platforms, magazine advertisements) mostly to acquire spare parts.

3.1.2.3 Potential data gaps and their causes

This section deals with the scenarios described in Chapters 3.1.2.1 and 3.1.2.2.

Potential gaps: No statistical records on the subset of vehicles that had been recycled in authorised dismantling facilities within Germany.

Possible reasons for the lack of records:

1. Incomplete record-keeping of partially dismantled vehicles by authorised dismantling facilities:

Affected scenario: 3

Discussions with experts and representatives of authorised dismantling facilities and authorities indicated that authorised dismantling facilities also perform dismantling on partially dismantled or pre-processed vehicles. These come from workshops, among others. An interviewee from an authorised dismantling facility stated that this was a standard practice at his workplace, and that in 2014, about 7% of the end-of-life vehicles treated there consisted of partially dismantled end-of-life vehicles with unknown origins (personal discussion with a representative of an authorised dismantling facility, April 2015). Experts claim that Certificates of Destruction are not always issued for partially dismantled end-of-life vehicles (personal discussion with representatives of authorised dismantling facilities and experts between December 2015 and March 2016).

The situation is further compounded by the fact (where applicable) that these facilities combine different business areas. In many cases, the dismantling activity is combined with the commercial or workshop activities of other facilities or facility units due to economic reasons, which may not be apparent to the last owner.

2. Transmission of incomplete data regarding Certificates of Destruction by authorised dismantling facilities:

Affected scenarios: 2 and 3

The incomplete record-keeping of Certificates of Destruction in the CVR/FMTA can be caused by (apart from neglecting to record Certificates of Destruction) last owners who do not forward the Certificate of Destruction to MV registration offices. The fact that last owners are not aware that they are obligated to submit the issued Certificates of Destruction might also contribute to this situation (for a detailed explanation, see Chapter 3.1.3).

3. Incomplete recording of data from authorised dismantling facilities:

Affected scenarios: 2 and 3

It is also possible that the waste statistics survey sample is incomplete and that some authorised dismantling facilities have not been recorded. An expert on recycling end-of-life vehicles (who, among other activities, also certifies dismantling facilities) stated in an interview that not all facilities registered at the JAEV are obligated to submit statistical reports (personal discussion with an expert, January 2015). This raises the question of whether or not the statistical data pool is complete or whether or not a projection is created based on the collected data sample (ibid.). An interviewed representative of an authorised dismantling facility reported similar experiences. The Federal Statistical Office considers the reports to have a high degree of completeness. In each case, it should be assumed that

all high-capacity authorised dismantling facilities have been recorded. Even if a facility is not taken into consideration, due to, among other eventualities, recent changes (e.g. a new authorised dismantling facility has been put into operation but has not yet been included in the survey sample), its quantitative relevance is estimated to be low (cf. Federal Statistical Office 2014a).

4. Dismantling not reported to state statistical offices:

Affected scenarios: 2 and 3

It is possible that authorised dismantling facilities recycle end-of-life vehicles, but do not report this when state statistical offices ask them to. The quantitative relevance of such unreported cases is estimated to be low, since they do not provide any significant advantages and the reporting itself does not lead to considerable additional expenses or disadvantages.

The quantitative relevance of the aforementioned reasons will be discussed in more detail in another report.

Reinforcing mechanisms by interaction:

Fee-based dismantling with a Certificate of Destruction:

Affected scenarios: 2 and 3

Dismantling with a Certificate of Destruction incurs an additional administrative fee of EUR 5.10 for the last holder as compared to dismantling without a Certificate of Destruction. If the Certificate of Destruction is presented subsequently, the additional costs rise to EUR 10.20⁸. It can be assumed that this circumstance results in fewer last holders claiming their Certificates of Destruction at authorised dismantling facilities and submitting them upon decommissioning. An interviewee from an authorised dismantling facility confirmed that the majority of last holders do not require the copy of the Certificate of Destruction, which is intended to be submitted to the MV registration office, when handing over their end-of-life vehicles (personal discussion with a representative of an authorised dismantling facility, April 2015).

Certificates of Destruction are associated with a recycling obligation (see Chapter 4.2.4), and they make it clear that the last owner intends the vehicle to be recycled as waste. Moreover, the submission of a Certificate of Destruction at the MV registration office – as opposed to the purely quantitative indication of the number of Certificates of Destruction the Federal Statistical Office receives from authorised dismantling facilities – results in a recycling process being assigned to the specific vehicle. This aspect is relevant when, for example, authorities such as customs offices investigate whether a Certificate of Destruction was submitted for a vehicle intended for export, which would prevent the resale of the vehicle as a second-hand vehicle. In this context, the higher number of Certificates of Destruction in the CVRFTMA can therefore be expected to influence the life-cycles.

According to the expert opinion of several individuals and the data provided by three interviewed MV registration offices, the number of Certificates of Destruction presented upon or after decommissioning is, among others, influenced by the fact that the MV registration offices are not always consistent in requiring the submission of Certificates of Destruction (MV registration office Kaiserslautern 2016; MV registration office Bad Dürkheim 2016; MV registration office Westerwaldkreis 2016; authorised dismantling facilities between December 2015 and March 2016; experts between January and March 2016).

⁸ Cf. item 224 of the Annex to the Ordinance on the Scale of Charges for Road Traffic Measures (OSCRTM) of 25/01/2011; last amended by the Ordinance of 16/04/2014.

The motivating measures aimed at last holders for the subsequent presentation of Certificates of Destruction are unknown. There is no legal obligation to do so (see also Chapter 4.1.2). During discussions with experts, it was assumed that these cases might entail total losses, which are only reimbursed by insurance companies if the decommissioning can be proven with a Certificate of Destruction. This could also be the case for vehicles that suffered an accident abroad (see Chapter 3.4.3).

3.1.3 Scenario 4: Whereabouts of end-of-life vehicles within Germany in case of non-authorized dismantling

Brief description of the scenario: The end-of-life vehicle is decommissioned without a Certificate of Destruction and disassembled for spare parts in a German dismantling facility other than those accredited in accordance with the ELV Ordinance (see Figure 17). The stripped vehicle is transported (without a blue copy of the Certificate of Destruction) to a shredding facility (Alternative a) or a scrap dealer, where it is crushed, mixed with other scrap and taken to a shredding facility (Alternative b).

Figure 17: Scenario 4: non-authorized dismantling in Germany

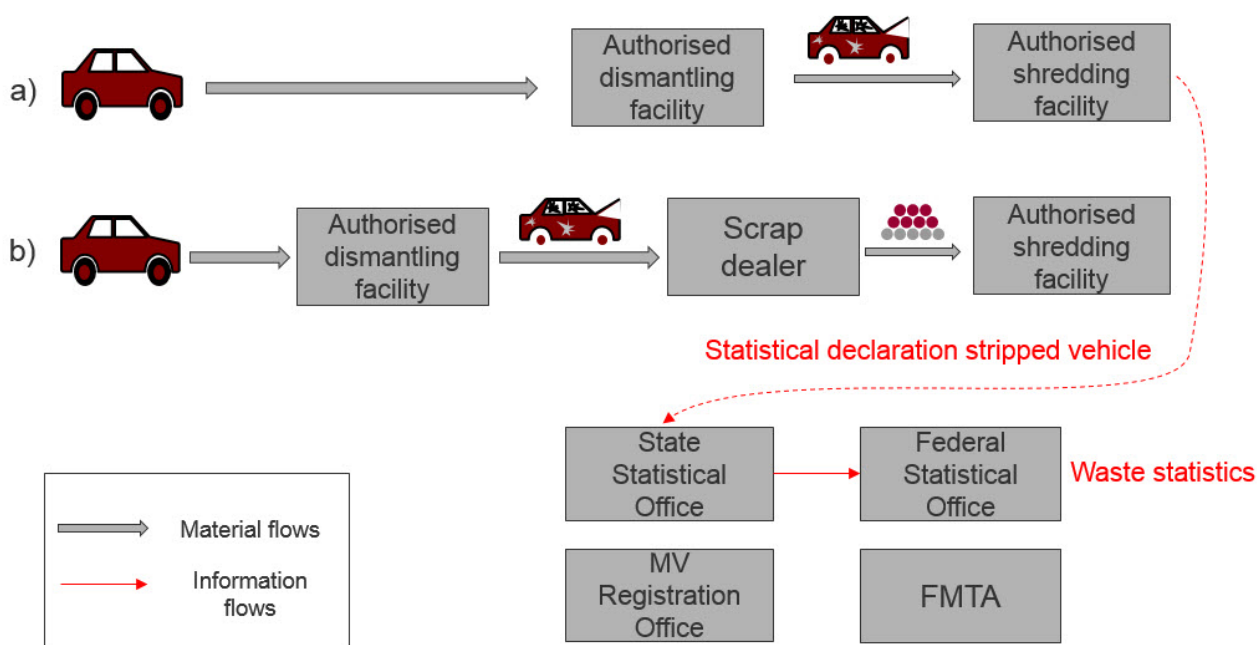


Table 10: Recycling end-of-life vehicles within Germany in case of non-authorised dismantling

| Viewing area | Decom. without CoD | Non-authorised dismantling | Potential sale of spare parts within Germany | Potential export of spare parts | Potential authorised shredding |
|---|--|--|--|---|---|
| Player | Last holder | Non-authorised dismantling (at a small business, workshop, dealer, or privately) | | | Scrap trade/shredding facilities |
| Information flow regarding the whereabouts | Decom.: Last holder → MV registration office → FMTA | n/a | n/a | Customs statistics if exported outside the EU and the value limit (EUR 1,000 total export value or 1,000 kg total export volume) was exceeded | Waste statistics reports; authorised shredding facilities might also report stripped vehicles |
| Statistical data pool | The vehicle is registered at the CVRFMTA for decom., but without a CoD | n/a | n/a | Customs statistics if exported outside the EU and the value limit was exceeded | Waste statistics of the Federal Statistical Office if declared as stripped vehicle |
| Legal norms | Vehicle Registration Ordinance (VRO) | CSCA; PC; End-of-Life Vehicle Ordinance, building laws or FICA, OHS | Trade laws, tax laws | Customs Code, Ordinance on the Implementation of the Customs Code, closed substance cycle laws | End-of-Life Vehicle Ordinance, Environmental Statistics Act, PC |
| Monitoring | MV registration offices | Supervisory authorities of the federal states | Trade supervision, Federal Fiscal Authority (where applicable) | Police, customs | Supervisory authorities of the federal states |

Regarding the scenario dealing with non-authorised dismantling in Germany, there are currently no statistical sources available for determining the number of vehicles with this life-cycle.

Non-authorised dismantling facilities or individuals performing such activities presumably acquire vehicles from different sources, for instance via magazine advertisements, eBay, salvage exchanges, private individuals, vehicle markets or fliers placed on the windshields of cars parking in public spaces. According to experts, the workshops of non-authorised dismantling facilities sometimes only remain at a place temporarily, making their localisation more difficult (cf., among others, statements from the expert workshop on the distinction between second-hand and end-of-life vehicles held in

Berlin on 21/03/2016). Members of enforcement and supervisory authorities claim that the location of the premises of these non-authorised dismantling facilities is often only identified accidentally or through the ‘indiscretion’ of other industry professionals (statements from the expert workshop on the distinction between second-hand and end-of-life vehicles held in Berlin on 21/03/2016).

Potential gaps: There are no statistical records on vehicles disassembled within Germany at non-authorised dismantling facilities or by private individuals, nor on those cases in which the partially treated vehicles are not handed over to authorised dismantling facilities.

Reasons for the lack of records:

1. Recycling without Certificates of Destruction

If a vehicle is disassembled by a non-authorised dismantling facility (including workshops), it receives no Certificate of Destruction, since such certificates can and may only be issued by authorised dismantling facilities. The same applies to non-authorised dismantling activities performed by private individuals. The Federal Statistical Office does not and cannot carry out an inquiry, since the facilities in question are not authorised dismantling facilities.

If partially dismantled end-of-life vehicles were handed over to authorised dismantling facilities, it would be possible to issue Certificates of Destruction or record the vehicles in the statistics of the Federal Statistical Office, meaning that a ‘delayed’ recording would take place (see Chapter 3.1.2). The economic grounds suggest that vehicles pre-processed by non-authorised dismantling facilities or private individuals are predominantly transported for further recycling as scrap, and not to authorised dismantling facilities (resulting in higher returns). The handover can entail the following:

- a) pre-processed vehicle given to a shredding facility (see Figure 17, Scenario a), or
- b) mixed scrap consisting of half-finished material awaiting shredding (see Figure 17, Scenario b).

In 2013, shredding facilities accepted 493,300 tonnes of stripped vehicles from within the country (FMENCBNS and FEA 2015, p. 10). 27,420 tonnes of stripped vehicles were exported under waste code 16 01 06 (ibid., p. 5, p. 13, p. 39). This amounts to 520,720 tonnes of stripped vehicles from dismantling facilities within Germany. This is offset by 500,322 end-of-life vehicles accepted at authorised dismantling facilities in 2013 (ibid., p. 6, p. 10, p. 34, p. 35, p. 40).

According to the FEA, the data comparison must take into account that, in the case of authorised dismantling facilities, the effect of the environmental bonus (albeit a comparatively low one) is to be determined (FMENCBNS and FEA 2015). As a result of inventory reduction, the volume treated in 2013 was approximately 5% higher than the volume of end-of-life vehicles accepted at authorised dismantling facilities⁹.

The conversion of the weights of end-of-life and stripped vehicles into unit numbers and vice versa is carried out by applying various factors, which are generally developed using treatment and shredding tests. The further analysis of these factors and the examination of the possible implications of shredding facility inputs on the amount of stripped vehicles from non-authorised dismantling activities or from non-documented dismantling activities carried out in authorised dismantling facilities are described in Chapter 5.3.2.3.

⁹ The FMENCBNS and the FEA (2015) specifies 500,322 accepted end-of-life vehicles and 526,231 treated end-of-life vehicles (see Figure 2, p. 16). These figures are estimates. No accurate data basis is available for this calculation, and it is particularly unclear whether or to what extent vehicles are exported regardless of the scrapping incentives (Heise 2009).

Enhanced effects due to the interaction of mechanisms

1. Official measures regarding non-authorised dismantling facilities:

The high number of non-authorised dismantling facilities mentioned by various market players¹⁰ demonstrates the difficulties the authorities have in suppressing such activities. This necessitates the consideration of multiple problems on different levels:

- ▶ Personnel expenses for the nationwide control of facilities/activities;
- ▶ Enforcement at facilities that do not comply with legal requirements (in case of mobile or temporary facilities/activities as well); and
- ▶ The legal bases that are required for a simple implementation might not be in place.

2. Lack of awareness on the part of last holders:

The circumstance introduced with the previous set of scenarios that deal with dismantling at authorised dismantling facilities within Germany (see Chapter 3.1.2) is also applicable here: last holders are presumably often unaware of their rights and particularly their obligations regarding the disposal of end-of-life vehicles. During discussions with experts, it was mentioned that MV registration offices usually provide no information on the future whereabouts of the vehicle to the last holder. This was explained with reasons related to cost- and time-management, but it was also mentioned that MV registration offices consider their primary task to be the registration and decommissioning of vehicles (personal discussion with representatives of authorised dismantling facilities between December 2015 and March 2016; FMTA 2015a). The interviewed representatives of MV registration offices confirmed this claim (MV registration office Kaiserslautern 2016; MV registration office Bad Dürkheim 2016; MV registration office Westerwaldkreis 2016). The lack of awareness on the part of last holders was also examined during discussions with representatives of authorised dismantling facilities (personal discussion with representatives of authorised dismantling facilities between December 2015 and March 2016).

3. No proof of origin required for spare parts trade:

According to expert estimates, approximately 10 million spare parts are traded via eBay each year in Germany (expert workshop on the whereabouts of end-of-life vehicles held in Dessau on 24/04/2015). Other spare parts trading activities take place, for example, through classified ads or on-site sales. It is assumed that a relevant proportion of these parts come from non-authorised dismantling. The origin of these parts does not have to be proved.

3.1.4 Scenario 5: Non-authorised dismantling of vehicles within Germany and export outside of the EU

Brief description of the scenario: The vehicle is decommissioned in Germany without a Certificate of Destruction and is reduced to individual components in a facility other than an authorised dismantling facility ('non-authorised dismantling facility'). As opposed to the previous scenario (3.1.3), each component is then exported to a non-EU country. No information is available regarding further use (e.g. reassembly, utilisation as spare parts).

¹⁰ Assessments were provided during, among others, the expert workshop on the Certificates of Destruction held on 29/02/2016 and the second meeting of the advisory body held on 29/04/2016.

Table 11: Non-authorised dismantling of vehicles within Germany and exporting them to a non-EU country

| Viewing area | Decom. without CoD | Non-authorised dismantling | Crossing the external border of the EU |
|--|--|--|--|
| Player | Last holder | Non-authorised dismantling (at a small business, workshop, dealer, or privately) | Last owner/exporter |
| Information flow regarding the whereabouts | Decom. → MV registration office → FMTA | n/a | As spare parts: German/EU MS foreign trade statistics if exported outside the EU and the value limit (EUR 1,000 total export value or 1,000 kg total export volume) was exceeded |
| Statistical data pool | The vehicle is registered at the CVRFMTA for decom., but without a CoD | n/a | German/EU MS foreign trade statistics if exported outside the EU and the value limit was exceeded |
| Legal norms | Vehicle Registration Ordinance (VRO) | CSCA; PC; End-of-Life Vehicle Ordinance, building laws or FICA, OHS | Foreign trade laws, Customs Code and associated legislation, possibly closed substance cycle laws if individual components constitute hazardous waste |
| Monitoring | Registration office | Supervisory authorities of the federal states | Federal police, customs |

Potential gaps: No records regarding vehicles disassembled at non-authorised dismantling facilities within Germany and exported outside of the EU.

Possible reasons for the lack of records:

1. Vehicle not recorded as exported vehicle and is therefore not included in the statistics:

The non-authorised dismantling of end-of-life vehicles within Germany is one of the possible reasons for the statistical gap. Disassembled vehicles or spare parts may be exported to non-EU countries. In such cases, they are taken abroad in containers or lorries by non-authorised dismantling facilities or the buyers, in parts or as a whole, and then registered as spare parts. Exporting spare parts that do not constitute hazardous waste is generally permitted¹¹. Exporting parts is not deemed illegal, but disassembling in non-authorised dismantling facilities is. Such disassembly leads to missing records from the waste statistics.

Exported spare parts are recorded under different commodity codes in foreign trade statistics¹². However, the number of spare parts or the number of vehicles they originate from cannot be reproduced,

¹¹ Car parts are classified as hazardous, if, for instance, engines are not fully emptied or airbags and shock absorbers still contain explosive and hazardous materials (cf. Customs 2013).

¹² E.g. 87060091: chassis; fitted with engines, for the motor vehicles of heading no. 87.03; 87071090: bodies; (including cabs) for the motor vehicles of heading no. 87.03 (cf. Federal Statistical Office 2015b).

as a single application often contains multiple spare parts, and only the value of the goods is specified. Furthermore, foreign trade statistics do not distinguish between new and second-hand vehicle parts. Determining whether the spare parts were obtained via authorised dismantling or illegal sources is also not possible. Therefore, the number of vehicles exported in this manner and the number of those not recorded in the statistics cannot be estimated (Federal Statistical Office 2015a). The Federal Criminal Police Office also reports an observed trend of ‘moving’ stolen MVs by way of completely disassembling them before crossing the border (Federal Criminal Police Office 2016).

3.2 Scenarios for transfer to other EU Member States

The scenarios in this subchapter deal with vehicles that are transferred to other EU Member States after decommissioning¹³. Statistical record-keeping depends on various legal requirements, which are discussed in further detail in Chapters 4.5.1 and 4.8.3. The different arrangements of this life-cycle are each presented in a distinguished manner in the following.

3.2.1 Transfer to other EU Member States for re-registration

In the following, the possible scenarios regarding the transfer of vehicles to other EU Member States with subsequent re-registration are described. The potential data gaps and their underlying reasons are also discussed.

3.2.1.1 Scenario 6: Transfer of vehicles to other EU Member States for re-registration – above the annual value limit

Brief description of the scenario: The vehicle is taken out of service without a Certificate of Destruction and transferred to an EU Member State as a second-hand vehicle for re-registration there. With the transfer of the vehicle and other goods (e.g. vehicles and other commodities shipped together), the annual value limit or the reporting threshold of the exporter regarding intra-European transfers (EUR 500,000 per exporter per year) is exceeded in the Intrastat declarations submitted to the Federal Statistical Office (for recording intra-Community commodity traffic). The vehicle is re-registered in the target country, resulting in a REGINA report¹⁴ sent to the FMTA (see Figure 18).

¹³ According to § 2 Para. 21 of the Foreign Trade and Payments Act (FTPA), transfer means ‘the delivery of material goods or the transmission of software or technology from Germany to the remaining customs territory of the European Union including its provision by electronic means to natural and legal persons in the remaining customs territory of the European Union’.

¹⁴ Registration and Information Agreement (international information exchange database on the re-registration of exported and imported vehicles)

Figure 18: Scenario 6: transfer to other EU Member States for re-registration – above the annual value limit

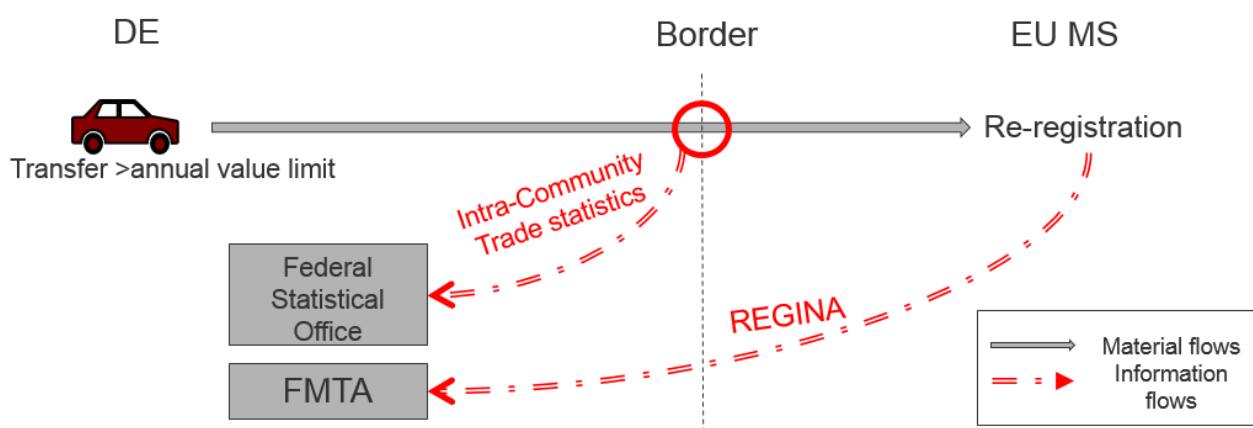


Table 12: Transfer of vehicles to other Member States for re-registration – above the annual value limit

| Viewing area | Decom. without CoD | Crossing the border of other EU MSs | Re-registration in EU MSs |
|---|--|--|--|
| Player | Last holder | Last owner/exporter | New owner |
| Information flow regarding the whereabouts | Decom. → MV registration office → FMTA | Written turnover tax declaration → internal trade statistics → Federal Statistical Office | Re-registration office in EU MS → REGINA → FMTA |
| Statistical data pool | The vehicle is registered at the CVRFMTA for decom., but without a CoD | Internal trade statistics | REGINA, FMTA |
| Legal norms | Vehicle Registration Ordinance (VRO) | Regulation (EC) No 638/2004 on Community statistics relating to the trading of goods between Member States | Directive 1999/37/EC, Article 5(2); vehicle registration ordinance of the target country |
| Monitoring | MV registration office | Customs, federal police, tax authorities | MV registration office within the target country |

The potential gaps and their reasons relevant for this scenario are described under Subchapter 3.2.1.3.

3.2.1.2 Scenario 7: Transfer of vehicles to other EU Member States for re-registration – below the annual value limit

Brief description of the scenario: The vehicle is taken out of service without a Certificate of Destruction and transferred to another EU Member State for re-registration there. With the transfer of the vehicle and other goods (e.g. vehicles and other commodities shipped together), the annual value limit or the reporting threshold of the exporter regarding intra-European transfers (EUR 500,000 per exporter per year) is **NOT** exceeded in the Intrastat declarations submitted to the Federal Statistical Office (for

recording intra-Community commodity traffic). The vehicle is re-registered in the target country, resulting in a REGINA report sent to the FMTA (see Figure 19).

Figure 19: Scenario 7: transfer to other EU Member States for re-registration – below the annual value limit

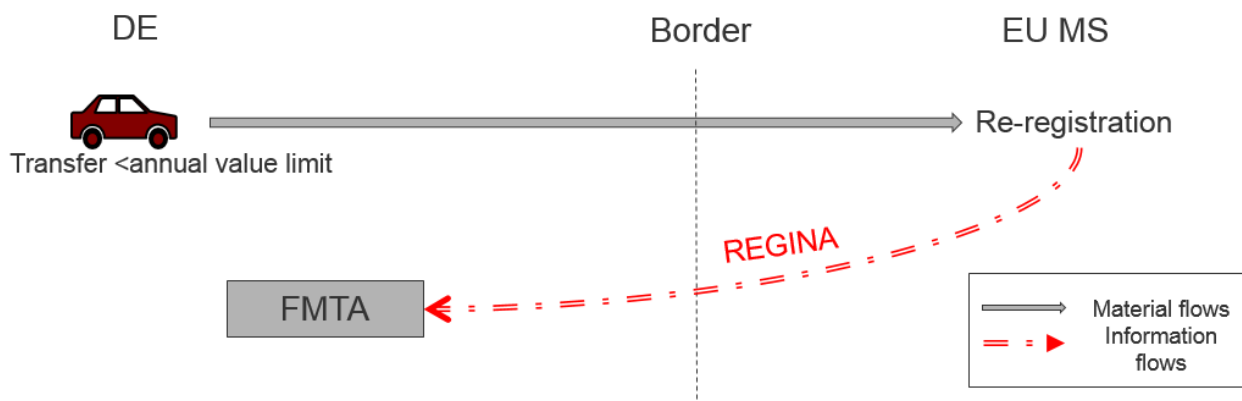


Table 13: Transfer of vehicles to other EU Member States for re-registration – below the annual value limit

| Viewing area | Decom. without CoD | Crossing EU MS border | Re-registration in EU MSs |
|---|--|--|---|
| Player | Last holder | Last owner/exporter | New owner |
| Information flow regarding the whereabouts | Decom. → MV registration office → FMTA | n/a | MV registration office in EU MS → REGINA → FMTA |
| Statistical data pool | The vehicle is registered at the CVRFMTA for decom., but without a CoD | n/a | REGINA, FMTA |
| Legal norms | Vehicle Registration Ordinance (VRO) | Regulation (EC) No 638/2004 on Community statistics relating to the trading of goods between Member States | Directive 1999/37/EC, Article 5(2); vehicle registration ordinance of the EU MS |
| Monitoring | MV registration office | Possibly tax authorities | MV registration office within the target country |

Currently there are two data sources available for recording vehicles intended to be transferred to other EU Member States for re-registration:

- ▶ The FMTA maintains statistics via the REGINA database encompassing vehicles re-registered in other EU countries¹⁵. In 2013, this contained 1.22 million vehicles.
- ▶ The internal trade statistics contain records on transfers made by companies whose import and export activities exceeded the value of EUR 500,000 in the previous year. Despite the reporting threshold of EUR 500,000, about 97 % of the transfer values across all commodity codes (not just second-hand vehicles) are recorded in internal trade statistics. The remaining 3 % accounts for

¹⁵ The non-EU countries of Norway, Switzerland, Iceland, Bosnia and Herzegovina, as well as Liechtenstein are also included in the system.

exemptions (approx. 2 %) and non-responses (approx. 1 %). The Federal Statistical Office receives sales data on all companies subject to sales tax and compares it with export declarations. If a company exceeds the reporting threshold and does not report this, it is prompted to provide a retrospective report, and must declare its transfer throughout the entire subsequent year. Failure to report is treated as an administrative offence.

The reporting threshold reduces the number of companies obligated to submit reports from 680,000 to 60,000 across all commodity groups (Federal Statistical Office 2015a). In 2013, the transfer of 138,614 second-hand vehicles was recorded in this manner (see Table 14, 'Internal trade statistics' column), although it is not known whether all these vehicles were actually re-registered.

Comparing the number of REGINA re-registrations with the figures of foreign trade statistics in the context of other EU countries, it can be concluded that approximately at least 90% of vehicles transferred to and re-registered in other EU Member States are below the reporting threshold or are transferred by private individuals (see Chapter 3.2.1.3, first possible reason for unrecorded cases).

The most popular target country for the re-registration of second-hand vehicles transferred from Germany is Poland, followed by Romania by a large margin. France and the Netherlands also receive a significant number of vehicles (see Table 14).

3.2.1.3 Potential data gaps and their causes

This section deals with the scenarios described in Chapters 3.2.1.1 and 3.2.1.2.

Potential gaps: There are no statistical records on vehicles transferred to and re-registered in EU Member States.

Possible reasons for the lack of records:

1. No records on transfers made by private individuals in internal trade statistics:

Affected scenarios: 6 and 7

Internal trade statistics only encompass transfers made by companies. Transfers made by private individuals, i.e. persons transporting vehicles for private use instead of commercial reasons, are not recorded. Experts assume that a significant number vehicles are transferred by private individuals not recording the registered vehicles in REGINA statistics could lead a quantitatively relevant gap (statements from the expert workshop on Certificates of Destruction held in Berlin on 29/02/2016).

Table 14: Comparison of the REGINA re-registrations with the foreign trade statistics in the context of other EU Member States for 2013

| Country | Re-registrations according to REGINA | Internal trade statistics | Difference | Maximum |
|----------------|--------------------------------------|---------------------------|------------|---------|
| Poland | 487,585 | 11,022 | -476,563 | 487,585 |
| Czech Republic | 88,724 | 6,251 | -82,473 | 88,724 |
| Slovakia | 15,556 | 4,644 | -10,912 | 15,556 |
| Hungary | 33,455 | 5,781 | -27,674 | 33,455 |
| Lithuania | 79,438 | 2,917 | -76,521 | 79,438 |
| Latvia | 26,769 | 1,935 | -24,834 | 26,769 |
| Estonia | 14,651 | 2,387 | -12,264 | 14,651 |

| Country | Re-registrations according to REGINA | Internal trade statistics | Difference | Maximum |
|---|--------------------------------------|---------------------------|------------|------------------|
| Slovenia | 4,528 | 1,278 | -3,250 | 4,528 |
| Croatia | 0 | 1,399 | 1,399 | 1,399 |
| Romania | 191,265 | 10,446 | -180,819 | 191,265 |
| Bulgaria | 43,701 | 1,827 | -41,874 | 43,701 |
| Cyprus | 0 | 232 | 232 | 232 |
| Malta | 83 | 17 | -66 | 83 |
| Finland | 14,910 | 2,520 | -12,390 | 14,910 |
| Denmark | 4,985 | 3,527 | -1,458 | 4,985 |
| Sweden | 9,029 | 1,180 | -7,849 | 9,029 |
| UK | 714 | 356 | -358 | 714 |
| Ireland | 34 | 12 | -22 | 34 |
| France | 91,878 | 17,666 | -74,212 | 91,878 |
| Netherlands | 58,334 | 14,874 | -43,460 | 58,334 |
| Belgium | 24,771 | 13,181 | -11,590 | 24,771 |
| Luxembourg | 9,123 | 3,339 | -5,784 | 9,123 |
| Austria | 3,281 | 10,074 | 6,793 | 10,074 |
| Spain | 3,180 | 5,461 | 2,281 | 5,461 |
| Portugal | 141 | 2,066 | 1,925 | 2,066 |
| Italy | 9,646 | 13,329 | 3,683 | 13,329 |
| Greece | 164 | 893 | 729 | 893 |
| Total | 1,215,945 | 138,614 | | 1,232,987 |
| Additional entries based on the adoption of the maximum values of REGINA and internal trade statistics | | | | 17,042 |

Source: FMTA and Federal Statistical Office

Table 15: Comparison of the REGINA re-registrations with the trade statistics in the context of other designated non-EU countries for 2013

| Country | Re-registrations according to REGINA | Trade statistics | Difference | Maximum |
|-------------|--------------------------------------|------------------|------------|---------|
| Norway | 26,120 | 21,510 | -4,610 | 26,120 |
| Switzerland | 708 | 16,809 | 16,101 | 16,809 |
| Iceland | 585 | 333 | -252 | 585 |
| Bosnia | 105 | 11,090 | 10,985 | 11,090 |

| Country | Re-registrations according to REGINA | Trade statistics | Difference | Maximum |
|---|--------------------------------------|------------------|------------|---------------|
| Liechtenstein | 319 | 117 | -202 | 319 |
| Total | 27,837 | 49,859 | | 54,923 |
| Additional entries based on the adoption of the maximum values of REGINA and internal trade statistics | | | | 5,064 |

Source: FMTA and Federal Statistical Office

2. Incomplete implementation of existing legal requirements through incomplete data reporting via the REGINA system:

Affected scenarios: 6 and 7

If the vehicles in these scenarios are not recorded, the main reason can be attributed to incomplete REGINA reports from other EU Member States. According to Directive 1999/37/EC on the registration documents for vehicles, the authorities of an EU Member State must immediately report the registration of a vehicle to another Member State where the vehicle was previously registered. The FMTA observed that the reporting behaviour of the Member States seems to be characterised by varying degrees of completeness. Data from Poland, for instance, is perceived as relatively complete, while data from Greece, France, Portugal or Spain, for example, is incomplete. This is supported by the fact that record-keeping is very different in the individual countries, therefore, obtaining specific figures can be extremely difficult (FMTA 2015a).

A comparison of REGINA re-registrations with the figures of internal trade statistics shows that the internal trade statistics for some EU countries contain higher figures (see Table 14). This would mean that in such countries, no (or not all) vehicles recorded in internal trade statistics are re-registered. A similar observation can be made for non-EU countries that also utilise the REGINA system (see Source: FMTA and Federal Statistical Office

Table 15). This may be caused by transfers subsequently exported to another country or due to incomplete REGINA reports.

In discussion with the competent authorities of different Member States (e.g. Czech Republic), it was concluded that the reports of the REGINA register are handled significantly differently from a technical perspective and, for the most part, considerably more unsystematically than in Germany (e.g. in terms of continuous reporting). In some countries, the records are still created in a paper-based format, and must then be stored in the system. Some interviewed authorities stated that they know about the incomplete nature of the data, particularly if the data is not transmitted continuously, but rather in a block format.

Czech dismantling companies identified a specific cause for the possible gaps in the REGINA reports sent to Germany. According to them, some versions of the software used to record car sales and re-registration online (see Chapter 4.1.4) do not include the function for indicating the foreign origin of the vehicle. The common practice in these cases would be to simply specify the location of the seller's premises, thereby distorting the statistics and rendering the REGINA reports incomplete. Poland, Romania and Lithuania had to deal with similar issues. However, in the Czech Republic, the problem particularly arose in the case of online records.

On the other hand, incorrect reports also occur when supposedly German second-hand vehicles are ‘fabricated’ with German papers and vehicle numbers, when at the same time they are, for example, reported as recycled in Germany as damaged vehicles considered to be total losses. In the Czech Republic, Slovakia, Poland and Romania, experts specifically expressed their concerns a number of times that the REGINA database would only be of limited significance for the indication of the whereabouts of vehicles from Germany (Štátný 2015; Nedelka 2015).

3.2.2 Transfer to other EU Member States without re-registration

In the following, the possible scenarios regarding the transfers of vehicles to other EU Member States without subsequent re-registration are described. The potential data gaps and their underlying reasons are also discussed.

3.2.2.1 Scenario 8: Transfer of vehicles to other EU Member States without re-registration – above the annual value limit

Brief description of the scenario: The vehicle is taken out of service without a Certificate of Destruction and transferred to another EU Member State without being re-registered there. With the transfer of the vehicle and other goods (e.g. vehicles and other commodities shipped together), the annual value limit or the reporting threshold of the exporter regarding intra-European transfers (EUR 500,000 per exporter per year) is exceeded in the Intrastat declarations submitted to the Federal Statistical Office (for recording intra-Community commodity traffic). The vehicle is **NOT** re-registered in the target country (see Figure 20).

Figure 20: Scenario 8: transfer to other EU Member States without re-registration – above the annual value limit

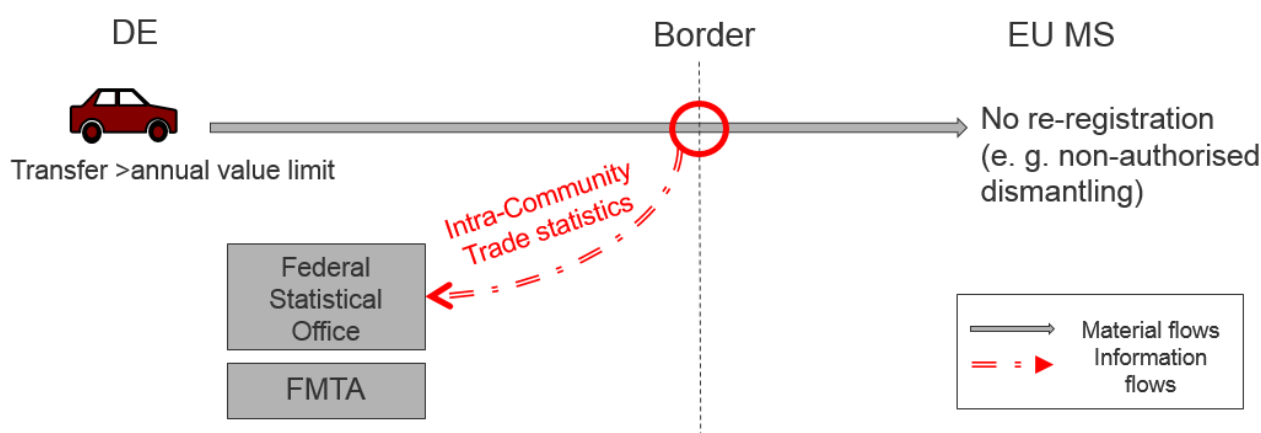


Table 16: Transfer of vehicles to other Member States without re-registration – above the annual value limit

| Viewing area | Decom. without CoD | Crossing the border of other EU MSs | No re-registration in EU MSs |
|---|--|---|---|
| Player | Last holder | Last owner/exporter | New owner |
| Information flow regarding the whereabouts | Decom. → MV registration office → FMTA | Written turnover tax declaration → internal trade statistics → Federal Statistical Office | Possibly disposal facilities → Authorities → waste statistics, where applicable |

| Viewing area | Decom. without CoD | Crossing the border of other EU MSs | No re-registration in EU MSs |
|------------------------------|--|--|---|
| Statistical data pool | The vehicle is registered at the CVRFMTA for decom., but without a CoD | Internal trade statistics | Waste statistics, where applicable, without an identifiable country of origin for the vehicle |
| Legal norms | Vehicle Registration Ordinance (VRO) | Regulation (EC) No 638/2004 on Community statistics relating to the trading of goods between Member States | EU-wide or national waste laws, where applicable |
| Monitoring | MV registration office | Customs, federal police, tax authorities | Authorities, police, waste monitoring authorities |

The potential gaps and their reasons relevant for this scenario are described under Subchapter 3.2.2.3.

3.2.2.2 Scenario 9: Transfer of vehicles to other EU Member States without re-registration – below the annual value limit

Brief description of the scenario: The vehicle is taken out of service without a Certificate of Destruction and transferred to another EU Member State without being re-registered there. With the transfer of the vehicle and other goods (e.g. vehicles and other commodities shipped together), the annual value limit or the reporting threshold of the exporter regarding intra-European transfers (EUR 500,000 per exporter per year) is **NOT** exceeded in the Intrastat declarations submitted to the Federal Statistical Office (for recording intra-Community commodity traffic). The vehicle is **NOT** re-registered in the target country (see Figure 21).

Figure 21: Scenario 9: transfer of vehicles to other Member States without re-registration – below the annual value limit

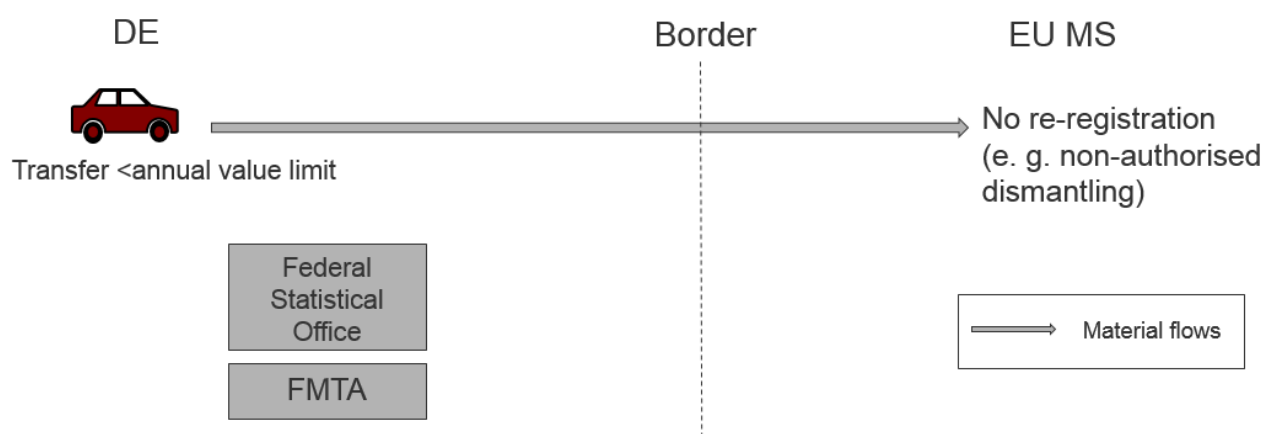


Table 17: Transfer of vehicles to other Member States without re-registration – below the annual value limit

| Viewing area | Decom. without CoD | Crossing EU MS border | No re-registration in EU MSs |
|---|--|--------------------------|---|
| Player | Last holder | Last owner/ exporter | New owner |
| Information flow regarding the whereabouts | Decom. → MV registration office → FMTA | n/a | Possibly disposal facilities → Authorities → waste statistics, where applicable |
| Statistical data pool | The vehicle is registered at the CVRFMTA for decom., but without a CoD | n/a | Waste statistics, where applicable, without an identifiable country of origin for the vehicle |
| Legal norms | Vehicle Registration Ordinance (VRO) | n/a | EU-wide or national waste laws, where applicable |
| Monitoring | MV registration office | Possibly tax authorities | Authorities, police, waste monitoring authorities |

The transferred vehicles are presumably intended to be dismantled for spare parts in a non-authorised manner, or re-exported. Only an incomplete data source is available for recording vehicles with this life-cycle with the aforementioned internal trade statistics. The source provides no data on the subsequent status of the vehicle (re-registered, dismantled in a non-authorised manner, re-exported); it only documents the border crossing.

3.2.2.3 Potential data gaps and their causes

This section deals with the scenarios described in Chapters 3.2.2.1 and 3.2.2.2.

Potential gaps: There are no statistical records on vehicles transferred to and not re-registered in EU Member States.

Possible reasons for the lack of records:

1. Reporting threshold level at EUR 500,000 and no records on transfers made by private individuals:

Affected scenarios: 8 and 9

The situation introduced above with Scenario 7, specifically the fact that internal trade statistics only account for transfers made by companies and not private individuals, also plays a key role here (see Chapter 3.2.1.2). In this context, companies in the second-hand vehicle industry are recorded less frequently in internal trade statistics compared to companies that trade new goods, since the value of the vehicles is comparatively lower. Therefore, it is possible to forgo the recording of vehicles transferred by companies due to the reporting threshold level.

2. Complex distinction between second-hand vehicles and end-of-life vehicles:

Affected scenarios: 8 and 9

Based on economic considerations, it is reasonable to assume that vehicles transferred with the purpose of non-authorised dismantling to be carried out outside of authorised dismantling facilities for spare parts in particular can no longer promise a higher profit than second-hand vehicles. This distinction is relevant, since a large proportion of such vehicles might not reach the reporting threshold due to their low value, or their transfer is made by private individuals (see above), therefore, they are not recorded in the internal trade statistics. Classifying these vehicles as end-of-life vehicles would

mean that they must be declared as waste and recorded in the cross-border waste statistics upon shipment (assuming that it is admissible).

Throughout discussions with the representatives of the authorities of different EU Member States (Lithuania, Poland, Czech Republic, France, Romania, Austria, Belgium and the Netherlands), the difficult distinction between end-of-life vehicles and second-hand vehicles was cited as one of the main obstacles in terms of implementing measures that prevent illegal transfers. Even if an unusable vehicle is uncovered at the border during a random inspection, the legally binding classification as end-of-life vehicle is not always easy to ascertain, resulting in difficulties in proving the act of illegal waste shipment. Correspondents' Guidelines No 9 on shipments of end-of-life vehicles (see Chapter 4.4.1) has always been considered useful for this, albeit not adequately qualified.

In practice, an economically determined distinction is often applied, e.g. based on whether putting the vehicle into circulation in the target country is profitable or not, whether the classification as waste is based on acute environmental hazards or not (e.g. oil leakage in case of the storage of an unregistered vehicle), or if exportation is not permitted due to restricted substances e.g. refrigerants and insulation containing CFCs (cf. contributions to the discussions concluded within the scope of workshops on the distinction between second-hand and end-of-life vehicles held in Berlin on 21/03/2016, and within the scope of the concluding expert discussion held in Berlin on 15/06/2016).

Enhanced effects due to the interaction of mechanisms

1. Implementation of waste laws in other EU Member States

Affected scenarios: 8 and 9

Expert discussions highlighted the fact that a substantial amount of vehicles are transferred to non-authorised dismantling facilities, barns or backyards in other EU Member States for non-authorised dismantling. Since the end-of-life vehicle GLs are EU-wide applicable, non-authorised dismantling is also forbidden in other EU Member States. In this context, the problems that occur in terms of implementation are similar to those in Germany. In France, the past years saw increases in the number of vehicles disposed of outside of the official recycling network to such an extent that it is now estimated that every second vehicle is recycled improperly (cf. chairperson of the Recycling Division of the French automobile association CNPA, cited from EUWID 2014).

During discussions with the representatives of the authorities located in various EU Member States, the situation of the staff in particular was characterised as difficult in the context of end-of-life vehicle exports through major ports, which would make it practically impossible to conduct comprehensive inspections. Involved players from Belgium, the Netherlands and Lithuania referred to the fact that this issue received more attention in the past years and the staffing situation underwent improvement. Nonetheless, only random inspections are feasible, which do not serve as an adequate deterrent for illegal activities, considering the potential profits.

2. Trade of damaged vehicles:

Affected scenarios: 8 and 9

Trading platforms such as salvage exchanges are intended to sell damaged vehicles for as much profit as possible in order to keep the damages to the insurance company and the last owner as low as possible. Two types of MV insurance claims can be distinguished here:

- a) Comprehensive insurance: In the event of damage, the insurance company pays the difference between the replacement value and the residual value to the last owner. The insurer posts the vehicle on a salvage exchange in order to determine its residual value. The insurer specifies the last owner and the potential buyers of the vehicle, whereupon the owner can decide on selling it, and

if so, to whom. At no point does the insurance company become the owner of the vehicle (see Chapter 4.2.2 for more details).

- b) Third-party liability claims for the MV: In this damage event, an expert must designate three regional buyers for the appraisal of the vehicle, to whom the last owner may sell the vehicle. The regional buyers sometimes sell the purchased vehicle, so multiple changes in ownership can occur. The insurer still does not become the owner of the vehicle (cf. GIA 2015a).

Certificates of Destruction practically play no role in these cases (statements from the expert workshop on Certificates of Destruction held in Berlin on 29/02/2016), and the statistics show no exports of end-of-life vehicles either for the past year (FMENCBNS and FEA 2015, p. 5).

The insurer no longer has an obligation to report total losses or similar events to the authorities. In the past, such cases were reported to the FMTA. According to experts, vehicles constituting total losses are also used to give new identities to stolen vehicles by using the documents of the damaged vehicle to 'legalise' the stolen one (vehicles as data donors; cf. statements from the expert workshop on the distinction between second-hand and end-of-life vehicles held in Berlin on 21/03/2016).

In the experts' opinion, a quantitatively relevant number of vehicles are traded on trading platforms (e.g. salvage exchanges) and are not recorded upon shipment and/or non-authorised dismantling (cf. *ibid.*).

3. Companies do not make use of the acquisition tax under the reporting threshold in accordance with the country of destination principle

Affected scenario: 9

Companies making use of the acquisition tax under the reporting threshold in accordance with the country of destination principle would provide a further opportunity for recording exported vehicles. In this event, a second-hand vehicle is delivered to an entrepreneur based in another EU Member State, and can basically be exempted from tax in Germany, the country of origin. The vehicle is taxed in the country of destination (at the recipient) instead. The prerequisite of this is that the arrival of the vehicle at the buyer within the EU must be proven. If the company does not make use of the sales tax refund, exporting under the reporting threshold cannot be recorded in this manner. However, even if a record is made, the fate of the vehicle in the EU Member State (registration, non-authorised dismantling, subsequent transfer to another EU Member State or a non-EU country) remains unclear. In most cases, an additional statistical recording would only take place if the vehicle is not re-registered.

3.2.3 Scenario 10: Shipment of end-of-life vehicles to other EU Member States for recycling

Brief description of the scenario: The vehicle is taken out of service and shipped to another EU Member State as an end-of-life vehicle for recycling at an authorised dismantling facility there.

Figure 22: Scenario 10: shipment of end-of-life vehicles to other EU Member States for recycling

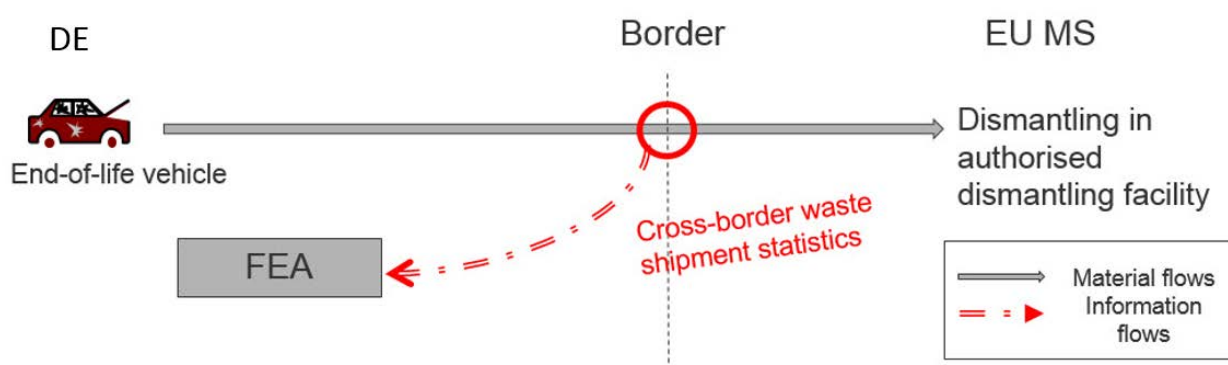


Table 18: Shipment of end-of-life vehicles to other EU Member States for recycling purposes

| Viewing area | decom. | Crossing EU MS border | Authorised recycling in an EU MS |
|---|--|---|---|
| Player | Last holder | Exporter | Authorised dismantling facility |
| Information flow regarding the whereabouts | Decom. → MV registration office → FMTA CoD, if applicable (possibly subsequently) → MV registration office → FMTA | Exporter notification procedure → federal state authorities → data collection as per the Environmental Statistics Act (FEA) | Authorised dismantling facility → statistical authorities, waste management authorities |
| Statistical data pool | The vehicle is registered at the CVR/FMTA for decom. (with a CoD, if applicable) | Cross-border waste shipment statistics | National + EU-wide waste statistics |
| Legal norms | Vehicle Registration Ordinance (VRO) | Waste laws, Environmental Statistics Act | EU laws on statistics |
| Monitoring | MV registration offices | Federal police, customs | Waste management authority of the MS |

Potential gaps: There are no records of end-of-life vehicles recycled at an authorised dismantling facility in an EU Member State.

Possible reasons for the lack of records:

1. Unreported waste shipments (if applicable):

End-of-life vehicles must be reported to the federal state authorities before carrying out their planned shipment to another EU Member State and their recycling at an authorised dismantling facility. The authorised dismantling facilities of an EU Member State may only accept and recycle such end-of-life

vehicles if the report is made and proven. According to the FMENCBNS and the FEA (2015, p. 5), no reported end-of-life vehicles were shipped to other EU Member States for recycling in 2013. However, cases are known where such reports have not been made. The number of vehicles that were not statistically recorded in this manner are not estimated to be quantitatively relevant, since such actions rarely compensate for the transporting costs and other expenses (personal discussion with the several representatives of authorised dismantling facilities 2015).

3.3 Scenarios for exporting to a non-EU country

The scenarios in this subchapter deal with vehicles that are exported to other non-EU countries after decommissioning. The different arrangements of this life-cycle are each presented in a distinguished manner.

3.3.1 Exporting vehicles as second-hand vehicles to non-EU countries

In the following, the possible scenarios regarding the exportation of vehicles as second-hand vehicles to other EU countries are described. The potential data gaps and their underlying reasons are also discussed.

3.3.1.1 Scenario 11: Exporting vehicles to a non-EU country – above the value limit or the reporting threshold

Brief description of the scenario: The vehicle is taken out of service without a Certificate of Destruction and is directly exported to a non-EU country as a second-hand vehicle. The actual intended use of the vehicle in the target country is not known. The vehicle exceeds the value limit or the foreign trade statistics reporting threshold (EUR 1,000 or 1,000 kg) regarding extra-European exports (see Figure 23).

Figure 23: Scenario 11: exporting vehicles to a non-EU country – above the value limit or the reporting threshold

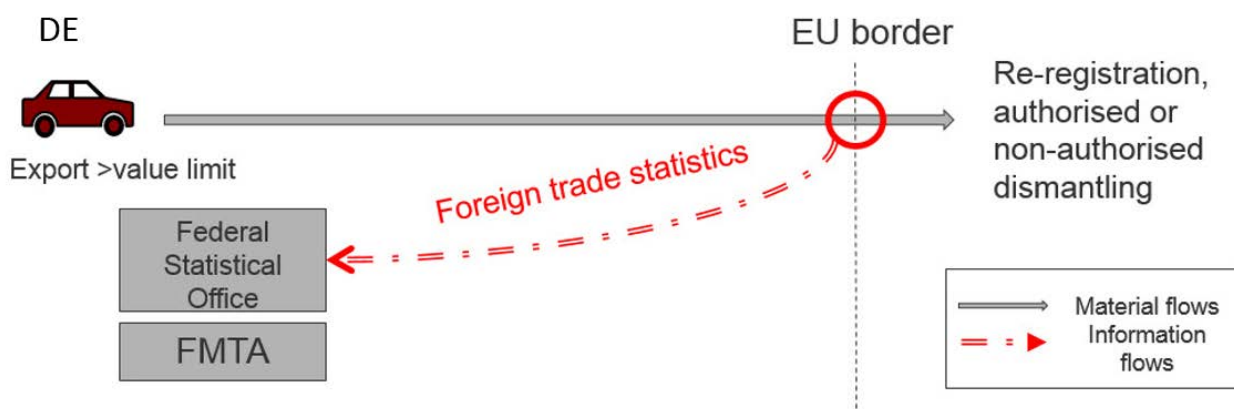


Table 19: Exporting vehicles to a non-EU country – above the value limit or the reporting threshold

| Viewing area | Decom. without CoD | Crossing the external border of the EU |
|--|--|---|
| Player | Last holder | Last owner/dealer/exporter |
| Information flow regarding the whereabouts | Decom. → MV registration office → FMTA | Written export declaration → customs statistics → foreign trade statistics |
| Statistical data pool | The vehicle is registered at the CVRFMTA for decom., but without a CoD | Foreign trade statistics |
| Legal norms | Vehicle Registration Ordinance (VRO) | Foreign Trade Statistics Act, Customs Code, Customs Code Implementing Ordinance |
| Monitoring | MV registration office | Customs, police |

The potential gaps and their reasons relevant for this scenario are described under Subchapter 0.

3.3.1.2 Scenario 12: Exporting vehicles to a non-EU country – below the value limit or the reporting threshold

Brief description of the scenario: The vehicle is taken out of service without a Certificate of Destruction and is directly exported to a non-EU country as a second-hand vehicle. The actual intended use of the vehicle in the target country is not known. The vehicle **DOES NOT** exceed the value limit or the reporting threshold (EUR 1,000 or 1,000 kg) regarding extra-European exports (see Figure 24).

Figure 24: Scenario 12: exporting vehicles to a non-EU country – under the value limit or the reporting threshold

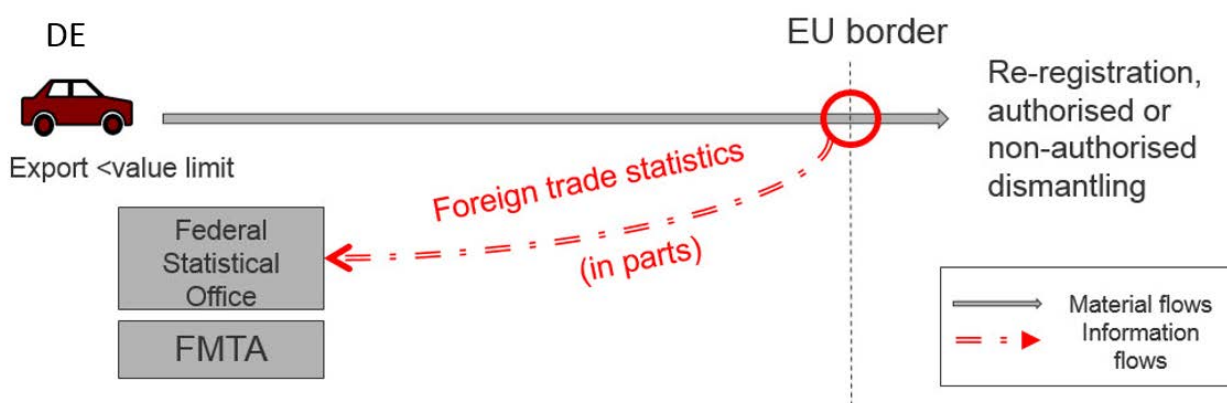


Table 20: Exporting vehicles to a non-EU country for re-registration purposes – below the value limit or the reporting threshold

| Viewing area | Decom. without CoD | Crossing the external border of the EU |
|--|--|--|
| Player | Last holder | Last owner/exporter |
| Information flow regarding the whereabouts | Decom. → MV registration office → FMTA | Written customs declaration (if applicable) → exit point from the customs territory → foreign trade statistics |

| Viewing area | Decom. without CoD | Crossing the external border of the EU |
|-----------------------|--|---|
| Statistical data pool | The vehicle is registered at the CVRFMTA for decom., but without a CoD | Foreign trade statistics (to some extent) |
| Legal norms | Vehicle Registration Ordinance (VRO) | Foreign Trade Statistics Act, Customs Code, Customs Code Implementing Ordinance |
| Monitoring | MV registration offices | Customs, police |

The potential gaps and their reasons relevant for this scenario are described under Subchapter 0.

3.3.1.3 Scenario 13: Exporting vehicles to a non-EU country through another EU Member State – below the value limit or the reporting threshold

Brief description of the scenario: The vehicle is taken out of service without a Certificate of Destruction and exported to a non-EU country as a second-hand vehicle. The actual intended use of the vehicle in the target country is not known. The vehicle is exported through another EU-Member State, where the vehicle is not re-registered prior to exporting it to the non-EU country. The exporter **DOES NOT** exceed the value limit or the foreign trade statistics reporting threshold (EUR 1,000 or 1,000 kg) regarding extra-European exports.

Figure 25: Scenario 13: exporting vehicles to a non-EU country through another EU Member State – below the value limit or the reporting threshold

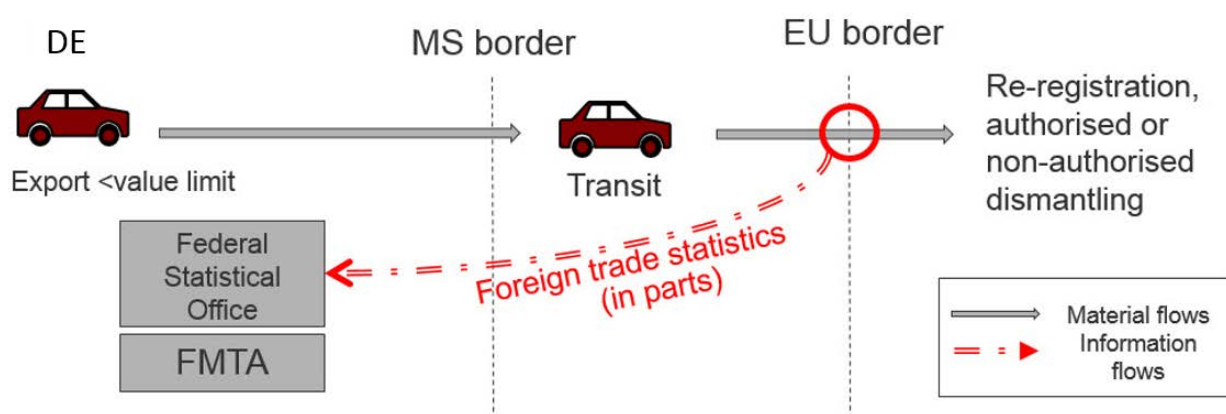


Table 21: Exporting vehicles to a non-EU country through another EU Member State – below the value limit or the reporting threshold

| Viewing area | Decom. without CoD | Crossing the border of other EU MSs (transit country) | Crossing the external border of the EU |
|--|--|---|--|
| Player | Last holder | Last owner/exporter | Dealer/exporter/new owner |
| Information flow regarding the whereabouts | Decom. → MV registration office → FMTA | n/a | Written export declaration (to some extent) → customs statistics of the EU MS → foreign trade statistics |
| Statistical data pool | The vehicle is registered at the CVRFMTA for decom., but without a CoD | n/a | Foreign trade statistics of the EU MS (if applicable) |

| Viewing area | Decom. without CoD | Crossing the border of other EU MSs (transit country) | Crossing the external border of the EU |
|--------------------|--------------------------------------|---|--|
| Legal norms | Vehicle Registration Ordinance (VRO) | n/a | Foreign trade laws of the EU MS, Customs Code, Customs Code Implementing Ordinance |
| Monitoring | Registration office | Federal police | Police of the EU MS, customs of the EU MS, authorities of the EU MS |

The potential gaps and their reasons relevant for this scenario are described under Subchapter 0.

3.3.1.4 Scenario 14a: Exporting vehicles to a non-EU country through another EU Member State – above the value limit or the reporting threshold; alternative a): customs declaration in Germany

Brief description of the scenario: The vehicle is taken out of service without a Certificate of Destruction and exported to a non-EU country as a second-hand vehicle. The actual intended use of the vehicle in the target country is not known. The vehicle is exported through an EU-Member State, where the vehicle is not re-registered prior to exporting it to the non-EU country. The exporter exceeds the value limit or the foreign trade statistics reporting threshold (EUR 1,000 or 1,000 kg) regarding extra-European exports. The vehicle is declared for exportation at German customs.

Figure 26: Scenario 14a: exporting vehicles to a non-EU country through another EU Member State – above the value limit or the reporting threshold; alternative a): customs declaration in Germany

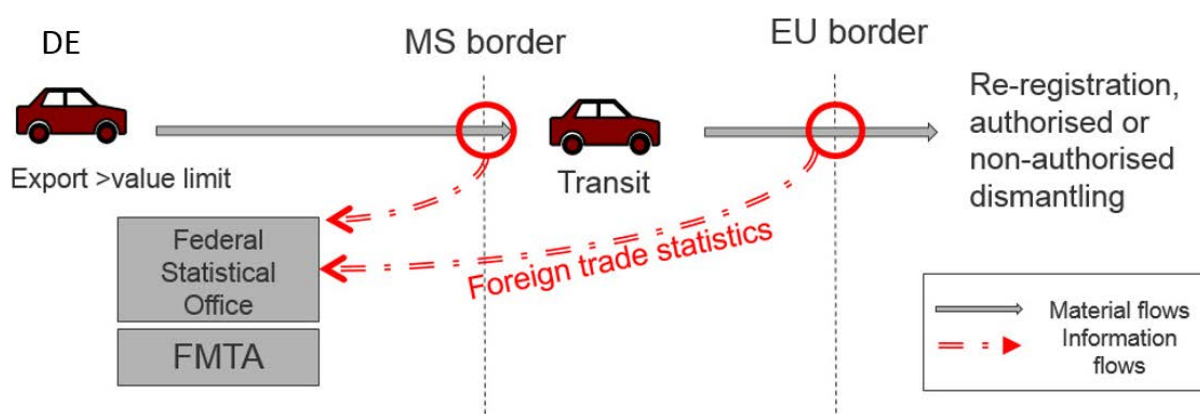


Table 22: Exporting vehicles to a non-EU country through another EU Member State – above the value limit or the reporting threshold; alternative a): customs declaration in Germany

| Viewing area | Decom. without CoD | Crossing the border of other EU MSs | Crossing the external border of the EU |
|---------------|--------------------|-------------------------------------|--|
| Player | Last holder | Last owner/dealer/exporter | Dealer/exporter/new owner |

| Viewing area | Decom. without CoD | Crossing the border of other EU MSs | Crossing the external border of the EU |
|---|--|-------------------------------------|---|
| Information flow regarding the whereabouts | Decom. → MV registration office → FMTA | n/a | Export confirmation by the EU MS customs office of exit |
| Statistical data pool | The vehicle is registered at the CVRFMTA for decom., but without a CoD | n/a | Foreign trade statistics |
| Legal norms | Vehicle Registration Ordinance (VRO) | n/a | Foreign Trade Statistics Act, Customs Code, Customs Code Implementing Ordinance |
| Monitoring | Registration office | Federal police | Customs, police of the EU MS |

The potential gaps and their reasons relevant for this scenario are described under Subchapter 0.

3.3.1.5 Scenario 14b: Exporting vehicles to a non-EU country through another EU Member State – above the value limit or the reporting threshold; alternative b): customs declaration in another EU Member State

Brief description of the scenario: The vehicle is taken out of service without a Certificate of Destruction and exported to a non-EU country as a second-hand vehicle. The actual intended use of the vehicle in the target country is not known. The vehicle is exported through another EU-Member State, where the vehicle is not re-registered prior to exporting it to the non-EU country. The exporter exceeds the value limit or the reporting threshold (EUR 1,000 or 1,000 kg) regarding extra-European exports. The vehicle is declared for exportation at the customs office of another EU Member State.

Figure 27: Scenario 14b: exporting vehicles to a non-EU country through another EU Member State – above the value limit or the reporting threshold; alternative b): customs declaration in another EU Member State

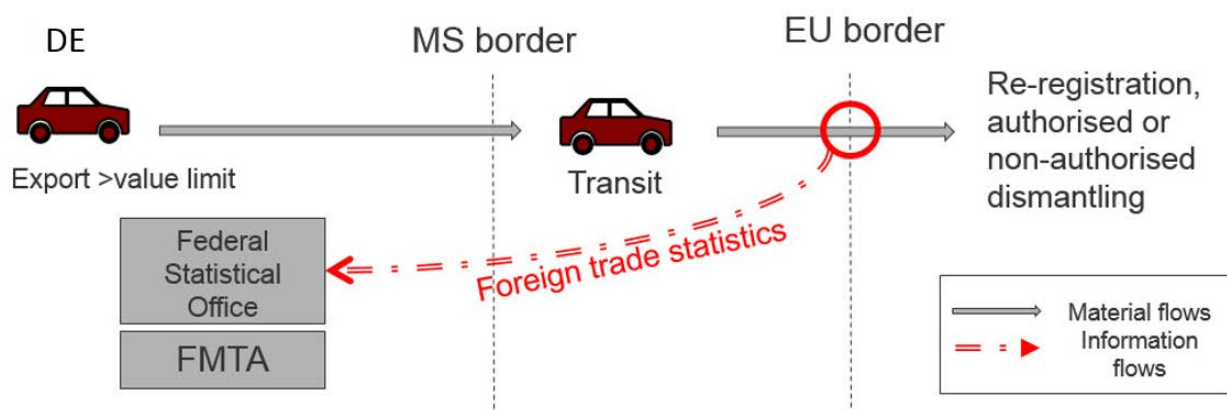


Table 23: Exporting vehicles to a non-EU country through another EU Member State – above the value limit or the reporting threshold; alternative b): customs declaration in another EU Member State

| Viewing area | Decom. without CoD | Crossing the border of other EU MSs | Crossing the external border of the EU |
|---|--|-------------------------------------|---|
| Player | Last holder | Last owner/exporter | Dealer/exporter/new owner |
| Information flow regarding the whereabouts | Decom. → MV registration office → FMTA | n/a | Written export declaration → customs statistics of the EU MS → foreign trade statistics |
| Statistical data pool | The vehicle is registered at the CVRFMTA for decom., but without a CoD | n/a | Foreign trade statistics of the other EU MS |
| Legal norms | Vehicle Registration Ordinance (VRO) | n/a | Foreign Trade Statistics Act, Customs Code, Customs Code Implementing Ordinance |
| Monitoring | Registration office | Federal police | Customs, police of the EU MS |

In the scenarios dealing with exportation to a non-EU country, the actual intended use of the vehicle is not known. It cannot be established whether the re-registration actually takes place in the country. It is also possible that the vehicles are officially exported as second-hand vehicles, but in fact, they are disassembled in the country destination. A data source with foreign trade statistics is currently available for this life-cycle. In 2013, officially 344,551 vehicles were declared in Germany for exportation to a non-EU country (FMENCBNS and FEA 2015).

Since 1 July 2009, export declarations must be provided EU-wide by means of an IT procedure in accordance with Art. 4a Para. 1 of the Customs Code Implementation Ordinance. The declarations are processed in a highly automated manner and are recorded electronically. In Germany, this is carried out with an IT procedure dubbed ATLAS (Automatisiertes Tarif- und Lokales Zollabwicklungssystem [automated tariff and local customs processing system]). This system replaces registration in a paper-based format. The obligation to submit electronic declarations covers all declarations regardless of

the type of transportation (road, air, marine, postal or railway transportation; FMF 2010, p. 1). According to the Federal Statistical Office, even oral declarations – which can be made for, among other things, the exportation of goods with a value of up to EUR 1,000 (see Chapter 0) – are recorded, as these are electronically indicated upon declaration (see the part discussing potential gaps below for more details; Federal Statistical Office 2015a).

Vehicles from Germany are mainly transported abroad via sea (directly or as a transit route) and land (as a transit route) to non-EU countries. Discussions with industry players clearly indicate that second-hand vehicle exports from Western and Southern Germany often pass through the Port of Antwerp (Belgium). For instance, vehicles are collected in large trade centres, such as in Essen (NRW), and are transported to Belgium with semitrailers (personal discussion with players involved in export activities at the Port of Hamburg held between August and October 2015; Antwerp Port Authority 2015).

According to the experts, the Balkans, particularly Serbia, Montenegro and Albania, recently became a significant destination for vehicles exported from Germany and Europe. In Serbia, the number of non-authorised players actively involved in vehicle dismantling is ten times the amount of those that are authorised, according to the Scholz Group, which conducts activities there. There are approximately 3,000 small scrapyards in total, which, among other activities, also carry out the disassembly of end-of-life vehicles. Additionally, there are about 2,000 non-authorised and illegal landfills, where parts that cannot be sold are disposed of. The inadequate supervision was explicitly pointed out as the reason for the high degree of illegal activities (recycling, but also storage, for example). According to Scholz AG, this business area solely operates on cash, which significantly reduces the transparency of finances and aids tax fraud as well as money laundering (Scholz AG 2015a).

Exporters based in non-EU countries require a German customs number or a fiscal representative in order to be able to export vehicles from Germany. In the event of an export declaration, the vehicle exporters indicate the weight and the number of the vehicles to be exported, whereupon the customs authorities carry out a superficial plausibility check and examine the data of suspicious cases more thoroughly.

Since 2009, the introduction of a European customs tariff system has been underway in order to enable companies with premises spread across several EU Member States to declare all goods in their home country within the framework of a so-called single-authorisation (FMF 2010). For example, if a Swedish second-hand vehicle exporter would like to export vehicles decommissioned in Germany to West Africa, it could make the export declaration in Sweden, i.e. the location of the goods no longer has to correspond to that of the customs office of export. The prerequisite for the introduction of this system is the establishment of data flows between all EU Member States that guarantee the exchange of reports with the countries of origin. The biggest current problem is this establishment, therefore, the system can be expected to be introduced by 2020 (Federal Statistical Office 2015a).

Vehicles exported to non-EU countries most likely originate from similar sources as those shipped to EU Member States, i.e. they are acquired through the second-hand vehicle market involving various players (private individuals, workshops, authorised end-of-life vehicle recyclers [if end-of-life vehicles are bought as second-hand vehicles, see Chapter 4.2.2], retail dealers, car dealers).

The quality of the vehicles varies significantly, depending on the country of destination. In 2013, the average value of a vehicle exported to Russia and the CIS countries was just under EUR 10,000, however, the average value for North Africa was almost EUR 3,000, while for West Africa, it was EUR 1,500 (see Table 24). There are considerable differences even between countries in the same region. The approximately 44,000 declared second-hand vehicle exports to Benin (West Africa) had an average value of a mere EUR 804 (Federal Statistical Office, 2015c). The average weight varies significantly as well depending on the region of destination, which suggests the export of different vehicle

classes. Vehicles exported to West or North Africa were 250 to 300 kg lighter on average than those exported to Russia and the CIS countries.

Table 24: Second-hand vehicle exports in the foreign trade statistics of 2013 regarding EU Member States and non-EU countries

| Countries | Export: Supplementary unit of measurement (Number) | Export: Weight (t) | Export: Value (Thousand EUR) | Spec. weight t/vehicle | Spec. price EUR/veh.) |
|--|--|--------------------|------------------------------|------------------------|-----------------------|
| Total | 481,547 | 720,348 | 5,516,280 | 1.50 | 11,455 |
| Total – EU 27 (including Croatia) | 147,146 | 238,799 | 2,689,632 | 1.62 | 18,279 |
| Total – non-EU | 334,401 | 481,549 | 2,826,648 | 1.44 | 8,453 |
| of which Russia and CIS | 92,078 | 143,106 | 902,592 | 1.55 | 9,802 |
| of which former Yugoslavia (excl. Croatia) | 19,366 | 28,867 | 116,838 | 1.49 | 6,033 |
| of which West Africa | 132,598 | 172,985 | 200,409 | 1.30 | 1,511 |
| of which North Africa | 25,886 | 32,508 | 75,316 | 1.26 | 2,910 |
| of which Norway and Switzerland | 37,725 | 63,973 | 1,082,753 | 1.70 | 28,701 |

Source: Federal Statistical Office¹⁶

In discussions with experts, it was pointed out that vehicles that could not be sold in Germany due to their low quality are often exported to regions such as West Africa. According to several professionals engaged in end-of-life vehicle recycling, driveable or rollable vehicles valued at EUR 350 or more, in particular, are resold to exporters (personal discussion with a representative of an authorised dismantling facility, April 2015). Such cases are also characterised by a wide variety of involved players (private individuals, MV dealers, workshops, authorised dismantling facilities).

¹⁶ Seven commodity codes were queried: WA87032190 pass. car with petrol engine, not exceeding 1,000 cm³, used, S; WA87032290 pass. car, petrol engine, 1,000–1,500 cm³, used, S; WA87032390 pass. car/motor home, petrol engine, 1,500–3,000 cm³, used, S; WA87032490 pass. car/motor home, petrol engine, >3000 cm³, used, S; WA87033190 pass. car with diesel engine, not exceeding 1500 cm³, used, S; WA87033290 pass. car/motor home, diesel engine, 1,500–2,500 cm³, used, S; WA87033390 pass. car/motor home with diesel engine, >2500 cm³, used, S.

3.3.1.6 Potential data gaps and their causes

This section deals with the scenarios described in Chapters 3.3.1.1 through 3.3.1.5.

Potential gaps: No statistical records on vehicles exported to non-EU countries.

Possible reasons for the lack of records:

Based on the legal framework:

1. No records on exports not exceeding a value of EUR 1,000:

Affected scenarios: 12 and 13

Exported goods not exceeding a value of EUR 1,000 are subject to separate rules in terms of declaration of exportation to a non-EU country. No export declaration has to be submitted through the ATLAS IT system; instead, an oral declaration at the customs office of exit accompanied by a commercial document (e.g. invoice, waybill or delivery order) is enough. According to customs authorities, such goods are not subject to written declaration for foreign trade statistics or declaration via the ATLAS system (customs, n.d., a). Second-hand vehicles valued under EUR 1,000 are therefore not included in the statistics. Various studies conducted in past years indicate that second-hand vehicle exports are not statistically recorded (Oszyguß 2006; Buchert et al. 2007; Mehlhart et al. 2011). However, the Federal Statistical Office disputes this. Since the procedure is entered into an electronic system even in the event of an oral declaration, all vehicles are recorded, regardless of their value, and almost 100% of second-hand vehicle exports are statistically recorded (Federal Statistical Office 2015a; Federal Statistical Office 2014b, p. 11).

The statistical record-keeping of low-value second-hand vehicles exported through another EU Member State is discussed in the next section under item no. 3 and in Chapter 4.5.2.

Incomplete implementation of existing legal requirements:

1. No export declaration due to limited inspection of exports:

Affected scenarios: 11–14b

A false export declaration can entail non-declaration, declaration using the name of another product or mis-declaration of waste as a product.

This is illustrated in a report of the ZDF magazine ‘Frontal 21’, according to which vehicle halves are shipped in containers and in part declared as furniture or bedding (ZDF 2015). Often entire vehicles are shipped in overseas containers without declaration (Hamburg Water Police 2015). Moreover, the Federal Criminal Police Office suspects that stolen vehicles in particular are completely disassembled and exported, declared as spare parts (Federal Criminal Police Office 2016).

Due to the high number of exported containers, only random inspections can be carried out on them. For instance, the Port of Antwerp reported that at most only 10% of the containers are subjected to inspection (Antwerp Port Authority 2015). The random inspections are carried out on the basis of a specific search pattern. The exportation of vehicles in containers also plays a role in the exportation of stolen vehicles (cf. Federal Criminal Police Office 2013, p. 10).

The insufficient personnel resources and the fact that the Correspondents’ Guidelines No 9 are not legally binding have been defined as the main reasons for the limited options in terms of inspecting exports (Hamburg Water Police 2015). The often difficult and costly distinction between second-

hand and end-of-life vehicles presents an additional factor against this background that reduces the number of traceable cases¹⁷.

2. Limited inspection of exports in other EU Member States acting as transit countries:

Affected scenarios: 13–14b

As in Germany, the lack of enforcement in the context of vehicle exports can also occur when exporting from Germany through another EU Member State. The causes are presumably similar to those in Germany (lack of personnel and financial resources, complex distinction between second-hand and end-of-life vehicles accompanied by the fact that the Correspondents' Guidelines No 9 are not legally binding).

3. Insufficient reporting from EU Member States acting as transit countries – exportation not declared in Germany:

Affected scenarios: 13 and 14b

According to the Federal Statistical Office, if vehicles from Germany cross the external border of the EU via another EU Member State and they are not declared for exportation in Germany, but instead are exported under the single-stage export procedure (this is possible, for instance, for vehicles valued under EUR 3,000; see Chapter 4.5.2), in principle, the EU Member State reports the exportation to the German authorities. Thus, such vehicles are recorded in the German foreign trade statistics (Federal Statistical Office 2015a). However, in a manner similar to the incomplete confirmations via the REGINA system, unreported cases occur here as well.

4. Complex distinction between second-hand vehicles and end-of-life vehicles:

Affected scenarios: 11–14b

The distinction between second-hand and end-of-life vehicles is relevant, since in the case of an end-of-life vehicle, a report must already be made in Germany, and the vehicle should be recorded in the cross-border waste shipment statistics. According to the Federal Statistical Office (see above under item no. 1 'Based on the legal framework'), the vehicles exported to non-EU countries are mostly declared. With regard to the number of unidentified exported vehicles, the effect of identifying end-of-life vehicles would probably be slighter than that in the case of exports to another EU Member State, where a significantly smaller proportion of vehicles is recorded in foreign trade statistics due to the higher value limit.

However, it should be taken into account that if an unstripped end-of-life vehicle is correctly declared, it must be registered as hazardous waste (see Chapter 4.4). Thus, the identification of such end-of-life vehicles in the statistics on vehicle whereabouts is of particular ecological relevance.

3.3.2 Scenario 15: Shipment of end-of-life vehicles to non-EU countries for disposal/recycling

Brief description of the scenario: The end-of-life vehicle is taken out of service without a Certificate of Destruction and shipped to a non-EU country (OECD or EFTA country (a) or non-OECD or non-EFTA country (b)) for disposal/recycling there. According to Article 36 of the Waste Shipment Regulation, shipment to a non-OECD or non-EFTA country is forbidden.

¹⁷ The Hamburg Water Police stated that, due to the frequent 'abandonment' of cases deemed suspicious in the past, only relatively clear-cut cases are reported, where the effort put into the inspection remains relatively low.

Figure 28: Scenario 15: Shipment of end-of-life vehicles to non-EU countries for disposal/recycling

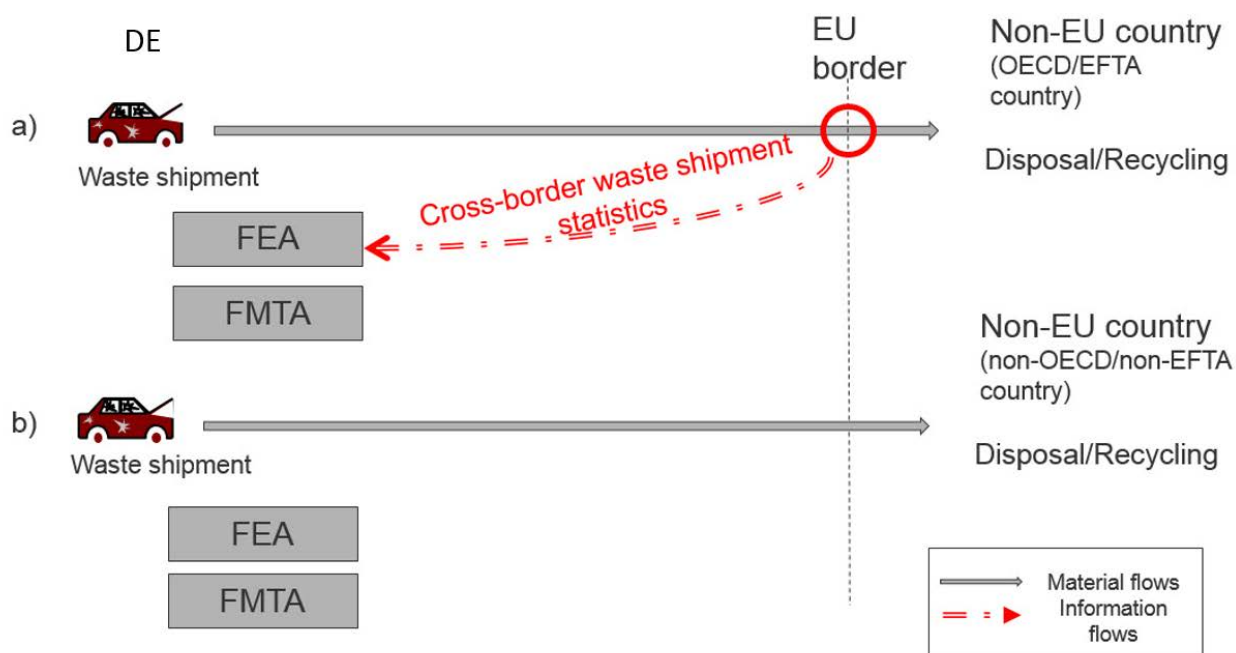


Table 25: Shipment of vehicles to non-EU countries for disposal/recycling purposes

| Viewing area | Decom. without CoD | Crossing the external border of the EU to a non-EU target country (OECD or EFTA country) | Crossing the external border of the EU to a non-EU target country (non-OECD or non-EFTA country) |
|---|--|---|--|
| Player | Last holder | Last owner/exporter | - |
| Information flow regarding the whereabouts | Decom. → MV registration office → FMTA | Last owner/exporter → federal state authorities → data collection as per the Environmental Statistics Act (FEA) → Focal Point to the Basel Convention (FEA) | Shipment forbidden |
| Statistical data pool | The vehicle is registered at the CVRFMTA for decom., but without a CoD | Cross-border waste statistics | - |
| Legal norms | Vehicle Registration Ordinance (VRO) | Waste Framework Directive, Waste Shipment Regulation, Environmental Statistics Act | Waste Framework Directive, Waste Shipment Regulation |
| Monitoring | MV registration offices | Federal police, customs | Customs, federal police |

Potential gaps: No statistical records on end-of-life vehicles exported to non-EU countries for recycling or disposal.

Possible reasons for the lack of records:

1. End-of-life vehicles exported as second-hand vehicles (under the value limit) and not declared to the authorities as waste, resulting in them not being recorded in the cross-border waste statistics:

The reasons for the lack of statistical records can be found in Subchapters 3.2.2.3 and 3.2.3 ('Distinction between second-hand and end-of-life vehicles', 'Trade of damaged vehicles', 'Implementation of waste laws in other EU Member States'). According to cross-border waste statistics, no end-of-life vehicles were exported to non-EU countries in 2013 (FMENCBNS and FEA 2015).

3.4 Other scenarios:

For the examination of the possible life-cycles of decommissioned vehicles, further scenarios have been identified, which, after conducting a preliminary analysis and according to discussions with experts, have been classified to have little quantitative relevance in the context of the scope of the study in comparison to other life-cycles. In addition, Scenarios 16 (remaining on private property, see Chapter 3.4.1) and 17 (theft, see Chapter 3.4.2) do not present the end-use situation of vehicles.

3.4.1 Scenario 16: Vehicles remaining on private properties

Brief description of the scenario: The vehicle is taken out of service without a Certificate of Destruction. Afterwards, it remains on a private property and is no longer used on public roads. The intended use is unknown, several methods of utilisation are conceivable, e.g. usage on company premises, exhibition in a museum, storage in a garage. The vehicle can subsequently be re-registered or one of the other scenarios may occur (e.g. recycling at an authorised dismantling facility, exportation outside of the EU, etc.).

Table 26: Vehicles remaining on private properties

| Viewing area | Decom. without CoD | Remaining on private property | If applicable: recycling at an authorised dismantling facility, non-authorised dismantling, re-registration, exportation, etc. |
|--|--|---|--|
| Player | Last holder | Last owner/dealer/disposal company/similar | See corresponding scenarios |
| Information flow regarding the whereabouts | Decom. → MV registration office → FMTA | n/a | |
| Statistical data pool | The vehicle is registered at the CVRFMTA for decom., but without a CoD | n/a | |
| Legal norms | Vehicle Registration Ordinance (VRO) | If applicable: ELV Ordinance/Federal Soil Protection Act, Federal Water Act, PC | |

| Viewing area | Decom. without CoD | Remaining on private property | If applicable: recycling at an authorised dismantling facility, non-authorised dismantling, re-registration, exportation, etc. |
|--------------|---------------------|--|--|
| Monitoring | Registration office | If applicable: waste management authorities (disposal order) | |

There are no statistics on the number of vehicles with this life-cycle. Moreover, with the current state of the available information, the FMTA does not believe it is possible to provide serious estimates (FMTA 2015). This scenario is not considered to be significantly quantitatively relevant by the experts, therefore, closing the data gap is not a task of primary importance. Although there is a certain number of vehicles on private properties, the current population is not relevant to statistics, since that would depend on a change in the population. However, since the growth potential (e.g. at airports or car clubs) is limited, the population has probably not changed much in past years, and a massive population increase in the course of one year is unlikely to take place.

The reason for the lack of records is once again the practice of decommissioning, where no further information on the subsequent whereabouts of the vehicle must be provided. Although MV registration offices should actively ask for the presentation of a Certificate of Destruction upon the decommissioning of a vehicle, in practice, this is often neglected (FMTA 2015a, MV registration office Kaiserslautern on 20/01/2016, MV registration office Bad Dürkheim on 17/02/2016, MV registration office Westerwaldkreis on 02/09/2016).

With regard to the statistical gap, this scenario can only be quantitatively relevant if the population of vehicles used on private properties increase or decrease significantly within short periods of time. The impacts of a constantly high population would not be particularly noticeable in the existing statistics. Moreover, this scenario usually deals with temporary whereabouts, and is followed by one of the other outlined scenarios.

3.4.2 Scenario 17: Vehicle theft

Brief description of the scenario: The vehicle is stolen and its further whereabouts are unknown. The last holder is obligated to decommission the vehicle after it has been stolen.

Table 27: Vehicle theft

| Viewing area | After theft | Decom. without CoD |
|--|---|--|
| Player | Last holder | Last holder |
| Information flow regarding the whereabouts | Last owner notifies the police and reports the theft to the insurance company. | Decom. → MV registration office → FMTA |
| Statistical data pool | Subset with comprehensive insurance: GIA Police/Federal Criminal Police Office: INPOL property search Statistics of the FMTA for search annotations regarding stolen vehicles acc. § 30 Para. 9 of the VRO Crime statistics of the Federal Criminal Police Office | The vehicle is registered at the CVRFMTA for decom., but without a CoD |

| Viewing area | After theft | Decom. without CoD |
|--------------|-----------------|--------------------------------------|
| Legal norms | Penal Code (PC) | Vehicle Registration Ordinance (VRO) |
| Monitoring | Police | MV registration office |

Two relevant statistics are available for this scenario. The GIA maintains statistics on the theft of vehicles with fully comprehensive insurance, according to which 18,805 such vehicles were reported stolen in 2013 (GIA 2014). Vehicles without comprehensive insurance are not included in these statistics. The second set of statistics is maintained by the Federal Criminal Police Office and contains all vehicles stolen in Germany. According to the INPOL property search, these amounted to 19,395 permanently stolen vehicles in 2013 (Federal Criminal Police Office 2013, p. 5). The INPOL property search registers all vehicles reported as stolen in the course of the year and still not found at the end of the year. This makes it different from the INPOL aggregated search listing, which includes all search listings on stolen pass. cars recorded throughout the year, irrespective of whether they are still sought at the end of the year. In 2013, this figure amounted to 35,696 vehicles. The Police Crime Statistics (PCS) also contain information on the cases of stolen motor vehicles and indicate that 37,427 vehicles were stolen in 2013 (Federal Criminal Police Office 2014, p. 11). However, the Federal Criminal Police Office notes that ‘PCS case numbers do not allow a final conclusion on the actual number of stolen motor vehicles as one case may involve the theft of more than one vehicle, and, as a result, there are uncertainties due to the documentation of criminal offenses and so-called use thefts’ (Federal Criminal Police Office 2011, p. 6). Therefore, it appears that INPOL property search, containing a number of 19,395 vehicles stolen for the long-term, represents the most reliable statistics in this respect. The level of completeness is also estimated to be very good, since, on insurance and tax law grounds, last holders have few reasons for not reporting their vehicles as stolen or not putting them out of operation. If a theft report issued by the police is submitted upon decommissioning, according to § 31 Para. 7 of the VRO, it must be stored in the local registration records by the MV registration office, and then in the Central Vehicle Register of the FMTA (CVRFMTA) according to § 30 Para. 9 of the VRO. In addition, the FMTA states that ‘insurance companies shall apply in writing for the storage of search notes in the CVRFMTA following the claim settlement by reason of vehicle theft in order to be able to assert their property claim on the affected vehicle in the event of a subsequent re-registration in Germany.’ (FMTA 2013a, p. 3).

Since this life-cycle does not describe the definitive whereabouts of the vehicles – instead, it is highly probable that sooner or later, stolen vehicles undergo a situation described in the other scenarios (e.g. transfer to another EU Member State) –, this scenario is also not considered to be relevant to the closure of the statistical gap.

3.4.3 Scenario 18: Recycling of end-of-life vehicles in EU Member States after an accident, breakdown or similar event had occurred there

Brief description of the scenario: The vehicle becomes an end-of-life vehicle abroad (e.g. due to an accident or a breakdown). It is given to an authorised end-of-life vehicle recycling facility for dismantling with the receipt of a foreign Certificate of Destruction. The last holder then puts the vehicle out of operation in Germany and presents the Certificate of Destruction obtained abroad upon decommissioning.

Table 28: Recycling of end-of-life vehicles in foreign EU countries after an accident or breakdown

| Viewing area | Dismantling in authorised dismantling facilities abroad | Decom. with CoD | Reporting to the insurance company in Germany |
|---|---|---|--|
| Player | Last holder | Last holder | Last holder |
| Information flow regarding the whereabouts | Foreign authorised dismantling facility: Issuing a CoD in accordance with the end-of-life vehicle directive implemented on a national level | Decom. → MV registration office (data according to § 15(2) of the VRO) → FMTA | Last holder → damage report to insurance company |
| Statistical data pool | End-of-life vehicle directive implemented on a national level | The vehicle is registered at the CVRFMTA for decom. with a CoD | Insurance statistics |
| Legal norms | End-of-life vehicle directive implemented on a national level | Vehicle Registration Ordinance (VRO) | Vehicle Registration Ordinance (VRO), insurance laws |
| Monitoring | Waste management authority of the MS | MV registration office | |

Only internal FMTA statistics are available for this scenario. This distinguishes Certificates of Destruction submitted in the context of decommissioning based on whether they concern recycling performed within Germany or abroad. Vehicles located abroad must be declared by the last owner in case of decommissioning in accordance with § 15 Para. 2 of the VRO. In 2013, the number of vehicles recycled abroad amounted to 9,040 (FMTA 2015b). The motivation of the last owner regarding the submission of the Certificate of Destruction obtained abroad could not be fully clarified. These cases might entail vehicles involved in an accident abroad, whose related costs are only reimbursed by insurance companies if a Certificate of Destruction is provided as the proof of decommissioning. Representatives of insurance companies' associations confirm that this is the most probable reason for submitting the Certificates of Destruction (GIA 2015b). Presumably, the FMTA figure provides a nearly complete representation of vehicles that have actually been involved in an accident abroad and recycled there, since last owners have a significant economic incentive to submit Certificates of Destruction, as that is the only way they receive the insured sum. Therefore, it can be assumed that this scenario has no quantitative relevance.

3.5 Summary

The purpose of Chapter 3 was to introduce the possible life-cycles of vehicles put out of operation within Germany based on the current level of knowledge. The systematisation was carried out by arranging life-cycles into 18 scenarios, two of which presented only temporary whereabouts. In doing so, the possible data gaps and their potentially underlying reasons, which could result in the lack of statistical records on decommissioned vehicles, were identified. The scenarios enabled the identification of the relevant fields of law and involved players to be examined and had to be taken into consideration to deal with the problems posed by the project.

Several relevant data gaps with corresponding causes were identified, which may contribute to the lack of records on decommissioned vehicles. The possible reasons for the lack of records on decommissioned vehicles were defined as the following:

- ▶ legal structure,
- ▶ incomplete implementation of existing legal requirements,
- ▶ complex definitions and distinctions, and
- ▶ interaction of various mechanisms that account for

the gaps. The data gaps and their causes have been associated with different levels of relevance for the closure of the statistical gap, which will be discussed in Chapter 5 by taking into account the actual whereabouts of end-of-life vehicles in the reference year of 2013.

4 Description of the legal framework

This chapter provides an explanation on the legal framework relevant to the subject-matter of the project.

For the identified legal bases, guidelines, administrative instructions,

- ▶ the sources of law, as well as (if applicable) the EU regulatory bases and the degree of obligation,
- ▶ the relevant case laws (if applicable; e.g. for the definition of waste),
- ▶ the scope of responsibility (competence) of the legislature, and
- ▶ the responsibility for enforcement and implementation practice

will be provided and then presented in tables.

In terms of the representation of state law, the legal situation of Lower Saxony will be regularly presented as an example. The legal situation in other federal states is only discussed in cases of significant special provisions.

The subsequent presentation of legal bases applicable in Germany in connection with the whereabouts of motor vehicles is structured on the basis of the affected individual material that directly or indirectly regulate vehicle whereabouts. The order of the individual chapters largely follows the logic of abstract concepts built on each other and not the progression stages of a motor vehicle (new vehicle, second-hand vehicle, end-of-life vehicle, stripped vehicle).

The following section discusses vehicle registration law specifically applicable to motor vehicles, describing their status (as road users). This is followed by a review of recycling law. As public street law and road traffic law are partly connected to the definition of waste, waste law is examined afterwards. The same applies to waste shipment law as a special field of waste law. Customs and foreign trade law applicable to the border-crossing process are also dealt with. This is followed by an analysis on industrial site regulations aimed at MV workshops. Then, the chapter deals with administrative offences and questions of criminal liability with regard to all conceivable vehicle life-cycles. The subsequently explored insurance law builds on the previously explained abstract concepts. The last part of the study presents a comprehensive analysis on all individual materials in conjunction with issues related to statistics and data protection. After a summary and a conclusion, further instruments and comprehensive possibilities for change will be discussed.

4.1 Motor vehicle registration law

Vehicle registration law is of particular relevance for determining the whereabouts of decommissioned vehicles. It regulates, among other things, vehicle decommissioning (§ 14 of the VRO) as well as the issue of Certificates of Destruction (§ 15 of the VRO). The motor vehicle tax liability and motor vehicle liability insurance obligation are both connected to permitted participation in road traffic. The following sections examine the provisions of motor vehicle registration law in the context of the reliable traceability of the whereabouts of decommissioned vehicles.

4.1.1 Basis for decommissioning

The Road Traffic Act (RTA¹⁸) **provides the basis for the decommissioning** of vehicles. § 6 Para. 1 item 2 of the RTA defines the legal basis of an Ordinance regulating the registration of vehicles for participating in road traffic. The amended 2011 version of the Vehicle Registration Ordinance

¹⁸ Road Traffic Act (RTA) in the version published on 05/03/2003 (FLG I p. 310, 919), last amended by the Act of 08/06/2015 (FLG I p. 904).

(VRO¹⁹) is based on this. According to the applicable law (§ 14 Para. 1 of the VRO), there are two methods available for decommissioning. The first method entails requesting and submitting the licence plate number for invalidation (conventional method), while the other method (available since 01/01/2015) consists of electronic decommissioning (electronic method). § 14 Para. 1 Sentence 1 of the VRO provides for the conditions of both the request as well as the submission of certain documents and the licence plate number.

According to the basic principle of registration law, decommissioning ends a vehicle's participation in road traffic. While registration renders the participation in road traffic possible and triggers tax liability and third-party liability, decommissioning results in exactly the opposite.

EU Directive 2014/46/EU²⁰, as part of the EU traffic safety package, amended Directive 1999/37/EC through the insertion of a new Article 3a to the effect that, under certain circumstances, the **temporary suspension** of a vehicle's permit for participation in road traffic can be imposed if the vehicle constitutes an immediate risk to road safety (Recital 1). The technical monitoring systems in the Member States provide the background for this. As per Recital 2, to reduce the administrative burden resulting from suspension, it should not be necessary to go through a new process of registration when the suspension is lifted. In any case, an obligation to permanently cancel the registration of a vehicle must be compulsory if the vehicle was treated as an end-of-life vehicle in accordance with Directive 2000/53/EC²¹ of the European Parliament and of the Council (Recital 3), i.e. recycled. Directive 2014/46/EU must be transposed into national law at the latest by 20/05/2017 and must enter into force at the latest by 20/05/2018.

4.1.1.1 Decommissioning

Part I of the registration certificate²² ('registration document') and the licence plate number of the vehicle must be submitted upon decommissioning. Since 01/07/2012, Part II of the registration certificate²³ ('vehicle title') need not be submitted upon decommissioning. Motor vehicles intended to be recycled constitute an exception to this rule.

§ 15 of the VRO prescribes two options regarding information on the whereabouts of vehicles of categories M1 or N1 in the case of decommissioning. Either the decommissioning is carried out with the presentation of a Certificate of Destruction²⁴ – if the vehicle is handed over for recycling to a facility authorised in accordance with the ELV Ordinance²⁵ (§ 15 Para. 1 VRO), or the last owner has to declare that the vehicle will remain abroad for disposal purposes or that the vehicle is not intended to be disposed of as waste (§ 15 Para. 2 VRO). According to § 31 Para. 1 item 27 of the VRO, this information must be stored in the local registration records by the MV registration office, and in the Central Vehicle Register according to § 30 Para. 1 item 27 of the VRO. In Germany, only those dismantling facilities may issue Certificates of Destruction that are authorised by the provisions of the ELV Ordinance (see Chapter 4.2).

¹⁹ Vehicle Registration Ordinance (VRO) of 03/02/2011 (FLG I p. 139), last amended by the Act of 03/12/2015 (FLG I p. 2178).

²⁰ Directive 2014/46/EU of the European Parliament and of the Council of 03/04/2014 amending Council Directive 1999/37/EC on the registration documents for vehicles, OJ no. L 127/129 of 29/04/2014.

²¹ Directive 2000/53/EC of the European Parliament and of the Council of 18/09/2000 on end-of-life vehicles (OJ L 269 of 21/10/2000, p. 34).

²² Part I of the registration certificate is regulated by § 11 of the VRO, which refers to Sample 5 of the VRO.

²³ Part II of the registration certificate is regulated by § 12 of the VRO, which refers to Sample 7 of the VRO in Para. 2.

²⁴ Therefore, the obligation incurred by the keeper or the owner to produce the Certificate of Destruction only applies to German Certificates of Destruction.

²⁵ End-of-Life Vehicle Ordinance (ELV Ordinance), text published on 21/06/2002 (FLG I p. 2214), last amended by the Ordinance of 31/08/2015 (FLG I, p. 147).

The latter mentioned informal declaration that a vehicle remains abroad for disposal purposes or that it is not disposed of as waste must not be confused with the so-called declaration of whereabouts abolished in Germany by the End-of-Life Vehicle Act of 01/07/2002. From 01/04/1998 to 30/06/2002, only pass. cars of vehicle category M1²⁶ were subject to the recording obligation set out in § 27a Para. 1 Sentence 1 of the RVRO (old version). According to this, the holder or the owner was obligated to declare the whereabouts of the vehicle either by presenting a Certificate of Destruction issued by an authorised dismantling facility or, if the vehicle remained abroad for disposal purposes or was not disposed of as waste, by submitting a declaration of whereabouts as set out in Sample 13 of the RVRO at the time the vehicle was permanently decommissioned or was deemed to be permanently decommissioned. § 27a of the old version of the RVRO (with the Certificate of Destruction as well as the declaration of whereabouts) was re-inserted into the RVRO with § 2 of the End-of-Life Vehicle Ordinance effective as of 01/04/1998. The draft law on the disposal for end-of-life vehicles prepared by the federal government (End-of-Life Vehicle Act)²⁷ includes the justification for the abolishment of the ‘declaration of whereabouts’, according to which it ‘required considerable enforcement efforts on the part of the authorities, however, without providing real assistance to the competent authorities in terms of monitoring due to the comparatively simple methods of circumventing it’.

4.1.1.2 I-MV procedure for decommissioning motor vehicles

Since 01/01/2015, an alternative to the previously described procedure has been available, namely the web-based decommissioning of motor vehicles within the scope of the first step of web-based vehicle registration (i-MV). As of the above date, vehicle owners may apply for decommissioning and use the new official seals and registration certificates used for vehicle registration with concealed security codes. This can be done on the web portals of state registration authorities or on the central portal operated by the Federal Motor Transport Authority. Thanks to the procedure, it is no longer necessary to appear personally at the competent registration authority (cf. § 14 Para. 2 of the VRO).

The web-based i-MV decommissioning procedure is not yet available for end-of-life vehicles intended to be decommissioned with a Certificate of Destruction (since 2007, sample in Annex 8 of the VRO). Throughout the decommissioning process, whether a Certificate of Destruction is required is asked. If the answer is yes, the online decommissioning procedure is concluded with a notice that the keeper of the motor vehicle (i.e. generally the vehicle’s registration or insurance holder²⁸) submit it personally at the MV registration office in order to carry out the decommissioning²⁹.

4.1.1.3 Decommissioning fees

Official acts of the registration authorities, including decommissioning, are subject to fees (see Chapter 3.1.2.3) that cover the expenses associated with them. Further details on this topic can be found in § 6a of the RTA. The specific consideration-based fees are based on (estimated) administrative ex-

²⁶ Vehicle category M1: Motor vehicles used primarily for the carriage of passengers comprising not more than eight seats in addition to the driver’s seat

²⁷ BT-Drs. 14/8343 (page 28): justification for § 4 (amending the Road Vehicle Registration Ordinance) item 1 (amended version of § 27a of the RVRO).

²⁸ HAC Lüneburg, order of 30/01/2014, 12 ME 243/13, NZV 2014, 485.

²⁹ Cf. FMTA (ed.), web-based vehicle registration (i-MV) – Decommissioning – Central Vehicle Register (CVRFMTA), Web application user manual, version of 15 June 2015, https://www.kba-online.de/i-kfz/portal/webapp/pdf/Anwenderhandbuch_Webanwendung_IKFZ_V_1_0.pdf, p. 21.

penses. These are based on the Ordinance on the Scale of Charges for Road Traffic Measures (OS-CRTM³⁰). Item 224 of the Annex to the OSCRTM lists the fees of decommissioning with or without a Certificate of Destruction:

Table 29: Decommissioning fees as per item 224 of the Annex to the OSCRTM

| No. | Decommissioning | Amount |
|-------|---|--------|
| 224.1 | within or outside of the registration district | 6,90 |
| 224.2 | web-based | 5,70 |
| 224.3 | acceptance of a Certificate of Destruction as per § 15 of the VRO at the same time with the decommissioning | 5,10 |
| 224.4 | acceptance of a Certificate of Destruction as per § 15 of the VRO not at the same time with the decommissioning | 10,20 |

4.1.1.4 Correlation between decommissioning and tax liability

Decommissioning terminates or suspends tax liability (§ 5 Para. 4 of the Motor Vehicle Tax Code [MVTC]³¹). In principle, the tax liability is terminated on the day of decommissioning, i.e. on the date the decommissioning note is recorded on the registration certificate and the licence plate number is invalidated³² (§ 5 Para. 4 Sentence 1 of the MVTC). Motor vehicle tax law refers to registration law through the legal concept of registration for use in traffic. It can be inferred from § 5 Para. 4 of the MVTC that it depends on the existence of both characteristics. The only exception is (as per § 5 Para. 4 Sentence 2 of the MVTC) if the taxpayer can furnish prima facie evidence that the vehicle was not used at an earlier time and the decommissioning of the vehicle was not culpably delayed³³.

Like vehicle registration at the registration authority, the application for decommissioning serves as a tax declaration (cf. customs, n.d., b). Just as the registration data, the data on the decommissioning is also transmitted to the competent Main Customs Office for the purpose of determining the termination of the motor vehicle tax liability. This serves as the legally binding basis assessment in accordance with § 171 Para. 10 of The Fiscal Code of Germany (FC³⁴) i.c.w. § 2 Para. 2 item 2 of the MVTC.

In conclusion, it can be stated that the tax liability currently exists until decommissioning and is not applicable thereafter, i.e. does not extend beyond the Certificate of Destruction or the export certificate.

4.1.2 Post-decommissioning processes

Once the decommissioning has been carried out, there are several options available for the last owner regarding the further whereabouts of the vehicle (see the scenarios described in Chapter 3). In case of disposal in accordance with § 4 Para. 1 of the ELV Ordinance, the last owner is obligated to deliver the vehicle to an approved acceptance facility, an approved collection facility or an accredited dismantling facility. However, it is currently also conceivable that a vehicle not undergoing disposal may be re-registered within Germany or exported outside of Germany. Vehicle registration law does

³⁰ Ordinance on the Scale of Charges for Road Traffic Measures (OSCRTM) of 25/01/2011 (FLG I p. 98), last amended by the Ordinance of 15/09/2015 (FLG I p. 1573).

³¹ Motor Vehicle Tax Code (MVTC) in the version published on 26/09/2002 (FLG I p. 3818), last amended by the Act of 08/06/2015 (FLG I p. 901).

³² BFH, order of 20/12/2010, II B 42/10, BFH/NV 2011, 655-656.

³³ BFH, order of 20/12/2010, II B 42/10, BFH/NV 2011, 655-656, No. 8 ff.

³⁴ The Fiscal Code of Germany in the version published on 01/10/2002 (FLG I p. 3866; 2003 I p. 61), last amended by the Act of 03/12/2015 (FLG I p. 2178).

not contain provisions on this and does not prescribe any further specific procedures on the subsequent record-keeping of such vehicles' whereabouts, apart from the provision that such vehicles may not be disposed of as waste (§ 15 Para. 2 of the VRO).

The last owner may report the disposal of the motor vehicle as an end-of-life vehicle for recycling purposes at the MV registration office subsequently, and consequently, the corresponding registration may also be entered later in the CVRFTA. However, there is no obligation to subsequently submit the Certificate of Destruction of a vehicle that has already been decommissioned.

It is also not specified in motor vehicle registration law that the owner must declare the disposal of the stripped vehicle at the MV registration office after decommissioning. If the owner disassembles its vehicle after decommissioning and sells the stripped vehicle to a dealer³⁵ without declaring the change in ownership at the MV registration office (Buller 2007, p. 13), the owner remains the last registered keeper and the person responsible for the threat caused by the stripped vehicle if it is later found in a public area, and must bear the costs of disposal (towing, etc.)³⁶.

After the vehicle has been decommissioned, it is possible to **re-register it later** (§ 14 Para. 6 of the VRO). The operating licence is not terminated by the decommissioning of the vehicle. During this 'state of uncertainty', it is suitable for further use as, for example, a collector's item in a garage. If it is intended to be re-registered later, part I ('registration document') and part II ('vehicle title') of the registration certificate must be kept and handed over to the buyer (if applicable)³⁷.

The rule on re-registration after decommissioning (§ 14 Para. 6 of the VRO) is a discretionary provision. The rule states that 'the re-registration can be declined if Part I and Part II of the presented registration certificate are marked with the inscription "Certificate of Destruction presented", and Part II of the registration certificate is additionally validated by cutting off the lower left corner.' This discretionary decision generally contradicts the arrangement of due treatment as per § 4 Para. 2 Sentences 5 and 6 of the ELV Ordinance. According to the latter rule: 'Upon issuing or delivering the Certificate of Destruction, end-of-life vehicles may only be transferred for the purpose of due treatment in compliance with the provisions of this Ordinance. This is warranted by issuing or delivering a Certificate of Destruction.'

There is no provision on decommissioning a vehicle registered in Germany abroad (however, see: German Embassy in Stockholm 2016). If a vehicle is recycled, the vehicle title, registration document and the licence plate number must be presented to the German registration office for decommissioning. This may also be carried out by proxy.

³⁵ See Chapter 4.2.2 for an assessment on such a procedure from the perspective of waste law.

³⁶ AC Göttingen, judgement of 22/07/2010, ref. no. 1 A 25/10, openJur 2012, 50823, <https://openjur.de/u/325810.html> (downloaded on 17/01/2015), No. 18.

³⁷ Until 30/09/2005, the person initiating the deregistration (i.e. the owner having its vehicle decommissioned by the authority) received a certificate of decommissioning (commonly known as a 'deregistration certificate') from the MV registration office, which had to be presented in its original form upon re-registration. The provision set out in § 27 Para. 6 Sentence 2 of the old version of the RVRO, according to which vehicles that have been decommissioned for 18 months are deemed to be permanently decommissioned, resulting in the keeper with this legal fiction losing its rights and the vehicle being stricken from the records, is no longer applicable.

4.1.3 Competent authorities for registration law and the enforcement of motor vehicle registration law

Motor vehicle registration laws are federal laws and are regulated by way of ordinance³⁸.

Due to the entry into force of the Vehicle Registration Ordinance (VRO) on 01/03/2007, the registration procedure was at the time subject to new regulation. Prior to this, the registration law regulations were exclusively contained in the Road Vehicle Registration Ordinance (RVRO). Presently, the RVRO only contains so-called building and plant regulations in addition to incidental provisions, e.g. on inspection obligations. Federal laws implement the regulations of EU Directive 1999/37/EC³⁹ on Part I and Part II of the registration certificate that entered into force on 01/10/2005. The EU Directive is binding as to the result to be achieved, but the measures related to its implementation are left to the discretion of the Member States (§ 288 Para. 3 of the TFEU).

Adherence to federal motor vehicle registration law – which applies directly to all federal states – is mandatory. Within the federal government, the maintenance of this field of law is the responsibility of the Federal Ministry of Transport and Digital Infrastructure (FMTDI).

As a basic principle, the states themselves are responsible for implementing federal law (§ 30, 83 f. BL). In terms of competence, § 46 Para. 1 Sentence 1 of the VRO prescribes that the Ordinance ‘shall be put into execution by the lower administrative authorities competent according to state law’. According to § 46 Para. 1 Sentence 2 of the VRO, ‘The competent higher state authorities, as well as the bodies designated by them or those competent under state law may also provide direction and guidance to administrative authorities in the context of individual cases or take the necessary measures themselves.’

Within the federal states, the implementation of this is a municipal task. In the territorial states, the (registration authorities of) administrative districts and the independent cities have competence⁴⁰. In the city states, the situation is different⁴¹.

4.1.4 Excursus: Procedures for decommissioning with a Certificate of Destruction and registration of second-hand vehicles in different EU Member States

With regard to record-keeping in the context of vehicle decommissioning, there are more or less significant differences between various Member States in terms of organisation, institutional competences and technical implementation. The following remarks are based on literature research, on-site sessions, workshops and partially on interview related to guidelines conducted with the participation of involved players from the respective countries.

³⁸ The legal basis of the Ordinances is provided by § 6 Para. 1 items 2a through d, j through l, p and s through v; item 7; item 12b and § 47 of the RTA; § 6 Para. 1 item 5c in conjunction with Para. 2a of the RTA; § 6 Para. 1 items 8 through 11 in conjunction with Para. 2 of the RTA and § 7 of the Compulsory Insurance Act (CIAct) of 05/04/1965 (FLG I p. 213), last amended by the Ordinance of 31/08/2015 (FLG I p. 1474).

³⁹ Directive 1999/37/EC of the Council of 29/04/1999 on the registration documents for vehicles (OJ L 138 of 01/06/1999, p. 57), last amended by Directive 2003/127/EC (OJ L 10 of 16/01/2004, p. 29).

⁴⁰ Cf. e.g. for Lower Saxony the Ordinance on the Responsibilities in the Field of Transportation (Ord. Resp. Transp.) of 25/08/2014 (LS GLO 2014, 249).

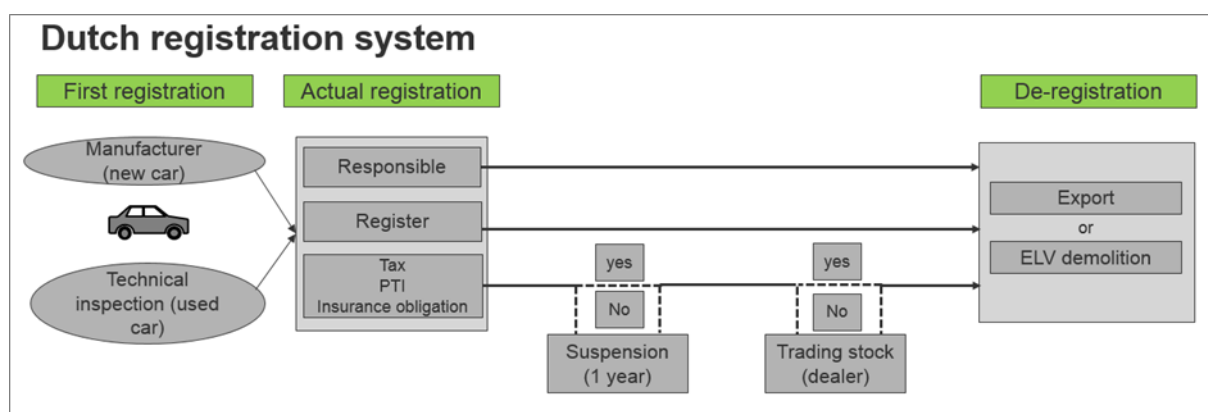
⁴¹ E.g. in Berlin, the MV registration office within the State Administration Authority is the competent body (cf. city of Berlin, n.d.). In Hamburg, the State Office of Transport (SOT) assumes competence (cf. city of Hamburg, n.d.). In Bremen, the Citizen Attention Centre of Bremerhaven and North, the Citizen Service Centre of Bremen, the Northern Citizen Service Centre of Bremen, and finally, the MV registration office of Bremen are the competent bodies (cf. City Office of Bremen, n.d.).

Netherlands

In the Netherlands, there is a strictly vehicle-based registration system, which is managed by the ‘Rijksdienst voor het Wegverkeer’ (Dutch Vehicle Authority, DVA) approval authority and is founded on the principle of continuous registration. From its first day of operation until its last (i.e. from the date of registration until the day of decommissioning or exportation), the vehicle must be listed in the DVA register without interruption. The so-called holder concept is one of the main points of this system. The obligations arising in connection with the vehicle, such as tax liability, inspection and insurance obligation, are linked to the holding instead of use. Therefore, in the Netherlands, registration serves as the basis of vehicle-related obligations (cf. Timmers and Niemeijer 2015).

There are only two options available for decommissioning vehicles: they may either be exported to another country or recycled at an authorised dismantling facility. It is only when one of these two routes are taken that the obligation to pay the motor vehicle tax, which is extremely high in the Netherlands, is permanently dispensed with. This results in a highly effective incentive to actually decommission the vehicle through these options. Figure 29 provides an overview of the Dutch registration system.

Figure 29: Overview of the Dutch registration system



Source: own representation

To be able to carry out recycling activities, dismantling facilities must have a licence granted by the DVA, which enables them to issue certificates that can be registered via an online system. Through this registration process, the relevant insurance companies are also notified about the decommissioning of vehicles.

The principle that the licence plate is always connected to the vehicle also plays an important role in the Netherlands. This way, licence plates allow for the seamless tracking of each vehicle (previous holders, accident damage, etc.).

All data on the vehicle and the keeper (not the owner) are recorded in the vehicle register. Information on stolen vehicles is preserved; moreover, the DVA register also logs vehicle mileage. In addition, the DVA register contains information on changes of personal data (e.g. address) via the ‘Gemeentelijke Basisadministratie’ (Central Register of Residents, CRR), and provides daily reports on all relevant changes to the Ministry of Finance, since the information stored in the register serves as the basis for the determination of payable motor vehicle tax. Public institutions exchange this data free of charge. Other interested parties may obtain this information for a fee. Most inquiries originate from tax authorities and the police. Suppliers in the automobile industry maintain their own register, which is updated with data from the DVA register by way of a paid subscription. This data transfer is subject to strict rules. According to the Dutch Data Protection Act, sensitive data stored in the registers may not be forwarded to individuals.

Approximately three million changes are made to keeper data each year. These changes can be carried out by the 7,000 authorised car companies or submitted by the keepers to a total of 900 post offices. Among other things, the post offices examine the identity of new owners through a valid driver's licence or identification card. The transmission process is carried out via computers online, therefore, the data is recorded real-time in the DVA register. The driver's licence is also checked online, just like the vehicle documents. At the same time, the data stored in the DVA register is checked for irregularities. If there are no irregularities, the vehicle is registered in the name of the new holder, who then receives a new registration code by post. Vehicles handed over to authorised car dealers or workshops are electronically reported to the DVA register. In this case, the obligations arising in connection with the vehicle (motor vehicle tax in particular) are temporarily suspended. If the vehicle has a green licence plate, the potential buyers or the dealership employees may use the vehicle in road traffic. Such a licence plate must be requested in advance. Compliance with the rules is ensured through regular and unannounced inspections conducted by the Ministry of Transport.

Since the Dutch registration system is keeper-oriented, the keeper incurring the obligations related to the vehicle must meet said obligations even if it does not use the vehicle. On the other hand, these obligations may be suspended for up to one year upon request. In this case, the vehicle cannot be used on public roads for the requested period of time. This is checked by the tax authority. On average, the cost of such a request is EUR 73. The owner submits a confirmation by post or via e-mail if the request has been submitted online.

Approximately 600,000 vehicles are deleted from the DVA vehicle register each year. For this, the holders must actively decommission their vehicles. If they fail to do so, they must continue to meet the obligations (including financial obligations) arising in connection with the vehicle. This ensures that the register always remains up-to-date.

Deregistration can be carried out as part of an official export or dismantling process. In the event of an export, the owner must report the vehicle to the DVA register as exported and the vehicle title must be stamped accordingly. In the event of dismantling, the owner must take the vehicle to an authorised dismantling facility, which in turn reports the vehicle electronically as dismantled to the register. Subsequently, the owner receives a confirmation from the authorised dismantling facility, with which insurance is provided against any potential damage later caused by the vehicle (cf. Timmers and Niemeijer 2015).

Violations of the insurance and inspection rules are directly recorded by the DVA register. The vehicle and keeper data of the DVA register are to date regularly compared to the data of motor vehicle insurance companies. If a vehicle is registered but does not have proper insurance and is not inspected in accordance with the rules, the keeper receives a notification from the DVA with the threat of a fine. If the keeper does not respond to this, the case is forwarded to the competent authorities through the Ministry of Justice. Tax collection is the responsibility of the Ministry of Finance. The public road use of vehicles registered for decommissioning or those that should have a green licence plate is checked through road inspections (cf. Timmers and Niemeijer 2015).

The Netherlands also has a motor vehicle tax (motorrijtuigenbelasting, MRB) in place. This is a so-called 'keeper tax', which must be paid on a quarterly or annual basis. The tax is connected to the holding of the vehicle instead of its use. The motor vehicle tax is imposed by the tax authority, which operates as part of the Ministry of Finance. The Ministry of Transport informs the tax authority about all changes made to the vehicle register, amounting to approximately 6.5 million changes each year. The holders automatically receive a tax assessment notice from the moment a vehicle is registered in their name. This means they do not have to inform the tax authority separately.

Poland

In Poland, the deregistration of vehicles is regulated by § 79 Paragraph 1 of the Road Traffic Act⁴². According to this, the owner of an end-of-life vehicle may only hand the vehicle over to the operator of an authorised vehicle dismantling or storage facility. Non-compliance results in a penalty fee (§ 48 of the Polish Road Traffic Act). Moreover, the holder of an end-of-life vehicle is obligated to decommission the vehicle within 30 days after the certificate of dismantling or the certificate confirming that the incomplete vehicle had been accepted by the operator of an authorised vehicle dismantling or storage facility has been issued.

A special characteristic of Poland is that a specific scale of charges is in effect, according to which second-hand vehicle importers must pay a fee of PLN 500⁴³ per vehicle. These fees must be transferred to a separate bank account of the National Fund for Environmental Protection and Water Management and are used for financing the following activities:

- ▶ co-financing of end-of-life vehicle dismantling,
- ▶ co-financing of investment projects related to end-of-life vehicle dismantling, management of waste produced by end-of-life vehicle dismantling and to end-of-life vehicle collection,
- ▶ supporting municipalities in collecting end-of-life vehicles that have been parked there by their last owners.

Sweden

The Swedish vehicle register comprehensively documents the details of vehicles, owners/keepers, taxes, insurances and traffic tickets. Mileages are also recorded during technical inspections on motor vehicles (cf. European Commission 2014a). Personal data (changes in address, death, etc.) is supplied by the central register of residents maintained and managed by the national tax authority. Since the vehicle register is a national register, it is subject to the public right of access to the information stored therein. This information is freely accessible and is connected to the registration or the chassis number. In particular, technical details, an overview of the previously registered owners/keepers, the date of the technical inspection, the insurance and the tax details are available. This access is available free of charge. Vehicle keepers and owners have the option to block third-party access to personal data, however, access to vehicle information cannot be blocked. Additionally, the vehicle register also contains information on stolen vehicles recorded and managed by the police.

If a vehicle is sold for exportation, the Swedish system requires a copy of the consignee's documents that explicitly state that the vehicle has been cleared by customs or a registration certificate issued in the country of destination if the vehicle has been registered there.

Spain

At present, about one million vehicles are decommissioned in Spain each year. The country is currently working on an IT system that would make this data available to other EU Member States. The registration can be suspended either through official exportation or via dismantling. In the event of exportation, the owner must declare the vehicle as exported at the local municipal office and must ensure the documentation of this fact in the vehicle documents. On the other hand, if the owner intends to recycle the vehicle through dismantling, the vehicle and the vehicle title must be handed over to a scrapyard accredited by the Spanish Ministry of Environment. The scrapyard declares the vehicle as dismantled to the competent office. The scrapyard operator provides the owner with a certificate of dismantling and a certificate of deregistration as proof of permanent deregistration.

⁴² Journal of Laws 2005, No 108, item 908.

⁴³ Amounting to approximately EUR 115 (as of 27/10/2016).

This certificate of dismantling adheres to a verification system and can be checked online for authenticity (cf. Garcia Lopez 2011). Spain developed a system, according to which the amount of the vehicle tax is based on vehicle holding and is not directly connected to roadworthiness. The system is similar to the regulations of the Netherlands (see above). The tax liability is for example only terminated if a Certificate of Destruction is issued and registered in the system.

Czech Republic

In the Czech Republic, data related to decommissioning has been recorded via the MA ISOH online system in the past years (Manhart 2015). Through this system, all (approximately 570) licenced authorised dismantling facilities can check whether a vehicle had been reported as stolen, before accepting it as a second-hand or end-of-life vehicle. Afterwards, a Certificate of Destruction can be issued directly through the system (in several languages, if requested). This certificate allows the keeper to subsequently decommission the vehicle at the local motor vehicle authority and request the termination of the annual motor vehicle tax liability (cf. IVS, n.d.). The current data stored in the system can be retrieved via a web portal, according to which, in 2015, a total of 477 recycling companies were connected to the system and 1,297,959 end-of-life vehicles were handed over to them that year (as of 01/12/2015).

If a second-hand vehicle is re-registered, a fee may be imposed depending on its age. This fee only applied to imported vehicles originally, but now, even Czech vehicles are subject to it. However, inquiries made at the Ministry of Transport responsible for this procedure have shown that the country of origin is not recorded, which would be required to enable a comparison with the REGINA statistics (Pajer 2015). On the other hand, Part I of the registration certificates has been scanned since 1 July 2015, which at the least makes it technically possible to assign vehicles to their countries of origin based on their vehicle identification number, where possible (Manhart 2015).

4.2 Recycling law

4.2.1 Classification as waste in principle

A vehicle⁴⁴ is not a second-hand vehicle, but an end-of-life vehicle if it constitutes waste as described in § 3 Para. 1 of the Closed Substance Cycle Act (CSCA) and § 3 item 1 of EC Waste Framework Directive 2008/98/EC.

The transparent classification of both legal regimes (product versus waste) will only be possible after the precise distinction between second-hand and end-of-life vehicles has been established for the respective vehicles as a legal classification based on the concept of objective and subjective waste (cf. Waste Framework Directive 2008/98/EC).

Upon the acceptance of the classification of waste, this must be implemented into the national waste legislation of the Member States. The legal definition of the **concept of waste** determined in § 3 Para. 1 of the Closed Substance Cycle Act (CSCA⁴⁵), as the previous definition set out in § 3 Para. 1 of the Closed Substance Cycle and Waste Management Act (CSCWMA⁴⁶) (cf. Gassner 1998, p. 1148; Beckmann 1999, p. 24; Wallau 2013, p. 26 ff.) is concerned with the concept of objective and subjective waste as described in the earlier Waste Act of 1986⁴⁷, as well as by the case law established at

⁴⁴ Vehicles of category M1 or N1 as defined in Annex IIA of Directive 70/156/EEC and three-wheel motor vehicles as defined in Directive 92/61/EEC, with the exception of three-wheel motorcycles.

⁴⁵ Closed Substance Cycle Act of 24/02/2012 (FLG I p. 212), last amended by § 4 of the Act of 04/04/2016 (FCA I p. 569).

⁴⁶ Closed Substance Cycle and Waste Management Act (Act for Promoting Closed Substance Cycle Waste Management and Ensuring Environmentally Compatible Waste Disposal), § 1 of the Act of 27/09/1994 (FLG I p. 2705).

⁴⁷ Act on the Reduction and Removal of Waste – Waste Act of 27/08/1986 (FLG I p. 1410).

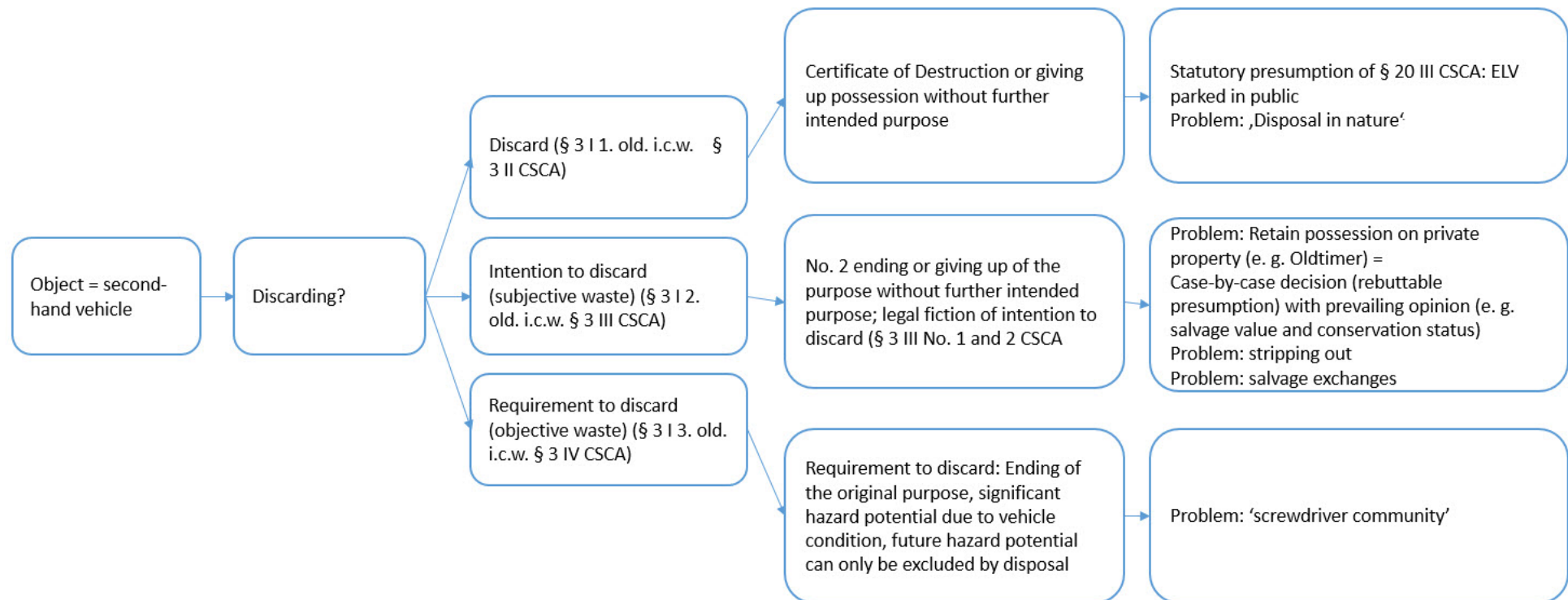
the highest judicial level applied here (cf. for development: Versteyl 2012, § 3 No. 4 ff.; Frenz 2012, § 3 Para. 1 of the CSCA, No. 3 ff).

On the other hand, a non-exhaustive list of waste⁴⁸ is no longer provided with the concept of waste, unlike in the CSCWMA⁴⁹. The provisions of § 3 Para. 1 of the CSCA on the concept of waste are presented in Figure 30.

⁴⁸ Commission Decision of 18/12/2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council (Text with EEA relevance) (2014/955/EU), OJ No. L 370/44 of 30/12/2014. Cf., in particular, Section 16 01: end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08).

⁴⁹ § 3 Para. 1 of the CSCWMA contains the following: 'which fall within the groups defined in Annex I' with Annex I defining waste groups in accordance with the European Waste Catalogue. This reference is not included in the CSCA.

Figure 30: Waste definition per § 3 Para. 1 of the CSCA (second-hand vehicle/end-of-life vehicle transition)



Source: Own representation

Waste is defined as a property that the owner disposes of (§ 3 Para. 2 of the CSCA), wants to dispose of (§ 3 Para. 3 of the CSCA) or must dispose of (§ 3 Para. 4 of the CSCA). The definition of property set out in the CSCA includes all moveable items in accordance with § 90 of the Civil Code, which also encompasses all vehicles (see, among others, Versteyl 2012, § 3 No. 6).

Thus, the characteristics of the concept of subjective and objective waste ('dual concept' [Versteyl 2012, § 3 No. 11]) must also be defined. In other words, it is necessary to investigate whether the criteria for the concept subjective or objective waste (as alternatives!) are fulfilled, taking § 3 Para. 1 Sentence 1 of the CSCA ('or') into account. In practice, there are often several alternatives available simultaneously. In such cases, the person actually disposes of the item, does so willingly, or is obligated to do so based on the objective classification of waste and for reasons of environmental protection (cf. Kopp-Assenmacher 2015; § 3 No. 8). The concept of subjective and objective waste is not characterised by a hierarchical relationship (for the dual structure of the definition of waste, cf. Frenz 2012, § 3 Para. 1 of the CSCA, No. 18).

The concept of subjective waste set out in the CSCA (§ 3 Para. 1 Sentence 1) is linked to disposal by the owner or the owner's intention to carry out the disposal. Due to the reference to an intention manifesting in action ('assumed'), we speak of a partially objectified subjective concept of waste (cf. Versteyl 2012, § 3 No. 11, 13; Frenz 2012, § 3 Para. 2 of the CSCA, No. 3; Wolf 2016, § 3 of the CSCA, No. 18).

For the concept of 'objective waste', it depends on whether disposal in the general interest is available at a specialised waste disposal operation. The definition of objective waste in § 3 Para. 1 Sentence 1 CSCA is further specified by the provision of § 3 Para. 4 CSCA. An object is objectively regarded as waste if its owner has the obligation to dispose of it. Prerequisites to be considered cumulatively (c.f. Frenz 2012, § 3 Para. 4 CSCA ref. 5 ff.; Wolf 2016, § 3 CSCA, No. 19) are the following: The owner of an object has the obligation to dispose of it, if

- ▶ it cannot be used any more according to its originally intended purpose,
- ▶ based on its specific state, it is suitable now or will be suitable in the future to endanger the common good, in particular the environment, and
- ▶ its hazard potential can only be eliminated by way of proper and harmless recycling or removal commensurate with the common good pursuant to the provisions of CSCA.

The first attribute mentioned above, the impossibility of further use according to the originally intended purpose, is closely related to intention to discard under the concept of subjective waste (c.f. § 3 Para. 3 Sentence 1 item 2 CSCA). The interaction works as follows: If the originally intended purpose of an object is lost or such a definition is waived, without a new intended purpose replacing the old one, the thing will already qualify as waste under the subjective waste definition. According to case law, this can be the case as a result of an accident⁵⁰ or a technical defect (c.f. Delfs 2013, No. 30). It is actually sufficient if the use for the new purpose is objectively possible within a reasonable period of time⁵¹. If, however, the originally intended purpose is directly replaced by a new intended purpose, in the lack of an intention to discard, it is not waste under the subjective concept of waste's definition⁵². Still, also in this case, depending on the other characteristics, the object may qualify as waste under the objective waste definition (c.f. Frenz 2012, § 3 Para. 4 CSCA No. 8).

⁵⁰ C.f. ECJ, judgement of 10/05/2007, Case C-252/05, 2007, I-3883 No. 28 (Thames Water Utilities).

⁵¹ HAC Niedersachsen, order of 29/09/2010, 7 ME 54/10, GewA 2011, 374 with further references; AC Neustadt in the case Weinstraße, judgement of 11/09/2015, 4 K 162/15.NW, BeckRS 2015, 52919.

⁵² C.f. only HAC Lüneburg, order of 09/09/2002, 7 LA 36/02, BeckRs 2005, 22249; AC Düsseldorf, order of 20/07/2010, 17 L 1137/10, BeckRs 2010, 55562.

This interpretation has recently been re-confirmed by the AC Neustadt in the case Weinstraße used car tyres as slope reinforcement and plant rings⁵³.

The intention to discard is regulated in § 3 Para. 3 CSCA: This means that the owner wishes to give up possession of a movable property, without using it for another purpose at the same time, in any manner of further utilisation. The intention to discard must be manifested in some way⁵⁴. Transferring a car to a disposal facility through the competent facilities/plants under the ELV Ordinance is an act proving the intention to discard.

In the aforementioned definition of intention to discard, in terms of the subjective data of the owner of waste, a certain degree of objectification is expressed ((Delfs 2013, § 3 CSCA No. 51; Petersen 2014, § 3 CSCA, No. 34), which is further intensified by the requirement that the prevailing opinion must be taken into account (c.f. Petersen 2014, § 3 CSCA, No. 82, 90 ff.) In this sense, one of the aspects to consider is marketability, which can be significant in terms of the waste owner's ability to quickly realise a new intended purpose (c.f. Halbgewächs 2008, p. 125).

The second attribute of the intention to discard under § 3 Para. 4 CSCA, i.e. that the object, in its specific state, is suitable now or will be suitable in the future to endanger the common good, in particular the environment, focuses on the hazard potential of the object. This is to be measured against the preventive principle. There is no need for any specific hazard, it is sufficient if the hazard potential will only be realised at a later stage (see here: Frenz 2012, § 3 Para. 4 CSCA, No. 10 ff. with further references. N.; Brandt 2014, § 3 CSCA No. 34).

The third attribute of the intention to discard under § 3 Para. 4 CSCA is the forecast that the hazard potential attached to an object can (only) be eliminated by way of proper and harmless recycling or removal commensurate with the common good. This is given provided that the environment-friendly procedures of disposal or recycling mentioned in Annex 1 or Annex 2 of CSCA are applied (c.f. Frenz 2012, § 3 Para. 4 CSCA, No. 16; Petersen 2014, § 3 CSCA, No. 112). The designation of the procedure does not have any exclusive character⁵⁵. It is possible and sufficient if the use of the object envisaged by the manufacturer or owner is also suitable for eliminating or at least controlling the possible hazard potential. In other words, it must be excluded that the hazard to common good could not be eliminated through further use.

4.2.2 Distinction between second-hand vehicle and end-of-life vehicle in the individual case

The following description of the legal situation uses a number of typical case scenarios:

The legal situation can be established easily if a MV **is parked without an official licence plate in a public area or outside of a built-up area**. In this case, under certain circumstances, the public waste management authority has the obligation under waste law to recycle or dispose of the MV (see § 20 Para. 3 CSCA; further explanations c.f. Dippel 2014, § 20 CSCA No. 36; Queitsch 2013, No. 53). A statutory presumption applies, according to which the prerequisites of qualification as waste are met.⁵⁶

It is questionable how to evaluate cases where the vehicle owner **does not give over a vehicle parked in private property, in connection with built-up areas for recycling** but wishes to main-

⁵³ AC Neustadt in the case Weinstraße, judgement of 11/09/2015, 4 K 162/15.NW, BeckRS 2015, 52919.

⁵⁴ C.f. replaced legal acts RAC Köln, order of 27/05/1994, Ss 171/94 (B) 107 B, NVwZ-RR 1995, 386.

⁵⁵ C.f. earlier attachments of CSCWMA a.F. FAC 92, 353 (356 f.).

⁵⁶ Beckmann/Durner/Mann/Röckinghausen, in: Landmann/Rohmer, Umweltrecht, 80. EL May 2016, No. 60

tain possession. It should be considered, among other factors, that the vehicle could be kept as a vintage car. Whether the vehicle is considered to be waste depends, in a particular case, on whether the owner of the vehicle concerned discards it, intends to or is required to discard it (see § 2 Para. 1 item 2 ELV Ordinance in conjunction with § 3 Para. 1 CSCA).

If the intention to discard is present, it must be considered that § 3 CSCA contains a statutory rebuttable presumption⁵⁷ (§ 3 Para. 3 Sentence 1 CSCA); the prevailing opinion (§ 3 Para. 3 Sentence 2 CSCA), including customs of the sector, is regarded as an objective corrective (c.f. Delfs 2013, No. 32 f.; Versteyl 2012, § 3 No. 21 f.; Petersen 2014, § 3 CSCA, No. 91; Brandt 2014, § 3 CSCA No. 24 ff.). The structure of Sentence 2, in particular that the view taken as a basis and the prevailing opinion, which is (solely) to be considered, implies that ‘the burden of proof is on the manufacturer or the owner that their behaviour does not fall under the conditions stated in § 3 Para. 3 and, thus, they do not intend to discard the vehicle (Versteyl 2012, § 3 No. 21).

The necessary decision in the particular case by the competent authorities will depend ‘in particular on the conservation status of the vehicle, the value of the vehicle and the required repair costs’⁵⁸. In the end, the waste management authority will make a decision in the particular case, supported by an expert opinion, if necessary. In addition to the length of storage, sub-criteria for the obligation of proper disposal also include the circumstances of storage as well as the value and conservation state of the vehicle⁵⁹.

With regard to the disposal of vehicles abandoned for several years in the open air on the plot of a weekend home (pass. cars and caravans), the Higher Administrative Court (HAC) of Rheinland Pfalz⁶⁰ referred to the relevance of the prevailing opinion under the subjective waste concept as defined in § 3 Para. 3 Sentence 2 of the ex-CSCWMA. The court maintained that the plaintiff was unable to present a new intended purpose to the satisfaction of the court. The original intended purpose of the vehicles – that is, further use on public roads – was lost because the vehicles were decommissioned and had been left exposed to weather conditions for years. In this context, the plaintiff’s objection, according to which one of the vehicles had been stored for tax-privileged use as a vintage car until 2012 pursuant to § 2 item 22 VRO, was dismissed by the HAC Rheinland-Pfalz as not convincing. According to the prevailing opinion, such a vehicle would not be parked in the open air until the expiry of the statutory period because damage to the substance (c.f. Petersen 2014, § 3 CSCA, No. 83), e.g. corrosion could be expected⁶¹. The court also referred to the objective waste concept at the same time. Both vehicles, in their specific state, would be suitable to pose current environmental risks. If vehicles are parked in the open air on soft ground, hazardous fluids could leak at any time, which means

⁵⁷ BT-Drs. 17/6052, 71; Delfs, 2013, § 3 CSCA No. 32. On the other hand, a legal fiction is partially assumed (subordination to facts which do not or cannot possibly apply): Frenz 2012, § 3 Para. 3 No. 3; Schink and Krappel 2012, § 3 No. 44.

⁵⁸ C.f. the minor inquiry of MP Ursula Hammann (BÜNDNIS 90/DIE GRÜNEN) of 17/01/2006 in the subject of the hazard potential of car wrecks and the reply of the Minister of the Environment, Rural Development and Consumer Protection of the State of Hesse, LT-Drs. 16/5196 of 21/03/2006, <http://starweb.hessen.de/cache/DRS/16/6/05196.pdf> (downloaded on 24.01.2016).

⁵⁹ Illustrated by AC München, judgement of 07/11/2013, M 17 K 12.624, BeckRS 2014, 49914 regarding a parked semitrailer.

⁶⁰ Order of 24/08/2009, 8 A 10623/09.

⁶¹ The HAC Niedersachsen takes a similar line of reasoning (order of 03/06/2010, LA 36/09, NVwZ 2010, 1111; maintained by HAC München, order of 14/05/2013, 20 CS 13.768, No. 16). Other court decisions follow the same direction (c.f. only AC Augsburg, judgement of 20/05/2009, Au 6 K 09.101, BeckRS 2010, 55095 ‘Gartenlaube’ (summer house); AC Gelsenkirchen, judgement of 24/11/2009, 14 K 1900/08, BeckRS 2010, 46439; AC München, judgement of 24/02/2011, 17 K 10.3407, BeckRS 2012, 46451; VG Düsseldorf, order of 09/03/2011, 17 L 285/11, BeckRS 2011, 49264; VG Düsseldorf, order of 20/04/2011, 17 L 1668/10, BeckRS 2011, 50558; VG Arnsberg, judgement of 29/09/2014 – 8 K 1863/13 –, juris). As to the current legal situation pursuant to § 3 Para 2 CSCA, the unchanged wording of the legal provision proves that nothing else applies.

that the threat is not only possible in theory but an abstract risk exists which could become concrete any time.

This legal interpretation is maintained by AC München⁶². However, the state of MVs abandoned, de-commissioned, used for storage ‘leads the court to the conclusion that the specified intended purpose of use on public roads is not acceptable. If and when it could be restored is not predictable. It is not foreseeable that the vehicles would be returned to their original use in the near future. If an object is currently not usable for its original purpose, the original intended purpose will only be maintained if, for instance, a repair is envisaged and is to be realised within reasonable time.’ The length of the standby time so far has also reinforced the court’s view that ‘further use by the plaintiff is not probable within a reasonable time under the objective circumstances’. Resumed use of the repaired vehicles is not to be expected (c.f. Bay HAC, order of 13/03/2013 ZB 13.8 – juris).’

An important argument for stating that the prevailing opinion can create a stricter measure than the waste owner’s subjective opinion is the resource protection purpose envisaged in the Closed Substance Cycle Act (§ 1 CSCA) and the protection of man and nature, which is the reason why Para. 4 has been added to § 3 CSCA (cf. Versteyl 2012, § 3 No. 21). Consequently, the prevailing opinion takes on the role of an ‘objective corrective’ (Versteyl 2012, § 3 No. 21 with reference to RAC Düsseldorf, NVwZ 1999, 571 (572)). Actually, no constitutional reservations exist, in particular, regarding the infringement of the protection of property – § 3 Para. 3 CSCA is a permissible definition of the content and limitations of property under Art. 14 Para. 1 Sentence 2 BL (see here Frenz 2012, § 3 Para. 3 CSCA No. 6-8; Versteyl 2012, § 3 No. 23; Petersen 2014, § 3 CSCA, No. 92).

AC Karlsruhe follows the same prevailing opinion approach⁶³. ‘According to the prevailing opinion, “if the objects concerned (mainly trucks, excavators, lift trucks) have not been used for their intended purpose for years”, this would confirm “the loss or abandonment of the originally stated intended use in the meaning of § 3 Para. 3 Sentence 1 item 2, Sentence 2 CSCA”. The same is supported by keeping them in the open air, failure to take protection and preservation measures, obvious signs of neglect, such as moss fouling and damage, as well as various objects accumulated without any recognizable system.’ In agreement with HAC Niedersachsen (see above), AC Karlsruhe also sets the requirement that the new intended purpose must be manifest. ‘We cannot speak of a direct replacement of the lost or abandoned original intended purpose in the meaning of § 3 Para. 3 Sentence 1 item 2 CSCA if some treatment (such as repair or cleaning of an object which has become unfit for the originally intended use due to soiling) is required for the new intended purpose unless it is “promptly implemented” according to the prevailing opinion. The “intention to sell equipment, thus making them the subject-matter of a commercial transaction” has been dismissed by AC Karlsruhe as an objection against the assumption of classification as waste. This intention does not provide an intended use as commercial good, since it is not a rarity that waste, as defined in § 3 CSCA, has some material, and thus, market value.’

In the following, some **typical, special scenarios** are discussed with relevance to the distinction between second-hand vehicles and end-of-life vehicles.

Reconstruction as **vintage vehicles** (as an alternative use) is mentioned in the Correspondents’ Guidelines No. 9, adopted by the EU Member States (see Chapter 4.4.1). Regarding the distinction between vintage vehicles and end-of-life vehicles, Annex 1 of the Correspondents’ Guidelines is referred to, which contains further reference to the definition of vintage vehicle in recital 10 of Directive 2000/53/EC on end-of-life vehicles. Vintage vehicles are defined there as ‘historic vehicles or vehicles of value to collectors or intended for museums, kept in a proper and environmentally sound

⁶² AC München, judgement of 30/08/2016 – file number 17 K 15.3371, BeckRS 2016, 51323.

⁶³ AC Karlsruhe, order of 05/02/2016 – 9 K 5063/15 –, juris.

manner, either ready for use or stripped into parts'. Pursuant to § 2 item 22 of VRO, vintage vehicles are 'Vehicles, which were first put into operation at least 30 years before, are in a state of good preservation, correspond as much as possible to their original state, and contribute to the cultural heritage of motor vehicle technology.'

Court decisions for the distinction of second-hand vehicles and end-of-life vehicles do not examine if continued use of the vehicles as mobile component parts storage with the economic value existing in the particular case could be relevant for the rejection of qualification as waste (c.f. Köhler and Klett attorneys-at-law 2010). It could be argued, then, that the vehicles should be stripped out at a later stage, so that they can be used as special sources of component parts (e.g. for certain types of old vehicles). A later possibility of exportation abroad is also irrelevant. Such objections will always depend on the state of the vehicle in the particular case. If a vehicle is actually used as a source of component parts, after removal of the component parts ('stripping out') the remaining vehicle body will become waste unless it is also sold as a component part⁶⁴. In such a case, it will not have an intended use any longer (§ 3 Para. 3 item 2 CSCA) and must be disposed of. If cars are stripped out, treatment measures will always be assessed taking the vehicle as a whole, rather than depending on the dismantled parts⁶⁵. A different assessment applies to used parts which the owner does not intend to discard or does not discard, but which are still functional or can serve their purpose and mostly also objectively lack the need for proper disposal⁶⁶. If such used parts are sold on the internet or in any other way, a certificate of origin is legally not required. From the legal point of view, it is not strictly established how many dismantled parts are needed for a vehicle to qualify as a stripped vehicle. Waste law does not specify any value criteria or numeric definition of dismantled parts, neither does it contain any materiality criteria for the type of dismantled parts. Instead of that, the intended use of the vehicle should be considered, and whether the roadworthiness (functionality, rather than approvability) of the vehicle is lost due to the removal of parts. If, as a result of the removal of parts, the vehicle is not roadworthy any longer, the intended use as means of transport is lost⁶⁷, and the vehicle becomes an end-of-life vehicle. This functional distinction, which is based on a functional criterion, will not result in impracticable solutions: If, to take a simple example, only the left side mirror is removed, under this definition, the vehicle will not be regarded as an end-of-life vehicle yet, even though the renewal of approval will most probably be made contingent upon the fitting of a new mirror. If, however, the gear is dismantled, the resulting vehicle is unfit for use, and under the same definition, it is not roadworthy any more, which, in turn, makes it an end-of-life vehicle.

Finally, it is questionable whether vehicles that have been **transferred** by their last owner **to an authorised dismantling facility (waste disposal facility)** are automatically and mandatorily regarded as end-of-life vehicles, which are to be recycled. Whether a vehicle is regarded as an end-of-life vehicle is determined primarily based on the definition of waste in § 3 Para. 1 CSCA. If the authorised dismantling facility issues a Certificate of Destruction pursuant to the ELV Ordinance, the vehicle is regarded as an end-of-life vehicle, which is to be recycled. The issue of the Certificate of Destruction means that an obligation of proper recycling exists (§ 4 Para. 2 Sentence 5 ELV Ordinance). The authorised dismantling facility is also not allowed to arrange for the repair of the vehicle or to resell it as a second-hand vehicle of its own accord. If the Certificate of Destruction is issued incorrectly, this would be subject to a fine (minor offence) pursuant to § 11 Para. 1 item 5 ELV Ordinance. On the

⁶⁴ AC Göttingen, judgement of 22/07/2010, ref. no. 1 A 25/10, openJur 2012, 50823, <https://openjur.de/u/325810.html> (downloaded on 24/01/2016).

⁶⁵ BayObLG NVwZ 1999, 570; No. 16; Wolf 2016, § 3, No. 16.

⁶⁶ HAC Bremen, 27/06/2005, 1 B 131/05, NVwZ-RR 2006, 321; Kopp-Assenmacher and Glass 2010, p. 234; Weidemann and Neun 2004.

⁶⁷ To this criterion see above AC München, judgement of 30/08/2016 – file no. 17 K 15.3371, BeckRs 2016, 51323.

other hand, if the authorised dismantling facility does not issue a Certificate of Destruction, and pays e.g. a symbolic price of EUR 1 to the last owner and repairs the vehicle, it may resell the vehicle, even though it is a waste management facility.

The waste law standards also apply to the assessment of so-called **salvage exchanges**. These are mostly internet-based platforms where MV experts (appraisers) offer damaged vehicles for sale in co-operation with accident insurance companies to specialised traders. If this is made possible, the price of damaged cars will rise in the end (economically speaking, according to the scarcity principle). In this process, insurers have a significant advantage, because for billing based on the residual value (damage recovery on their own accounts), in practice, the replacement cost (§ 249 Para. 2 Sentence 1 BGB), the residual value of the recyclable vehicle (proceeds of recycling) to be deducted from the replacement cost, can be valued higher than if the damaged party himself/herself attempts to find a local outlet which accepts the vehicle (c.f. Wortmann 2010; Wellner 2012; p. 12; Allendorf 2014).

We speak of technical total loss if repair is technically impossible or only possible with disproportionately high technical expenditure. A vehicle is regarded to be economic total loss if the repair costs exceed the difference of the replacement value and the residual value⁶⁸. However, it is important to note that ‘total loss’ established by an insurance expert [...] is only relevant for the settlement of the damage claim and ‘no statement about the waste quality of the vehicle can be derived from it’ (BMLFUW 2015). According to the statement of the Association of Independent MV Experts, an impartial expert is required in practice so that a serious assessment can be made in the value appraisal as to whether the damaged vehicle subject to assessment is to be regarded economically speaking as a second-hand vehicle or an end-of-life vehicle (c.f. Hoppe 2016). For this appraisal, the expert may only calculate with legitimate recycling possibilities. In any case, the expert’s value appraisal serves as an indication. Legally, the waste definition and the prevailing opinion will remain decisive.

If private individuals use the exchange to sell their privately used, roadworthy vehicles, which are not total loss in the sense defined above, objectively, they do not necessarily count as waste in the meaning of § 3 Para. 2 and Para. 4 CSCA. Nevertheless, posting in a salvage exchange may result in a violation of the transfer obligation under § 4 Para. 1 ELV Ordinance, if the seller subjectively intends to discard the vehicle (§ 3 Para. 3 CSCA) and transfers the vehicle as objective waste to a facility which is not an authorised dismantling facility.

In Germany, no case law exists regarding the assessment of the so-called salvage exchanges under waste law.

According to German case law,⁶⁹ the examination of the criteria for the objective obligation to discard (risk to the common good) under § 3 Para. 4 CSCA depends on the lacking probability of use and the lack of other possibilities of use, the latter of which is, under certain circumstances, based on the absence of a market price. The AC Berlin⁷⁰ **has denied the necessity of harmless recycling to a so-called ‘screwdriver community’**. The reasoning seems to be questionable as it says:

‘Therefore, a binding justification of the waste quality is only given where the burden caused by the object does not allow for any other possibility than recycling or disposal. The owner’s intention to the contrary may only be broken in such cases. The value of the object is irrelevant. This word for word interpretation reduces the practical meaning of the above alternatives of disposal to materials or objects for which the

⁶⁸ The FCJ (judgement 25/02/2005, VI ZR 70/04) has marked the limit of disproportionality where, according to the expert’s cost estimate, the compensation for repair costs lies up to 30% above the replacement value of the vehicle.

⁶⁹ FAC 92, 359 (362).

⁷⁰ AC Berlin, order of 03/04/2014, AC 10 L 49.14, BeckRS 2014, 50031.

risk could not be eliminated by another permitted use intended by the owner, such as toxic substances, whose elimination is prescribed by law, e.g. PCB/PCT (c.f. Jahn/Deifuß-Kruse/Brandt (ed.), Closed Substance Cycle Act, Commentary, 1st edition, 2014, Brandt, regarding § 3 No. 31). If the materials or objects cause risks, they should primarily be handled by the application of regulatory legislation, in particular the rest of environmental law. In such cases, the Closed Substance Cycle Act is a subsidiary norm (c.f. Schmehl, Gemeinschaftskommentar zu Kreislaufwirtschaftsgesetz (Community commentary to the CSCA), 2013, Delfs, regarding § 3 No. 58).'

If, according to the first sentence of the reasoning presented, waste quality is only assumed where **no** other alternative action exists, this interpretation seems to be too restrictive, as it denies the function of the objective waste definition under § 3 Para. 4 CSCA. In addition to the subjective waste definition, this can also justify waste quality in itself. As explained above in Chapter 4.2.1 with reference to § 3 Para. 1 Sentence 1 CSCA ('or'), the subjective and objective waste definitions are alternatives to each other⁷¹. Pursuant to § 3 Para. 4 CSCA, the owner is obliged to discard materials and objects in the meaning of Para. 1 if they cannot be used according to their originally intended purpose, and because of their condition, they are currently, or will be in the future, suitable to threaten the common good, in particular the environment, and the hazard they pose can only be excluded by proper and safe recycling or elimination commensurate with the common good, in accordance with the requirements specified in the Act and the Ordinances adopted based on it. As explained by the AC Neustadt⁷², it is only mandatory to regard something as waste [...] if its disposal (see § 3 Para. 22 CSCA) is the ultima ratio' (Häberle 2016, § 3 CSCA No. 30). The owner's intention to the contrary can only be broken in cases where the burden caused by the object does not allow for any other possibility than recycling or disposal. The value of the object is irrelevant. This word-for-word interpretation reduces the practical meaning of the above alternatives for disposal of materials or objects for which the risk could not be eliminated by another permitted use intended by the owner, such as toxic substances⁷³. If the materials or objects cause risks, they should primarily be handled by the application of regulatory legislation, in particular the rest of environmental law. Thus, the Closed Substance Cycle Act is a subsidiary norm here⁷⁴.

4.2.3 An excursus on the Austrian legal situation in waste law

Regarding the distinction between second-hand vehicles and end-of-life vehicles, stricter than the outlined German case law is, for instance, the interpretation of the neighbouring Austria, which is summarised below as an excursus. The Supreme Administrative Court of Austria (SACA)⁷⁵ presumes, similarly to the German courts, that end-of-life vehicles are basically hazardous waste due to their potential to pose hazard to the environment. However, it arrives at a stricter delineation: Vehicles are not to be regarded as second-hand vehicles but rather as waste if the required repair effort is less than the time value of the vehicle. If the vehicle is exported, the repair cost is to be calculated based on the

⁷¹ AC Neustadt is systematically incorrect to claim in the case Weinstraße, judgement of 11/09/2015, 4 K 162/15.NW, BeckRS 2015, 52919 that: 'For being regarded as waste, the third criteria should also be met, which requires that the hazard should be excludable by the recycling or disposal of used tyres.'

⁷² AC Neustadt in the case Weinstraße, judgement of 11/09/2015, 4 K 162/15.NW, BeckRS 2015, 52919.

⁷³ C.f. also AC Oldenburg, judgement of 22/10/2014 – 5 A 5466/13 –, juris on cross-border Aflatoxin B1-content contaminated forage maize and AC Ansbach, judgement of 04/12/2013 – AN 11 K 13.00515 –, juris on demolition material built in forest paths).

⁷⁴ Cf. AC Berlin, order of 03/04/2014 – 10 L 49.14 –, juris with further references

⁷⁵ Supreme Administrative Court of Austria, decision of 25/07/2013, 2013/07/0032, RIS-document No. JWT_2013070032_20130725X00.

cost level in Austria and not that of the country of destination⁷⁶. This means that, as a first step for assessing if something is to be regarded as waste or not, Austria sets an economic line of division. Meanwhile this delineation – based on § 57a Para. 4 of the Act on Motor Vehicles (KFG 1967⁷⁷) – has been specified in an administrative regulation of the Austrian Federal Minister of Agriculture and Forestry, Environment and Water Management (c.f. BMLFUW 2016) implementing the end-of-life vehicle ordinance⁷⁸. Normally, repair costs are approved based on Austrian standards if they are not more than 10% higher than the current value; otherwise the vehicle is to be regarded as an end-of-life vehicle. In addition, this piece of legislation defines requirements on the expert certification of reparability (annex 1) and contains a list of the extensive reporting obligations (Annex 2). Currently, Austria plans to strengthen the rules on seizure for violations of waste law in order to allow for easier intervention where end-of-life vehicles are classified incorrectly (c.f. Löw 2016). In another, later decision, the Supreme Administrative Court of Austria has reaffirmed its view⁷⁹ on the intended use for the case of ‘stripping out’:

In the contested decision, the relevant authority correctly thinks in contrast that based on the state in which the vehicles were found, their proper use in the meaning of § 2 Para. 3 Z 2 of the Foreign Trade Act of 2002 (AWG) could not be assumed any more. Thus, according to the prevailing opinion, the use of vehicles for ‘stripping out’ that is dismantling component parts for application as used parts, does not constitute ‘proper use’ in the meaning of the provision cited (cf. the decision of 30 September 2010, Zl. 2007/07/0167, with further references).’

With regard to salvage exchanges, in an insurance law decision, the Supreme Court of Austria only allowed deductions for the insured party with strict conditions⁸⁰, but in this case, the Court did not need to deal with the distinction between second-hand vehicles and end-of-life vehicles. In any case, a rule in Austria states that only authorised bidders with waste law permission under § 24a AWG 2002 are eligible for acting in ‘car wreck exchanges’.

4.2.4 The ELV Ordinance, consequences of the waste quality of end-of-life vehicles and requirements on authorised dismantling facilities

The **End-of-Life Vehicle Ordinance** (ELV Ordinance⁸¹), which entered into force in 2002, and is characterised by, among other elements, resource protection considerations, contains in its Annex detailed requirements on the proper and safe recovery and recycling of end-of-life vehicles and stripped vehicles, as well as the proper and safe disposal of the resulting waste (c.f. Förtsch and Meinholz 2015, p. 212 ff.). In 2006, the German ELV Ordinance had to be adapted to the European

⁷⁶ The AC München also takes the repair costs in Germany as a basis, rather than those in Bosnia-Herzegovina, c.f. judgement of 05/09/2013, M 17 K 12.4459, BeckRS 2014, 47513.

⁷⁷ Motor Vehicle Act 1967, BGBl. No. 267/1967, last amended by Federal Law (BGBl. I No. 87/2014) and published (BGBl. I No. 26/2015).

⁷⁸ Ordinance of the Federal Minister of Agriculture, Forestry, Environment and Water Management on waste prevention, collection and handling of end-of-life vehicles (ELV Ordinance) FLG II Nr. 407/2002, by Article 95 of the Ordinance of 31 August 2015 (FLG I S. 1474) amended by FLG II No. 168/2005, FLG II No. 184/2006, FLG II No. 179/2010, FLG II No. 53/2012 and FLG II No. 13/2014.

⁷⁹ SACA, decision of 18/12/2014, 2012/07/0152, https://www.ris.bka.gv.at/Dokument.wxe?Abfrage=Vwgh&Dokumentnummer=IWT_2012070152_20141218X00 (downloaded on 14/03/2016).

⁸⁰ Supreme Court, 14/03/2013, 20b18/13f, https://www.ris.bka.gv.at/Dokument.wxe?Abfrage=Justiz&Dokumentnummer=JIT_20130314_OGH0002_00200B00018_13F0000_000 (downloaded on 20/04/2016).

⁸¹ End-of-Life Vehicle Ordinance, text published on 21/06/2002 (FLG I p. 2214), latest amendment by Ordinance of 31/08/2015 (FLG I, p. 1474).

law requirements (c.f. Anonym 2005). The latest significant amendment was on 24/02/2012 (c.f. Blume and Walter 2013). The current ELV Ordinance is based on EU Directive 2000/53/EC on end-of-life vehicles (**End-of-Life Vehicle Directive**)⁸², which regulates the recovery and recycling of motor vehicles within the EU (cf. Gerrard and Kandlikar 2007; Dreher 2002). Currently, changes in the EU are only known in their rough outlines. The Circular Economy Package presented by the EU Commission on 02/12/2015, then amended (cf. European Commission 2016a) contains only the announcement that the End-of-Life Vehicle Directive would be revised (cf. European Commission 2015a, p.2). With regard to end-of-life vehicles, reference is made to the accompanying fact sheet (cf. European Commission 2016b) and the Action Plan (cf. European Commission 2015b, p.12) as well as the already amended Waste Shipments Regulation (referenced by R 660/2014) (see Subchapter 4.4.1).

The End-of-Life Vehicle Directive in its currently effective version requires the manufacturer, for product liability reasons (cf. Gattermann 2013, p. 65 f.) to ensure free-of-charge take-back of end-of-life vehicles. The Directive applies to:

- ▶ Vehicle category M₁: Motor vehicles used primarily for the carriage of passengers comprising not more than 8 seats in addition to the driver's seat; and
- ▶ Vehicle category N₁: Motor vehicles used primarily for the carriage of goods and having a maximum mass not exceeding 3.5 tons

acc. to Annex II Section A of Directive 70/156/EEC and three-wheel motor vehicles acc. to Directive 92/61/EEC but not including three-wheel motorcycles.

Furthermore, the EU Member States are responsible for setting up systems for the collection of end-of-life vehicles (cf. Go, Wahab and Rahman et al. 2011; Chana, Chanb and Jainc 2012). Manufacturers and importers of the vehicles subject to the ELV Ordinance are obliged based on their product liability (§ 23 CSCA) (cf. Prella 2010; Gattermann 2013, p. 72 ff.) to take back all end-of-life vehicles from their last owners basically free of charge. § 3 ELV Ordinance regulates the transposition of product liability under the EU Waste Framework Directive in the framework of the German legal requirements regarding end-of-life vehicles. Anybody disposing of, wanting to dispose of or having to dispose of a vehicle is required to transfer such vehicle only to an approved acceptance facility, an approved collection facility or an accredited dismantling facility⁸³ (§ 4 Para. 1 ELV Ordinance). Anybody who transfers an end-of-life vehicle pursuant to this provision will be released from the generally applicable recording obligations (§ 2 Para. 1 Ordinance on Waste Recovery and Disposal Records – OWRDR⁸⁴)⁸⁵. The special waste recovery record which is to be issued mandatorily by the authorised dismantling facility pursuant to § 4 Para. 2 ELV Ordinance replaces the Certificate of Destruction under § 3 OWRDR.

The question is what happens if an authorised dismantling facility strips out already dismantled vehicles or receives only a 'stripped' end-of-life vehicle. Due to the fact that § 3 Para. 4 ELV Ordinance mentions 'stripped' end-of-life vehicle instead of 'stripped vehicle' (in the legal sense cf. § 2 Para. 1 No. 17 ELV Ordinance), this is what is meant here. According to the wording of § 4 Para. 2 Sentence 1 ELV Ordinance, authorised dismantling facilities have to issue the Certificate of Destruction right after

⁸² Directive 2000/53/EC of the European Parliament and the Council on End-of-Life Vehicles of 18/09/2000 (OJ No. L 269 p. 34), last amended by Directive 2013/28/EU of 17/05/2013 (OJ No. L 135 p. 14).

⁸³ For further details on these facilities, see below.

⁸⁴ Recording Obligations Ordinance of 20/10/2006 (FLG I p. 2298), last amended by Ordinance of 31/08/2015 (FLG I p. 1474).

⁸⁵ According to the OWRDR, among others, the waste producer would be obliged to record the remaining waste if hazardous waste is concerned (§ 50 Para. 1 CSCA) or, although it is not hazardous waste, the recording obligation was imposed by the waste authority (§ 51 Para. 1 Sentence 1 No. 1 CSCA).

taking over a vehicle (they 'are required to confirm immediately that a vehicle has been turned over in accordance with Paragraph 1 by issuing a Certificate of Destruction'). Pursuant to § 3 Para. 4 item 3 ELV Ordinance, the manufacturer's (and importer's) free-of-charge collection obligation under § 3 Para. 1 Sentence 2 ELV Ordinance does not apply if 'the end-of-life vehicle no longer contains essential components and assemblies, in particular the drive train, body, chassis, catalytic converter or electronic controls for vehicle functions'.⁸⁶

The **collection obligations apply exclusively to the manufacturers** (and the importers).

For this purpose, they make use of authorised collection facilities or authorised dismantling facilities designated by a manufacturer for collection. Consequently, many authorised **dismantling facilities are not obliged to take back end-of-life vehicles**.

However, if an authorised dismantling facility actually takes over end-of-life vehicles (also if they are not obliged to do so), they have to issue the corresponding Certificates of Destruction, regardless of whether or not the end-of-life vehicles contain their essential components (i.e. they have been 'stripped out'). In any case, pursuant to Number 4.1.1 Sentence 3 of the Annex to the ELV Ordinance, shredding facilities **may only accept stripped vehicles**, if the end-of-life vehicles have been **treated at accredited dismantling facilities** (the definition of 'stripped vehicle' is thereby added in § 2 Para. 1 item 17).

§ 2 Para. 1 items 14-16 ELV Ordinance differentiate between the following functions:

- ▶ **Acceptance facility:** It takes over any make of end-of-life vehicle; dismantling occurs at a cooperating facility.
- ▶ **Collection facility:** It is a manufacturer-specific acceptance facility, which accepts vehicles of a specific make only. Dismantling occurs at a cooperating facility.
- ▶ **Dismantling facility:** A facility in which end-of-life vehicles are treated for recovery and recycling purposes. This may also include the collection of end-of-life vehicles.

The acceptance and collection facilities specified in the ELV Ordinance may not treat end-of-life vehicles, in particular, they may not drain and disassemble them. Normally, they are divided into areas for drop-off, preparation for transport and pick-up. Damage to the environment due to storage conditions is prevented by technical requirements imposed on the storage areas as well as the agreement on suitable pick-up cycles between the dismantling facility and the acceptance and collection facility. All incoming and outgoing vehicles must be recorded in an operating log. Copies of the Certificates of Destruction for all incoming end-of-life vehicles must also be collected⁸⁷.

The Joint Agency for End-of-Life Vehicles (JAELV) keeps a list of accredited dismantling facilities, shredders and other facilities for further treatment and makes it publicly available⁸⁸.

Since in practice, only a relatively small number of acceptance facilities exist⁸⁹, in many cases, the dismantling facility (§ 2 Para. 1 item 16 ELV Ordinance) is the first stage rather than the downstream in end-of-life vehicle recovery.

⁸⁶ Cf. Brinktrine, in Schmehl (ed.), CSCA-GK, ELV Ordinance, No. 9; Dageförde, in: v. Lersner/Wendenburg/Versteyl, *Recht der Abfallbeseitigung* (Law of Waste Disposal), ELV Ord., § 3 No. 3.

⁸⁷ Cf. only Ministry of the Environment, Climate and Energy Economy (ed.), *Betrieblicher Umweltschutz Baden-Württemberg – Kraftfahrzeuggewerbe* (Operational Environmental Protection Baden-Württemberg – Automotive industry), Stuttgart 2013, p. 69

⁸⁸ Cf. the search function at <http://www.altfahrzeugstelle.de/de/429>.

⁸⁹ In November 2015, the JAELV list contained 113 acceptance facilities, three of which were identified as a shredder and one as a further treatment facility.

An authorised dismantling facility is divided into different parts, which must be clearly delimited from each other and identified: delivery, preliminary storage, area for the pre-treatment, storage of pre-treated vehicles, disassembly, compacting and storage areas for usable parts and waste, depending on whether they still contain operating fluids (c.f. Minister of the Environment, Climate and Energy Baden-Württemberg n.d.). The exact requirements are specified in No. 3.1 of the Annex of the ELV Ordinance. These requirements include, among others, that the facility is to be divided into different areas (e.g. preliminary storage, disassembly and the storage for usable fluid-carrying motor vehicle parts) (WG Altautoverwertung (Recycling of end-of-life vehicles) n.d. b). Also, areas where water polluting materials are treated must be paved to be waterproof. Finally, certain technical devices are required too. Since hazardous materials (e.g. transmission oil) are handled, the provisions of the Ordinance on Hazardous Substances (OHS⁹⁰) and the Ordinance on Industrial Safety and Health (OISH⁹¹) must be respected.

Since airbags and seatbelt tensioners contain explosive elements (pyrotechnic systems), the dismantling facilities have to report their activities to the Regulatory Authority for Explosion Hazards (§ 14 Explosives Act – SprengstoffG⁹²). The handling of such parts requires relevant technical expertise and the facility has to designate a competent expert.

Furthermore, pursuant to § 5 Para. 3 ELV Ordinance, every 18 months, operators of acceptance facilities, collection facilities, dismantling facilities, shredders and other facilities for further treatment of end-of-life vehicles are to be inspected by an accredited expert to certify their compliance with the requirements specified in the Annex of the ELV Ordinance. Acceptance and collection facilities that are MV garages receive their authorisation from the supervising motor vehicle guild.

A part of the end-of-life vehicle facilities are, at the same time, **specialised waste management facilities** under § 56 and § 57 CSCA. Such facilities meet certain requirements and are certified as specialised waste management facilities by a technical supervisory organisation or a waste management association. Details are regulated by the Ordinance on Specialised Waste Management Facilities⁹³ and the Guideline on Waste Management Associations⁹⁴.

The specific requirements on the facility arise from § 5 Para. 2 ELV Ordinance in conjunction with the Annex of the ELV Ordinance. The Annex ‘Requirements for the acceptance and collection of end-of-life vehicles, the proper and safe recovery and recycling of end-of-life vehicles and stripped vehicles, as well as the proper and safe disposal of the resulting waste’⁹⁵ provides that all facilities must comply with the requirements on facilities regarding the handling of water polluting materials (No. 1 refers to § 62, § 63 FWA). Requirements in acceptance and collection facilities are listed in No. 2 of the

⁹⁰ Ordinance on the Protection against Hazardous Substances (Ordinance on Hazardous Substances – OHS) of 26/11/2010 (FLG I, No. 59, p. 1643), last amended by the Ordinance of 03/02/2015 (FLG I p. 49).

⁹¹ Ordinance on Industrial Safety and Health in the Provision of Work Equipment and its Use at Work, on Safety in Operating Systems Requiring Inspection and on the Organisation of Operational Labour Protection (Ordinance on Industrial Safety and Health – OISH) of 27/09/2002 (FLG I, p. 3777), last amended by the Ordinance of 02/06/2016 (FLG I, p. 1257).

⁹² Explosives Act (SprengstoffG) in the version published on 10/09/2002 (FLG I p. 3518), last amended by the Act of 18/07/2016 (FLG I p. 1666).

⁹³ Ordinance on Specialised Waste Management Facilities of 10/09/1996 (FLG I p. 1421), last amended by the Ordinance of 05/12/2013 (FLG I, p. 4043). An amendment of the Ordinance on Specialised Waste Management Facilities is being planned, cf. Art. 1 of the working draft of FMENCBNS for the Second Ordinance on the development of waste law monitoring, version of 24/07/2015, http://www.bmub.bund.de/fileadmin/Daten_BMU/Download_PDF/Ge-setze/entwurf_abfallrechtliche_ueberwachung_bf.pdf.

⁹⁴ Guideline on Waste Management Associations (Waste Management Associations Guideline) of 09/09/1996 (BAnz. No. 178 p. 10909).

⁹⁵ Source of the original text: FLG I 2002, p. 2221-2225.

Annex. No. 3 of the Annex states the requirements on dismantling facilities. Requirements imposed on shredders and other further treatment facilities are contained in No. 4 of the Annex. No. 5 allows for exemptions from the requirements under strict conditions.

The Annex of the ELV Ordinance regulates information flows on accepted vehicles and the operating logs. For instance, the recording obligations of acceptance and collection facilities are described in No. 2.3 of the Annex. The operating log must contain, among other items, written documentation of all incoming and outgoing end-of-life vehicles. Furthermore, copies of the Certificates of Destruction of all incoming end-of-life vehicles must be collected. Finally, the cooperation between acceptance or collection facilities and dismantling facilities must be documented with contracts (cf. Lohse and Sander 2000).

§ 7 Para. 2 Sentence 1 CSCSA, which contains the basic obligation of waste recycling and recovery, directly creates the obligation (see here Beckmann 2015, § 7 CSCA No. 3, 22; d.o. Hofmann 2015, § 7 No. 6). The obligation is imposed primarily on the producers or holders of waste, which reflects the costs-by-cause principle.

4.2.5 Recycling law and enforcement

Within the federal government, recycling law falls within the competence of the FMENCBNS.

The responsibility for the enforcement of recycling law and, in particular, the general supervision under § 47 CSCA (a. o. Para. 4 over waste utilisation plants) lies with the competent waste management authorities under federal state law. For example, in Lower Saxony, subject-matter competence is regulated in § 42 of the Waste Management Act (WMA⁹⁶) of Lower Saxony. Specifically, the lower-instance waste management authorities are the districts and independent towns as well as the towns Celle, Cuxhaven, Göttingen, Hildesheim and Lüneburg. If, for instance, it is suspected that end-of-life vehicles are disassembled in a plant which is not recognised for this activity, the competent contact is the lower-instance waste management authority. The authority responsible for the implementation of Regulation (EC) No. 1013/2006 on shipments of waste (RSW) in Lower Saxony is partly the NGS, in particular for notifications under the RSW.

4.3 Road traffic law and public streets law

If a decommissioned vehicle is parked in public street space, the question arises, on what legal ground the authorities may proceed against this.

If non-registered and potentially not roadworthy vehicles parked in a public street space are not removed within one month from the request to this effect, they pose a present threat to public safety and order. A present threat to public safety and order is, for instance, pursuant to § 2 item 1b of the Act of Lower Saxony on Public Safety and Order (LSAPSO⁹⁷) a threat where the effects of the damaging occurrence have already been manifested or are imminent with a probability that borders on certainty. Public safety is affected if legal requirements are violated or individual objects of legal protection are concerned.

⁹⁶ Waste Management Act of Lower Saxony (WMA) in the version published on 14/07/2003 (LS GLO p. 273), last amended by the Act of 31/10/2013 (NS GLO p. 254). § 42 Para. 1 WMA states: 'Unless provided otherwise, the lower-instance waste management authorities are responsible for decisions and other measures taken on the basis of the Closed Substance Cycle Act, the Waste Shipment Act, the Battery Act, the Act on Electric and Electronic Devices, the legal provisions of the European Union on waste law, this Act and the Ordinances adopted on the basis of this Act.'

⁹⁷ Lower Saxony Act on Public Security and Order (LSAPSO) of 19/01/2005 (LS GLO 2/2005 p. 9), last amended by the Act of 12/11/2015 (LS GLO p. 307).

The violated legal provision is § 32 Para. 1 Road Traffic Ordinance (RTO⁹⁸). Pursuant to that ‘it is prohibited (...) to bring objects onto the road or leave them there if they could endanger traffic or render it more difficult.’ The parked end-of-life vehicle uses space which would otherwise be open to free traffic; this means that traffic is endangered or rendered more difficult (Doms 178, 39; Janker 2014, § 32 RTO No. 4 with further references). In addition, the parking of a not operational vehicle in the street constitutes not permitted extraordinary use of public roads, which exceeds general use, as defined e.g. in § 14 Para. 1, 18 of the Roads Act of Lower Saxony (RALS⁹⁹)¹⁰⁰. Moreover, a statutory presumption under § 20 Para. 3 CSCA applies (on this, see also Subchapter 4.2.2 above), which states that vehicles parked in public space without a valid licence plate number are regarded as waste, which is to be disposed of under § 20 Para. 1, 3 CSCA. In the individual case, the threat can also involve, in particular with not functional end-of-life vehicles, that a substantial potential of injuries to children or passers-by exists, since they pose a present threat to the physical integrity of the public at large.

The measures specified, in particular the removal and transfer to end-of-life vehicle recovery (substitute performance under the Administrative Enforcement Act, as amended, of the Federal State¹⁰¹) are required from the holder of the vehicle, who is at least the person responsible for the threat caused by the vehicle. No vehicle without a holder exists (cf. König 2015, § 7 RTA, No. 21).

The regulatory authorities are responsible for the elimination of the threat caused by non-licensed vehicles parked in public street space. For instance in Lower Saxony, the subject-matter competence is derived from § 97 LSAPSO, while the local competence from § 100 LSAPSO.

4.4 Waste shipment law

Waste shipment law is superordinate legislation consisting, on the one hand, of an international law convention and an OECD Decision, both of which have been implemented by EU law, and on the other hand, of subsidiary German transposition law.

4.4.1 Basel Convention, OECD Decision and EU law

Internationally relevant legislation comprises the Basel Convention of 22/03/1989 on the Control of Transboundary Movements of Hazardous Wastes and their Disposal¹⁰², which, however, does not apply to non-hazardous waste, and the OECD Decision on the control of transboundary movements of waste destined for recovery operations¹⁰³. Notable European legal acts include Regulation (EC) No. 1013/2006 on shipments of waste (RSW)¹⁰⁴, which implements the Basel Convention and the OECD Decision, and Regulation (EC) No. 1418/2007 concerning the export for recovery of certain waste listed in Annex III or IIIA to Regulation (EC) No. 1013/2006 of the European Parliament and of the

⁹⁸ Road Traffic Ordinance (RTO) of 06/03/2013 (FLG I p. 367), last amended by the Ordinance of 17/06/2016 (FLG I p. 1463).

⁹⁹ Roads Act of Lower Saxony (RALS) of 24/09/1980 (LS GLO p.359), last amended by Art. 5 of the Act of 22/10/2014 (LS GLO No. 21/2014 p. 291).

¹⁰⁰ Cf. AC Braunschweig, judgement of 07/12/2005, 6 A 121/05, published at <http://www.dbovg.niedersachsen.de> (downloaded on 26/01/2016).

¹⁰¹ Cf. e.g. the Administrative Enforcement Act of Lower Saxony (LSAEA) in the version of 04/07/2011, partly revised by Art. 1 of the Act of 23/07/2014 (LS GLO p. 211).

¹⁰² Downloadable at: <http://www.basel.int/TheConvention/Overview/TextoftheConvention/tabid/1275/Default.aspx>.

¹⁰³ OECD Decision C (2001)107 final (amended by C (2004)20).

¹⁰⁴ Regulation (EC) No. 1013/2006 of the European Parliament and of the Council of 14/06/2006 on shipments of waste, last amended by Commission Regulation (EU) 2015/2002 of 10/11/2015 (OJ L 294 of 11/11/2015).

Council to certain countries, to which the OECD Decision on the control of transboundary movements of wastes does not apply¹⁰⁵.

As a result of the modification by Regulation (EU) No. 660/2014¹⁰⁶, effective as of 01/01/2016, the RSW provides for a so-called reversal of the burden of proof regarding the question whether or not the certification of not illegal waste disposal is successful (c.f. Art. 50 Para. 4a through 4d RSW). Art. 50 RSW requires the Member States to ensure compliance with the provisions of the Regulation. This should be attained by random inspections of waste quality and the imposition of sanctions, which must be *‘effective, proportionate and dissuasive’*. In addition, Reg. (EU) No. 660/2014 contains more specific and further-reaching requirements. The modification is justified by the establishment of *‘divergences and gaps in the enforcement and inspections’* (recital 1) and diverging rules and powers of authorities involved in inspections (recital 6).

Pursuant to Art. 50 Para. 2a of Directive 660/2014, by 01/01/2017, the Member States are required to establish inspection plans and review, and where appropriate, update them every three years (with specifications on priorities, authorities as well as personal, financial and other resources).

Art. 50 Para. 4a, 4b RSW grants the authorities involved in the inspection the possibility to request certification that an object does not qualify as waste, including reference to its functionality. Pursuant to¹⁰⁷ Art. 50 Para. 4b RSW, they may conclude that the object is waste and, thus, illegally transported if the certification is not submitted in due time or the information presented is not sufficient for the assessment (Art. 50 Para. 4b). In such cases, the transport of the material or object can be regarded as illegal transport, and treated pursuant to Art. 24 and 25 RSW (c.f. Art. 50 Para. 4b). It is expected that the reversal of the burden of proof will have the result that the competent authorities catch illegal waste transport easier and data collection will also become simpler. During the inspections, the burden of proof that the material or object being transported is not waste lies with the natural or legal persons holding a material or object or ordering the transport of a material or object; in the decision on waste quality it must also be specified if the material or object concerned is protected from damage during transport, loading and unloading with proper packaging or suitable stacking (cf.: Art. 50 Para. 4a Sentence 2).

The formal requirements of such certifications are not regulated.

Pursuant to Art. 2 item 1, the RSW applies to materials or objects which fall within the waste definition in Art. 3 item 1 of the EU Waste Framework Directive 2008/98/EC, which corresponds to the definition in § 3 Para. 1 CSCA (cf. Ellinghaus 2013, No. 9).

According to the European Correspondents’ Guidelines No 9 on the shipment of waste vehicles¹⁰⁸, which have been effective as of 01/09/2011, the responsibility lies with the exporter. According to that, second-hand vehicles must either be functional or require only minor repairs. The Correspondents’ Guidelines reflect the common opinion of all Member States as to the correct interpretation of the RSW. The Guidelines were adopted by the correspondents at a meeting on 8 July 2011, which was

¹⁰⁵ Commission Regulation (EC) No. 1418/2007 of 29/11/2007 concerning the export for recovery of certain waste listed in Annex III or IIIA to Regulation (EC) No. 1013/2006 of the European Parliament and of the Council to certain countries to which the OECD Decision on the control of transboundary movements of wastes does not apply, last amended by Commission Regulation (EU) No. 733/2014 of 24/06/2014 (OJ No. L 197/10 of 04/07/2014).

¹⁰⁶ Regulation (EC) No 660/2014 of the European Parliament and of the Council of 15/05/2014 amending Regulation (EU) No. 1013/2006 on the shipments of waste, OJ No. L 189/135 of 27/06/2014.

¹⁰⁷ Cf. the draft legislation at www.bmub.bund.de/N39165/; in the reasoning it is stated that: ‘Such certification should be requested by the authorities on a case-by-case basis if suspicion arises (cf. recital 6 Sentence 4 of Regulation (EU) No. 660/2014)’.

¹⁰⁸ Cf. https://www.umweltbundesamt.de/sites/default/files/medien/421/dokumente/anlaufstellen_leitlinien_nr_9.pdf (downloaded on 25/01/2016).

convened pursuant to Art. 57 RSW, but they are not legally binding. The only body with competence to establish binding interpretation of Community law is the European Court of Justice. The Guidelines of 2011 are to be revised and, if necessary, amended five years from this date at the latest.

In regard to wastes, the Correspondents' Guidelines No 9 state that: 'If the material is a waste, the control procedures depend on whether the shipment of the waste has to be notified or not under the RSW, whether the waste is destined for recovery or disposal, and whether there are additional controls in the country of destination.'

With regard to the cost level of second-hand vehicles, Para. 9 item d. of Correspondents' Guidelines No. 9 determines as an indicator for classification as an end-of-life vehicle that the repair costs exceed the present value of the vehicle and the possibility for repair cannot be assumed. Repair costs in the MS of destination can be taken as a basis of evaluation¹⁰⁹.

4.4.2 Excursus: Procedure in Austria

As an excursus, we will briefly deal with the situation in the neighbouring Austria: There, the national delineation of second-hand vehicles from end-of-life vehicles based on the repair costs in Austrian terms is also applied to the export of vehicles: The Federal Ministry of Agriculture and Forestry, the Environment and Water Management assumes that the national decree of April 2015 (cf. BMLFUW 2015) also applies to the field of waste exports, i.e. Art. 28 RSW is implemented. The legal situation is understood, according to a representative of BMLFUW, so that the national law and also the implementation of Correspondents' Guidelines No 9 in Austria is to be regarded in the context of the Austrian framework decision¹¹⁰. It would also be applicable to the export of used MV component parts from Austria to other states. It has to be considered that the provisions of RSW as those of a Regulation of EU law are subordinate to national legislation.

4.4.3 Admissibility of the transfer of end-of-life vehicles as waste and the competent authorities under the German WSA

In addition to the above-mentioned international and EU law provisions, additional rules were adopted in Germany on transboundary transports in the Waste Shipment Act (WSA) of 19/07/2007¹¹¹. The regulation contains additional procedural rules on the notification procedure for the implementation of RSW, more specific provisions on the information obligations, details on the acceptance obligations and marking obligations, as well as the authorisation for inspections by authorities¹¹² and administrative orders in the individual case.

If, based on the above-mentioned benchmarks, the objects inspected are regarded as waste (end-of-life vehicles) rather than second-hand vehicles, the question of the admissibility of waste exports is to

¹⁰⁹ Nonetheless, footnote 5 of Correspondents' Guidelines No 9 states: 'If a vehicle is classified as waste sooner in a Member State of dispatch with higher labour or other costs, it may be reasonable to take into account the repair costs in the Member State of destination.' Thus, costs in third countries are not taken into consideration.

¹¹⁰ The BMLFUW decree of April 2015 (as referenced above, p. 2) provides that: 'For the assessment of current value and repair costs in any state, it is relevant in which state the end-of-life vehicle is located at the time when the current value and repair costs are established (cf. also Art. 28 RSW No. 1013/2006 idgF). Therefore, compliance with the national technical requirements in Austria should be considered.'

¹¹¹ Waste Shipment Act (WSA) of 19/07/2007 (FLG I p. 1462), last amended by Art. 4 Para. 31 of the Act of 18/07/2016 (FLG I p. 1666).

¹¹² See also the revised enforcement aid (version: July 2012), which was published with the consent of UMK in August 2012 as WGFSW communication 25 (http://www.laga-online.de/servlet/is/23874/M25_VH_Abfallverbringung.pdf?command=downloadContent&filename=M25_VH_Abfallverbringung.pdf) (downloaded on 24/01/2016).

be considered. The competent waste management authority prohibits the intended exportation pursuant to § 13 Sentence 1 WSA if hazardous waste is concerned which is not admissible for export under the RSW. Should the waste be transported, the following rules will hold for the country of destination, depending on applicability:

- ▶ The disposal of certain types of waste is always subject to a procedure of prior notification and consent and the exportation outside of the EU is prohibited (except for exports to EFTA states).
- ▶ Wastes listed in Annex IV of RSW ('Amber' Listed Waste) (hazardous recyclable waste) may be transported within the OECD and the EU (but consent is required). However, the hazardous wastes listed in Annex V of RSW (end-of-life vehicles are also included; entry 16 01 04* in Annex V Part 2), with the exception of end-of-life vehicles containing neither liquids nor other hazardous components (entry 16 01 06) may not be exported from the EU to third countries outside the OECD.
- ▶ Non-hazardous recyclable waste in Annexes III ('Green' Listed Waste), IIIA and IIIB of RSW, including e.g. 'end-of-life vehicles containing neither liquids nor other hazardous components' (entry B1250) may be imported without notification within the OECD and the EU. However, pursuant to Regulation (EC) No. 1418/2007, in certain cases, notification may still be required or an export ban may apply. If the vehicles concerned in this project are waste, they are considered to be hazardous waste. For this reason, this area only has limited relevance to the topic of the project.

Pursuant to § 13 Sentence 1 WSA, the competent authority may adopt the necessary administrative orders for the proper enforcement of the RSW, among others, for instance, to open freight containers.

§ 14 WSA regulates the competent authorities at Federal State level. For instance, the second sentence of § 14 Para. 1 states: 'Responsibility for measures in connection with the transport of waste from the territory of the Federation and the related recycling and disposal, including the obligations imposed on the competent authority by Regulation (EC) No. 1013/2006 lies with the authority of the State from where the waste should be or is dispatched.' The States are responsible for the inspection of facilities regarding the shipments (§ 11 Para. 1 WSA). The State authorities are responsible for the inspection of shipments, but the Customs Authority and the Federal Office for Goods Transport are also involved in the inspections (§ 11 Para. 2 WSA). In the Federal States, responsibility lies with the bodies designated for the implementation of WSA. For instance, in Lower Saxony, § 42 Para. 1 WMA designates the districts and independent towns as the lower-instance waste management authorities. In the Federal States, various combinations exist, involving other bodies in addition to the waste management authorities (cf. the Senator responsible for the Environment, Building and Traffic in Bremen 2014). In some States (Baden-Württemberg, Hessen and Sachsen-Anhalt), besides the competent waste management authorities, the police are responsible for the supervision of compliance with waste law requirements during traffic control. In some other States, (Rheinland-Pfalz, Bayern) cooperation agreements exist. In Hamburg the harbour police also has inspection responsibilities.

Pursuant to § 14 Para. 4 Sentence 1 WSA, the Federal Environmental Agency is responsible for 'decisions on waste shipments which should occur or occur through the territory of the Federation, and the related recovery or disposal in cases where prior notification and consent are required'.

4.5 Customs and foreign trade law

A number of legal requirements apply to the exportation of second-hand vehicles (cf. KSM n.d.). It depends on whether the second-hand vehicle is transported to another EU Member State or is to be exported to a state outside of the customs territory of the Community (non-Member State). Since the EU internal market exists, transits have had no further relevance for customs and foreign trade purposes. It is crossing the external border of the EU that has become decisive.

4.5.1 Transferring second-hand vehicles to other EU Member States

If a second-hand vehicle is delivered (transported or brought) to an entrepreneur based in another EU Member State, pursuant to § 4 item 1b in conjunction with § 6a Sales Tax Act (STA¹¹³), this delivery can basically be exempted from tax in Germany, the country of origin (cf. Fuchs 2013, p. 5). The vehicle is taxed in the country of destination (tax on intra-community acquisitions on the basis of the destination principle) instead. The first prerequisite is that the corporate customer must have a so-called sales tax identification number. As a second prerequisite, strict formal requirements are to be met. Since 2012, § 17a Para. 2 the Implementing Ordinance of the Sales Tax Act (STIO) requires proof¹¹⁴ for the existence of the certificate which states that the vehicle has been accepted by a recipient in the EU. We can only speak of intra-community delivery if this succeeds (§ 6a STA).

It is necessary for the recipient to certify (in a set form) that the vehicle has actually arrived at the other Member State (cf. FMF 2013). The recipient has to certify to the entrepreneur or the independent third party responsible for transportation that the transported object has arrived at a destination within the territory of the Community (so-called certification of arrival) (cf. Bachmeier 2013, Fuchs 2013, p. 9). The sales tax withheld in Germany may only be reclaimed once this certification is successful¹¹⁵, that is the vehicle is registered in the territory of the Community within reasonable time.

For the whereabouts of second-hand vehicles it is important that pursuant to § 17a Para. 2 item b) STIO, the entrepreneur has to indicate the mass of the transported object and the standard commercial identification, including the vehicle identification number for vehicles defined in § 1b Para. 2 STA. The previous distinction between the cases of transportation and dispatch is not relevant any more. Presently, besides the copy of the invoice, the certification of arrival must be submitted as a standard certifying document. The previous Section 6a. 4 of the Decree on the application of the sales tax act (DAST¹¹⁶) has been repealed.

Further possibilities for certification are the dispatch voucher of commercial law and the so-called ‘shipper’s attestation’; summary certifications are also allowed (cf. Fuchs 2013, p. 11, 14).

4.5.2 Exportation of second-hand vehicles to a non-EU country (legal situation for the reference year 2013)

If a second-hand vehicle is to be exported from Germany to a country of destination outside of the customs territory of the EU, basically, an export notification is required under EU customs law¹¹⁷. As

¹¹³ Sales Tax Act (STA) in the version published on 21/02/2005 (FLG I p. 386), last amended by Art. 5 of the Act of 19/07/2016 (FLG I. p. 1730).

¹¹⁴ Sales Tax Implementing Ordinance (STIO) in the version published on 21/02/2005 (FLG I. p. 434), last amended by Art. 3 of the Ordinance of 18/07/2016 (FLG I. p. 1722).

¹¹⁵ FC Rheinland-Pfalz, judgement of 28/06/2012, 6 K 2615/09, BeckRS 2012, 95902; BFH, order of 03/05/2010, XI B 51/09, BFH/NV 2010, 1872-73; LS. FC, judgement of 23/04/2009, 16 K 261/05, zit. nach juris; FC Düsseldorf, judgement of 31/01/2014, 1 K 3117/12 U.

¹¹⁶ Decree on the application of the sales tax act of 01/10/2010, BStBl I p. 846 – current version (as on 10/08/2016) – according to the version of 31/12/2015, last amended by FMF-letter of 10/08/2016 – III C 3 – S 7279/16/10001 (2016/0745510). http://www.bundesfinanzministerium.de/Content/DE/Downloads/BMF_Schreiben/Steuerarten/Umsatzsteuer/Umsatzsteuer-Anwendungserlass/2016-08-10-aenderungen-der-steuerschuldnerschaft-des-leistungsempfangers-durch-das-steueraenderungsgesetz-2015.html.

¹¹⁷ Cf. to the following customs (ed.), ATLAS-General, http://www.zoll.de/DE/Fachthemen/Zoelle/ATLAS/ATLAS-Allgemein/atlas-allgemein_node.html;jsessionid=2F6BA842C424107E91362C73C9EECA6.live0482.

a general rule, community goods, including second-hand vehicles, may be exported through any customs post of the EU¹¹⁸. An export declaration must be submitted, for which a distinction must be made between the exporter and the declarant. The exporter is the person at whose cost the export declaration is made and who is the owner of the vehicle or has a similar right of disposal at the time of the declaration. The declarant or representative can be the shipping company, which makes the export declaration on the exporter's behalf. At the time when the declaration is received, the exporter is in a contractual relationship with the recipient in the third country and disposes of the dispatch of the goods from within the customs territory of the EU. If the owner of the goods (or the person having a similar right of disposal) resides outside the EU, the EU-resident contracting party will be regarded as the exporter provided that an export relationship exists (Art. 788 Customs Code Implementing Ordinance – CCIO¹¹⁹). The export declaration may be made by any person who is certified for the use of a customs software (e.g. ATLAS) and is 'able to present a product or have a product presented to the competent customs office' (§ 64 Customs Code – CC)¹²⁰ and to supply all the required documents. The customs office for submission of the export declaration cannot be chosen freely, but submission must rather be made to the customs office responsible for the exportation.

One-step export procedure of second-hand vehicles

In the one-step export procedure for second-hand vehicles, the export declaration can be submitted to the customs office of exit. The customs office of exit is basically the last customs office before the vehicles leave the EU customs territory (cf. § 793 Para. 2 Subpara. 1 CCIO). This customs office lies on the EU external border. Under certain circumstances, airports or seaports can also function as such. Vehicles of a product value not exceeding EUR 3,000 may be declared in a one-step procedure – provided that they are not subject to any other prohibition or restriction (cf. § 794 Para. 1 CCIO). It is also possible to declare several vehicles at the same time if their value does not exceed EUR 3,000 (e.g. six vehicles of EUR 500 each). In order to facilitate the export procedure, in Germany, second-hand vehicles driven to the border by the owner may also be declared in a one-step procedure, regardless of their value¹²¹. In accordance with § 794 Para. 1 Sentence 2 CCIO, Member States may provide that the simplified procedure is not to be applied to persons who act on behalf of others as professional customs agents.

Two-step export procedure of second-hand vehicles

In the two-step export procedure for second-hand vehicles, the export declaration can be submitted to the competent export customs office. The export customs office (see § 4 item 4c CC) is the customs office at which the declared vehicles enter the export procedure. The competent export customs office is either the customs office at the exporter's place of residence, at the subcontractor's place of residence or the customs office in whose district the second-hand vehicles are packed or loaded for exportation (cf. §. 161 Para. 5 CC and § 789 CCIO). In the case of second-hand vehicles, this can be, for instance, the port where the vehicles are loaded if the vehicles are transported driven by the owner. If transported on a car transporter, all second-hand vehicles placed on the transporter can be declared at the export customs office from where the transport of the last vehicle loaded begins. Normally, the

¹¹⁸ Exportation under customs law means the final or temporary transport of EU goods to a place of destination outside the customs territory of the EU.

¹¹⁹ Commission Regulation (EEC) No. 2454/93 of 02/07/1993 laying down provisions for the implementation of Council Regulation (EEC) No. 2913/92 establishing the Community Customs Code (OJ. L 253 of 11/10/1993, p. 1), last amended by Impl. Reg. (EU) 2015/2064 of 17/11/2015 (OJ No. L 301 p. 12).

¹²⁰ Council Regulation (EEC) No. 2913/92 of 12/10/1992 establishing the Community Customs Code (OJ. L 302 of 19/10/1992, p. 1).

¹²¹ Cf. zoll.de and Federal Finance Directorate North (2015).

export customs office and the customs office of exit cannot be the same in the two-step export procedure¹²². At some customs offices, such as the Hamburg port in Hamburg-Waltershof, exceptions are made, due to large volumes, in order to facilitate exportation. Here the export customs office and the customs office of exit are identical, but a different customs agency code is indicated on the declaration¹²³. The vehicles have to be presented, i.e. shown to the export customs office. In the normally expected case of a two-step export procedure where the export customs office and the customs office of exit are not the same, the export declaration is submitted with the customs office of exit. Once the vehicle exits, the customs office of exit confirms to the export customs office that the product has been exported.

4.5.2.1 Developments of the new customs and foreign trade law and transition from the old legal situation to the new one

For the following presentation of the legal situation, the changes due to entry into force of the new EU customs code are to be considered. As a result of the so-called great customs code reform, the modernised EU customs code (EC) No. 450/2008 entered into force as of 01/05/2016, which is basically an entirely new text¹²⁴. The Union Customs Code (UCC), Regulation (EU) No. 952/2013 entered into force on 31/10/2013¹²⁵. Pursuant to Art. 286 Para. 2 UCC, the UCC took effect as of the date specified above; while at the same time, the modernised customs code was repealed, whereby the CCIO has lost its legal basis. Instead of the CCIO, the two other applicable acts of law are: the UCC delegating act and the UCC implementing act¹²⁶.

This leads to a complicated situation for the introduction of the modernised IT procedure, e.g., the ATLAS system, which is relevant for the exportation of end-of-life vehicles¹²⁷: Since a Transitional Delegating Act (TDA) will also be introduced on the basis of Art. 278 UCC¹²⁸, certain modernised IT procedures will be postponed until the end of 2020 at the latest¹²⁹.¹³⁰ Art. 54 of the draft TDA rules that for the transport of goods from the EU customs territory (see Art. 269 UCC), the customs authorities could permit that ‘until the implementation of the UCC AES according to the Annex of the Implementing Decision 2014/255/EU, non-electronic data processing means will be used for the exchange and storage of information on the export of goods from the EU customs territory’.

For ATLAS it means that ‘the new ATLAS versions export 2.3 and 8.7 (2016), and 8.8 (2017) [...] are planned and introduced entirely on the basis of the old Customs Code’. Consequently, the new IT procedures cannot correctly reflect the new legal situation determined by the UCC. The German customs

¹²² Cf. to this and the following part: Zoll (Customs) (ed.), http://www.zoll.de/DE/Fachthemen/Zoelle/Zollverfahren/Ausfuhrverfahren/Warenausfuhr-zweistufiges-Verfahren/Normales-Verfahren/normales-verfahren_node.html.

¹²³ Thus, in the two-step export procedure, the export customs office Hamburg-Waltershof receives customs agency code DE014851, whereas in the one-step procedure, the customs agency code DE004851 is used. Cf. Information leaflet on customs declarations, summary declarations and re-export notifications – Publication 2016 – (GZD – Z 3455-2016.00002-DV.A.22 (201600051837) of 5 April 2016, which replaces the 2015 Information leaflet.

¹²⁴ Cf. to this and the following part: the overview at Weerth, AWR Commentary online, (version of June 2015), § 161 CC, No. 6 ff.

¹²⁵ OJ EU 2013 No. L 269/1, ber. No. L 287/90.

¹²⁶ Delegated Act (DA) Reg. 2015/2446, Implementing Act (IA) 2015/2447, OJ No. L 343/1 of 29/12/2015.

¹²⁷ ATLAS is the German abbreviation for Automatic Rate and Local Customs Clearance System. Cf. § 787 CCIO.

¹²⁸ Cf. FMF (ed.), Unionszollkodex, Übergangsregelungen (EU Customs Code, Transitional rules), http://www.zoll.de/DE/Fachthemen/Zoelle/-Der_Zollkodex_der_Union/Uebergangsregelungen/uebergangsregelungen_node.html (downloaded on 29/01/2016); cf. draft at http://www.ra-moellenhoff.de/newsletter/_dta/file/downloads/uzk-rechtsakte-stand-2015-12-29.pdf.

¹²⁹ Cf. also recitals 18 and 43 of Reg. 952/2013.

¹³⁰ Cf. the draft at http://www.ra-moellenhoff.de/newsletter/_dta/file/downloads/uzk-rechtsakte-stand-2015-12-29.pdf.

authorities¹³¹ expect that the first ATLAS release based completely on the new UCC law will not foreseeably appear before 2018.

Although Art. 162-165 UCC ('Standard customs declaration') does not mention the oral declaration procedure, the German customs authorities assume¹³² continued existence of this procedure. For the future, Art. 166 UCC sets the framework of the simplified customs declarations. According to Para. 1, the customs authorities may 'permit a person have goods placed under a customs procedure on the basis of a simplified declaration which may omit certain particulars referred to in Article 162 and documents referred to in Article 163.' Para. 2 rules that 'regular use of the simplified customs declaration must be approved by the customs authorities'. As a result, another type of simplified customs declaration exists. In addition, the customs declaration can also take the form of an entry in the declarant's records (Art. 182 UCC). The conditions for the admissibility of a simplified procedure are specified in detail in Art. 145 of the Delegated Act Reg. 2015/2446.

Consequently, until the waiver of the UCC transition norm and the re-adjustment of the IT procedure, the current legal situation and customs practice will apply.

4.5.2.2 Customs and foreign trade law in the period examined

Thus far, an export declaration has been required under § 216 Para. 2 CCIO. Declaration in so-called commercial traffic (commercial dealers) serves, among other things, for the Federal Statistical Office to record the flows of exported goods, and for the customs authorities to ensure compliance with the export rules. Form 0733 is used for the export certificate of the border customs agency. The customs tariff is calculated on the basis of the eight-digit customs tariff number, according to the particulars in the vehicle registration document. Furthermore, a copy of the proof of preference (EUR.1 for commodity traffic conducted with countries that the EC or EU has concluded free trade, preferential or cooperation agreements with, as well as countries and territories associated with the EC/ATR for Turkey) etc. should be documented, if available¹³³. The proof of preference serves to make use of duty-free treatment in the country of destination¹³⁴. A different proof of preference is used for each country of destination, which must contain the origin of the goods (Germany) and a specific target country. The exporter may request the proof of preference together with the movement certificate at any customs agency which performs the examination of the originating status¹³⁵.

In Germany, similarly to other EU Member States (e.g. Austria)¹³⁶, a paper-based system was used for export declarations and statistical records, without any electronic support. Since 01/07/2009, a standard obligation exists in the EU¹³⁷ for participation in the electronic export procedure (§ 787

¹³¹ Main Customs Office Siegen (ed.) Wirtschaft trifft Zoll (Economy meets customs) – Topic: Unionszollkodex-UCC, presentation slides Reiner Stadler, Konstanz, 15 December 2015, <http://www.konstanz.ihk.de/blob/knihk24/international/downloads/3006576/3cf6ca87a2f7aba77feb19fff1eb0d4c/Unionszollkodex-data.pdf> (downloaded), slide 31

¹³² Main Customs Office Siegen (ed.) Wirtschaft trifft Zoll (Economy meets customs) – Topic: Unionszollkodex-UCC, presentation slides Reiner Stadler, Konstanz, 15 December 2015, <http://www.konstanz.ihk.de/blob/knihk24/international/downloads/3006576/3cf6ca87a2f7aba77feb19fff1eb0d4c/Unionszollkodex-data.pdf> (downloaded), slide 12

¹³³ Cf. IHK Hochrhein-Bodensee n.d.

¹³⁴ See the General Scheme of Preferences, GSP, for developing countries acc. to Regulation (EU) No. 978/2012 of the European Parliament and of the Council. E.g. a preference rule of mutuality exists with Lebanon (preference of origin).

¹³⁵ Cf. the information under Zoll (Customs) (ed.), Allgemeine Informationen zur Ausstellung (General information on issue), https://www.zoll.de/DE/Fachthemen/Warenursprung-Praeferenzen/Praeferenzen/Praeferenznachweise/Ausstellung-foermlicher-Praeferenznachweise/Allgemeine-Information-zur-Ausstellung/allgemeine-information-zur-ausstellung_node.html

¹³⁶ Cf. Gabriel, Stock and Kanzian (2000).

¹³⁷ The legal ground provided by Council Regulation (EEC) No. 2913/92 of 12/10/1992 establishing the Community Customs Code (OJ L 302 of 19/10/1992, p. 1, OJ L 79 of 01/04/1993, p. 84, OJ L 97 of 18/04/1996, p. 38), last amended by

CCIO) regarding exports outside of the customs territory of the Community (§ 786 Para. 1 CCIO). The former written export declaration has been replaced by an electronic export declaration. In Germany, the electronic export declaration is to be submitted via the IT system ATLAS exports¹³⁸. The use of the ATLAS system is mandatory for waste exporters. Section 1.1 of the operating instruction of customs authorities for the IT procedure ATLAS¹³⁹ states as a legal ground that: ‘(1) To enable extensive automation of commercial commodity traffic with third countries, the German customs administration has introduced the IT procedure ATLAS (Automated tariff and local customs processing system) on federal level, on the basis of Art. 61 item (b) CC [Reg. (EEC) No. 2913/92] and Art. 4a, Art. 4b, Art. 183 ff. and Art. 222 to 224 CCIO [Reg. (EEC) No. 2454/93]. (2) Pursuant to § 8a Customs Ord., the rules of the above-mentioned operating instruction apply mandatorily to participants, stakeholders, clearing centres and users. The operating instruction supports the application of the customs rules by a uniform regulation on IT-based customs clearance at customs agencies’.

With regard to this, the FMF Decree states, with a focus on the export customs office (COExp) that:

‘The (German) COExp performs the customs process on the basis of the ‘exit confirmation’ transmitted by the COExit by sending the ‘export notice’ (§ 796e CCIO) to the Exporter/declarant as a pdf document (Annex 1). The ‘export notice’ contains the particulars of the original export declaration, supplemented by the additional establishments and results of the COExp. Thereby, exportation is appropriately documented in all cases (transport and dispatch) with the ‘export notice’¹⁴⁰.

‘The obligation to submit electronic export declarations applies to all declarations, regardless of the means of transport (road, air, sea, post and rail transport)’¹⁴¹. Exceptions from the electronic export declaration are only possible with strict limitations. It is a separate issue, whether a so-called incomplete export declaration under § 253 Para. 1 and § 280 and 281 CCIO is admissible. In such a case, documents must be submitted subsequently. An exception to the electronic export declaration applies only if ‘the preconditions for an oral or implied export declaration’ are met. This is the case for exports with a Carnet Admission Temporaire (ATA), which functions as a shipping document or if the failure and security concept (operating instruction for the IT procedure ATLAS Chapter 8.2.6) applies.

In deviation from the standard two-step procedure (declaration and presentation of the goods at the internal customs office, issue of the export accompanying document, final production at the border customs agency), the following simplifications exist generally for the commercial¹⁴² export of second-hand vehicles:

Reg. (EU) 952/2013 of 09/10/2013 of the European Parliament and of the Council (OJ No. L 269 of 10/10/2013, p. 1) – Customs Code.

¹³⁸ Cf. § 787 CCIO.

¹³⁹ Cf. Zoll (Customs) (2014).

¹⁴⁰ Cf. FMF (2010).

¹⁴¹ Cf. FMF n.d.

¹⁴² Special rules apply to non-commercial export by private individuals: If a vehicle is exported on its own axes (operated with own motor power, rather than on some active transport means or a trailer behind a MV) by a private individual, the one-step procedure is sufficient (Zoll, Customs n.d.).

Table 30: Threshold values for the one-step and oral export declaration procedures for commercial export of second-hand vehicles¹⁴³

| Simplification | Preconditions | Other |
|--|---|---|
| Oral procedure: Exporters may but are not required to submit electronic export declarations | Goods do not exceed the value of EUR 1,000 or the weight of 1,000 kg and a) no special permit is required for the goods and b) there is no need to request an export refund | Product value under EUR 1,000 = cross-border value/statistical value. The pro-rated transportation costs up to the EU external border are included. |
| Two-step export procedure combined with presentation pursuant to § 9 Para. 2 FTPO | Request for presentation away from customs offices (form 0765) | Consequence: The inspection of the goods does not take place at the customs office but at the company. |
| One-step procedure: The goods are presented (i.e. shown) directly to the German customs office of exit (border customs office) and the export declaration is submitted there. | Shipments between a value of goods of EUR 1,000 and EUR 3,000 (§ 794 CCIO) | If the declaration is incorrect, the border customs office may refer the shipment back and the procedure must be started again. |
| Reduced data requirements for export acc. to the Customs Code: a) the incomplete customs declaration (under § 76 Para. 1 item a) CC) b) the simplified declaration procedure (under § 76 Para. 1 item b) CC). | a) Preconditions (subcontractor cases + delivery) are not given for second-hand vehicles. b) The simplified declaration procedure requires prior approval by the Main Customs Office of the district where the applicant's (exporter/declarant) main accounts are held. Not applicable to second-hand vehicle exporters. | |

¹⁴³ According to the Industry and Trade Chamber Potsdam (n.d.); Zoll (Customs) (n.d.).

Eligible exporter (local clearance procedure)

There is no need for actual clearance at the customs office of export (internal customs office) before the departure of the goods (§ 76 Para. 1 item c) CC, § 283 ff. CCIO in conjunction with § 264, 265 CCIO). The goods are transferred electronically in an automated process. This means that the accompanying export document is returned on the basis of the electronic export declaration of the company; transport to the external border may start.

The local clearance procedure must be approved by the competent Main Customs Office. The holder of the approval must assure correct performance of the procedure and the group of goods must be named (gen. the first four digits of the customs tariff number).

So far, in addition to § 76 CC, the legal grounds for the threshold value of simplification has been, as far as the value of goods is concerned, Art. 225 f. EU-CCIO, further specified in Germany by the FMF Decree of 03/05/2010 (cf. FMF 2010, p. 5). The last amendment of the above-mentioned decree was made by the decree of 2015 (cf. FMF 2015). More specifically, Art. 226 EU-CCIO permits oral export declarations for certain goods, for instance for b) goods in the sense of Art. 225 item b) and goods of minor economic value provided that it is approved by the customs authorities. Art. 225 EU-CCIO allows that customs declarations for transfer to the duty-free traffic of the following goods may be made orally (simplified procedure), for instance for b) goods for commercial purposes provided that the total value per shipment and declarant does not exceed the statistical value threshold specified in the relevant Community regulations, the shipment is not a part of a regular series of similar shipments and the goods are not transported by an independent transporter as a part of a bigger commercial transport procedure.

If the exported goods are of a value under EUR 1,000 and of a weight under 1,000 kg, according to the German practice, it is sufficient to present the commercial invoice(s) at the customs office of exit (e.g. airport, seaport or border customs office) on the external border of the EU (so-called oral declaration). For the calculation of this value limit, pursuant to § 2 Para. 4 Foreign Trade Act (FTA), the export shipment is defined as the quantity of goods¹⁴⁴ which is exported by the exporter at the same time via the same customs office of exit to the same country of destination. As a result, all shipments are added up if they are sent on the same day to the same country of destination.

With regard to the practical application in such cases, the above-mentioned FMF Decree states:

'In cases where the export declaration is still not made in the electronic export procedure (for exports with oral or implied declaration with minor economic importance or export declarations with a goods value of up to EUR 1,000), as before, the export of

¹⁴⁴ Foreign Trade Act (FTA) of 06/06/2013 (FLG I p. 1482), last amended by the Act of 03/12/2015 (FLG I p. 2178).

the goods is monitored in another way with the Sample No. 3 of the export declaration (= Sample No. 3 of the single administrative document). If a standard commercial document (e.g. bill of lading, invoice, delivery note) is used, it will be accepted as a proof for sales tax purposes if the export confirmation is indicated on the reverse side as a note (service stamp of the border customs office with date)."

The scope of documents (documentation procedure) required for the export of second-hand vehicles under the value limit to non-EU Member States differs depending on whether it is a transport or dispatch case (cf. FMF 2012; Janzen 2012):

'In transport cases, an export certificate of the border customs office is required (§ 9 Para. 1 Sentence 1 item 2 STIO). In such cases, a standard commercial document, e.g. an invoice or a delivery note is used as an export declaration. (...) This document is recognised as a proof of export if the export confirmation is indicated on the reverse side as a note (service stamp of the border customs office with date). The document must contain the following information (Section 6.6 Para. 1 item 1 c. DAST):

- 1. name and address of the delivering entrepreneur*
- 2. standard commercial designation and volume of the exported objects*
- 3. place and date of export*
- 4. export confirmation."*

In dispatch cases the exportation must be documented by means of a dispatch voucher, 'e.g.

- 1. a bill of lading signed by the customer, a postal receipt, a purchase order placed with the courier service (§ 10 Para. 1 Sentence 1 item 2 a STIO) or*
- 2. the white receipt of goods (§ 10a Para. 1 Sentence 1 item 2 b STIO).*
- 3. (...) If it is (...) not possible or reasonable to document the exportation with a dispatch voucher or white receipt of goods, ... (it is possible) to present the proof of exit, similarly to transport cases, that is the proof of export by the border customs office (§ 10 Para. 4 STIO...).'*

Meanwhile the FMF (2015) has clarified, referring to the sample in Annexes 1 to 4 of the letter of 23/01/2015, that certain export notices are required:

'6.7a Export notices as proof of export

Besides the general 'export notice' and the 'alternative export notice' (cf. Section 6.6 Para. 1 item 1 a and Section 6.7 Para. 1), the following export notices transmitted in the computer-assisted export procedure ATLAS by COExp are recognised as export notices:

- 1. Export notice on the basis of a monthly summary declaration under § 285a Para. 1a CCIO provided that the export of the goods is clear and easily verifiable from the accompanying documents and the accounts,*
- 2. Export notice on the basis of a subsequent export declaration in the fall-back procedure under § 787 Para. 2 CCIO,*

3. *Export notice on the basis of a subsequent export declaration under § 795 CCIO and*

4. *Export notice on the basis of a subsequent export declaration if the first export declaration was wholly or partly incorrect.'*

The European Commission criticised that the practice was divergent concerning the value limits. As a result of different value limits in the Member States, certain vehicle exports were not recorded, which resulted in statistical distortions (cf. European Commission 2013, p. 8).

4.5.2.3 Information flow in the one-step procedure with customs office of exit outside of Germany

If a second-hand vehicle is exported from the customs territory of the Community with a one-step declaration at a foreign customs office of exit, then no information is transmitted to the German customs authorities on the vehicles exported in this way. This so-called transit effect should be eliminated by 2020, since the EU notification system is being improved (cf. European Commission 2015a, p. 11 f., 19 f.). It is intended that the EU Member State should automatically report back to Germany about the goods exported. Details of the information exchange are regulated in Art. 796a ff. CCIO. The notification system legally based on § 796b CCIO, the European IT system AES (Automated Export System)/ECS (Export Control System), is currently being optimised for data exchange, e.g. between the authorities of the exporting state, the transit state and the importing state under the keyword 'eCustoms'¹⁴⁵.

4.5.2.4 Export licence plate and VIN

As a general precondition for the exportation of a second-hand vehicle, a sales contract (and an EU seller's invoice) or, in certain cases, an export licence plate issued previously by the MV registration office is required (the owner's residence is irrelevant for competence). Already, because of the special proof of insurance as a precondition for an export licence plate, to which non-EU Member State the second-hand vehicle is transported is documented. This is also recorded for second-hand vehicles of a value under EUR 1,000 and of a weight under 1 t. If the vehicle is exported with an export licence plate, the export notice must contain the export licence plate number (§ 9 Para. 2 Sentence 2 and § 10 Para. 2 Sentence 2 STIO). For this reason, in the export declaration, it is necessary to indicate the export licence plate number in the field 'designation of goods'.

However, a German temporary plate number (for transportation of a vehicle) is sufficient for the exportation itself. If a foreign transportation number plate is used in Germany for transfer abroad, it may constitute misuse of registration marks under § 22 Para. 1 item 1 and 2 RTA¹⁴⁶.

However, the German temporary number plate is not sufficient for VAT declaration. Or as Janzen (2012) puts it:

'If exportation takes place without an export licence plate, the export notice must contain the vehicle identification number (§ 9 Para. 2 Sentence 1 item 1 STIO). For this reason, in the export declaration, it is necessary to indicate the vehicle identification number in the field 'designation of goods'. In addition, the entrepreneur has to provide proof of registration, customs clearance or taxation on imports in the third

¹⁴⁵ Cf. on the details European Commission (2015b), p. 11. The deficit analysis is to be found in European Commission 2014b, project leaflet 1.6 to 'UCC Automated Export System (AES)': 'This major functionality gap concerns simplified procedures, partial/split exit via several offices of exit, connection between export and transit and export and the EMCS' (p. 31).

¹⁴⁶ Cf. ECJ, decision of 02/10/2003, C-12/02, DAR 2004, 213 = EWS 2004, 38-40.

country (§ 9 Para. 2 Sentence 1 item 2, § 10 Para. 2 Sentence 1 item 2 STIO). The administrative practice is that these documents must be provided with a certified translation into German. For the proof of taxation on import, an English-language document will suffice (Section 6.9 Para. 11 Sentence 4 and 5 Sales tax application decree of 1 October 2010, FTJ I p- 846 as on 31 December 2015).'

4.5.2.5 Issues of taxation law

In certain cases, a VAT reclaim¹⁴⁷ is to be considered, which is only possible after presentation of the original exportation documents with stamp and certification of the relevant tax authorities. In such cases, on the grounds of taxation law, it is also necessary to present an international registration certificate for any exportation to a non-EU state. This is mandatory if the exportation of the MV must be certified by the customs authority (VAT reclaim). If the second-hand vehicle is registered for a company, the extract from the company register or the trade registration must be presented.

Special rules apply to the **treatment** of exported second-hand vehicles in **taxation law** (generally, export shipments are exempted from German sales tax, § 4 item 1a i.c.w. § 6 STA) (cf. Nieskoven 2011, p. 287; Fuchs 2013, p. 31 ff.), which can be found in the Sales Tax Implementing Ordinance (STIO¹⁴⁸):

§ 9 Para. 1 Sentence 2 item 1 STIO also requires the indication of the vehicle identification number for MVs in the export document and as an entry in the accounting evidence (§ 13 Para. 2 item 1 STIO-E). In addition, the exporter has to possess proof of registration, customs clearance or taxation on imports in the third country (§ 9 Para. 1 Sentence 2 item 2 STIO-E). However, pursuant to § 9 Para. 1 Sentence 3 STIO, no special MV verification is required if the vehicle is exported with an export licence plate and the licence plate number is evident from the export document¹⁴⁹.

4.5.3 Competent authorities for the transfer of goods and taxation

The EU has established some (legally non-binding) guidelines for customs clearance¹⁵⁰. Within the Federal Government, the Federal Ministry of Finance (FMF) is responsible for the issues related to the cross-border transport of goods, which is the Supreme Financial Authority and whose scope of responsibility extends to customs. Detailed rules are contained in the Customs Administration Act¹⁵¹. The organisational structure of the customs administration (cf. § 17 Customs Administration Act) is defined in the Financial Administration Act¹⁵². The FMF is also responsible for taxation.

¹⁴⁷ Cf. also Weimann, Vorgehen beim grenzüberschreitenden Kfz-Handel zur Verringerung der Umsatzsteuerbelastung (Procedure for cross-border MV trade to mitigate the sales tax burden), ASR 11/2015, 7.

¹⁴⁸ In the version published on 21/02/2005 (FLG I. p. 434), last amended by § 3 of the Ordinance of 18/07/2016 (FLG I. p. 1722).

¹⁴⁹ Cf. BFH 31/07/2008, Ord. R 21/06.

¹⁵⁰ Guidelines for customs clearance for the cross-border transport of wastes – Summary for the public, (2015/C 157/01), OJ No. C-157/1 of 12/05/2015.

¹⁵¹ Customs Administration Act of 21/12/1992 (FLG I p. 2125; 1993 I p. 2493), last amended by the Act of 26/07/2016 (FLG I p. 1824).

¹⁵² Act on Financial Administration (Financial Administration Act – FAA) of 04/04/2006 (FLG I p. 846, 1202), last amended by the Act of 19/07/2016 (FLG I p. 1730).

4.6 Plant-related legislation

4.6.1 Dismantling facilities and shredders

The law on plant permits generally requires authorisation for the construction and operation of end-of-life vehicle recovery plants. Dismantling facilities with insignificant output (<5 end-of-life vehicles per week) only require a construction law permit, while a permit under FICA is needed for bigger dismantling facilities and shredders¹⁵³.

End-of-life vehicle recovery facilities requiring authorisation under FICA are specified in § 4 Federal Immission Control Act (FICA¹⁵⁴) in conjunction with 4 OIFICA¹⁵⁵, No. 8.9 and 8.12 of Annex 1, see Table 31 and Table 32. The facilities named in the Annex to the 4th OIFICA are subject to the immission control law authorisation procedure. A formal procedure is required for shredders (from a daily capacity of 50 tons) and large car wreck storages. The formal administrative procedure has a concentration effect (§ 13 FICA), so it also comprises the construction law permit and the licence of the water management authority¹⁵⁶. There is no need for a separate waste law permit procedure neither for the construction and operation of waste disposal facilities nor for a significant change to such a facility or its operation. Pursuant to § 35 Para. 1 CSCA, such facilities require (only) a permit according to the requirements of FICA, and there is no need for any other authorisation under CSCA¹⁵⁷. The requirements specified in the Annex of the ELV Ordinance are also used as the criteria to establish whether the dismantling facilities correspond to the state of the art. Thus, the term ‘state of the art’ in immission control law has a hinge function to waste law.

Different numbers of Annex 1 to 4th OIFICA apply to the waste disposal facilities in connection with end-of-life vehicles of relevance to us, as a result of which they are assigned to various types of procedure (§ 2 of 4th OIFICA) (P = permit procedure under § 10 FICA (with public consultation); S = simplified procedure under § 19 FICA (without public consultation), E = facility under Art. 10 IE-Directive 2010/75/EU¹⁵⁸, so-called IED-facility).

The provisions applicable to metallic wastes in shredders and dismantling facilities for end-of-life vehicle recovery are No. 8.9 of 4th OIFICA.

¹⁵³ Cf. an earlier case of continuing planning approval under § 67 Para. 7 FICA or authorisation under the Waste Act AC Düsseldorf, judgement of 30/07/2013, 3 K 6674/11, BeckRS 2014, 55530.

¹⁵⁴ Federal Immission Control Act in the version published on 17/05/2013 (FLG I p. 1274), last amended by the Act of 26/07/2016 (FLG I p. 1839).

¹⁵⁵ Fourth Ordinance on the Implementation of the Federal Immission Control Act (Ordinance on facilities requiring permits – 4th OIFICA) of 02/05/2013 (FLG I p. 973, 3756), last amended by the Ordinance of 28/04/2015 (FLG I p. 670).

¹⁵⁶ Cf. the concentration of the permit under § 58 and § 59 FWA e.g. Decree of the Lower Saxony Minister of the Environment (file number 35-40500/1/0/13) of 08/05/2002.

¹⁵⁷ HAC Hesse, judgement of 13/07/1989, 3 UE 1304/89, openJur 2012, 18879 on an earlier case (before the entry into force of CSCWMA a.F.).

¹⁵⁸ Directive 2010/75/EU of the European Parliament and of the Council of 17/10/2010 on industrial emissions (integrated pollution prevention and control) OJ EC L 334, p. 17-119.

Table 31: Plants subject to licencing under FICA: Shredders and end-of-life vehicle dismantling facilities

| No. | Description of the facility | Type of procedure | IED facility |
|---------|--|-------------------|--------------|
| 8.9 | Facilities for the treatment of | | |
| 8.9.1 | non-hazardous metallic wastes in shredders with a throughput performance of input materials of | | |
| 8.9.1.1 | 50 tons or more per day, | P | E |
| 8.9.1.2 | 10 tons to less than 50 tons per day, | S | |
| 8.9.2 | End-of-life vehicles, other commercial vehicles, buses or special vehicles (including draining) with a weekly output capacity of 5 or more end-of-life vehicles, other commercial vehicles, buses or special vehicles; | S | |

Source: 4th OIFICA, Annex 1

Many end-of-life vehicle recovery facilities have an end-of-life vehicle storage and/or scrapyard. Such storage facilities also require a FICA authorisation, depending on their size, for the storage of ferrous and non-ferrous scrap, including car wrecks (so-called incoming stock storage; see Table 32).

Table 32: Plants subject to licencing under FICA: Storage of ferrous and non-ferrous scrap, including car wrecks (so-called incoming stock storage)

| No. | Description of the facility | Type of procedure | IED facility |
|----------|--|-------------------|--------------|
| 8.12 | Facilities for temporary storage of wastes, including slurries, except for temporary storage until collection on the area where the waste is generated and facilities pertaining to No. 8.14 | | |
| 8.12.1 | hazardous wastes with a total storage capacity of | | |
| 8.12.1.1 | 50 tons or more, | P | E |
| 8.12.1.2 | 30 tons to less than 50 tons, | S | |
| 8.12.2 | non-hazardous wastes with a total storage capacity of 100 tons or more, | S | |
| 8.12.3 | Ferrous and non-ferrous scrap, including car wrecks with | | |
| 8.12.3.1 | a total storage area of 15,000 square metres or more or a total storage capacity of 1,500 tons or more, | P | |
| 8.12.3.2 | a total storage area of 1,000 to less than 15,000 square metres or more or a total storage capacity of 100 to less than 1,500 tons; | S | |

Source: 4th OIFICA, Annex 1

End-of-life vehicles in preliminary storage are hazardous wastes. This means that the limit of 50 t applies pursuant to 8.12.1.1. The ‘car wrecks’ mentioned in No. 8.12.3 means drained¹⁵⁹, stripped vehicles. It follows from the fact that they are mentioned together with ferrous scrap. Since there is no standard parameter for determining the weight of stripped vehicles, it is practically difficult to calculate the number of end-of-life vehicles contained in 1,500 t.

Storages of car recovery and shredder facilities are either storages of pre-treated vehicles as defined in No. 8.12 (facilities for temporary storage of wastes, including slurries, except for temporary storage until collection on the area where the waste is generated and facilities pertaining to No. 8.14), or facilities for the storage of wastes for a period of over one year (No. 8.14 of Annex 1 of 4th OIFICA).

In any case, specific requirements apply to facilities subject to federal immission control legislation depending on the size of the facility (= environmental relevance), which are translated into a more or less demanding immission control authorisation procedure¹⁶⁰. The general eligibility for authorisation can be assessed according to § 6 FICA. The immission control authorisation may only be issued if compliance with the obligations arising from § 5 FICA and an Ordinance adopted on the basis of § 7 FICA (§ 6 Para. 1 item 1 FICA) is ensured and no other public law requirement or labour protection concern is opposed to the construction and operation of the facility (§ 6 Para. 1 No. 2 FICA)¹⁶¹. If there is any doubt concerning the preconditions for the issue of the authorisation, in general, it will lead to a decision against the applicant (Jarass 2015, § 6 No. 12). This ensures that the facilities correspond to the state of the art.

The requirements of the EU Industrial Emission Directive (also known as IED¹⁶²) are applicable to large shredders (No. 8.9.1.1 Annex 1 of 4th OIFICA).

The authorisation procedure for larger recovery facilities generally includes the performance of an environmental impact assessment under the Environmental Impacts Assessment Act (EIAA)¹⁶³. Releasers are expected harmful environmental effects of the storage of ferrous and non-ferrous metallic scrap including car wrecks with a total storage capacity of 1,500 t or more, or 100 t to less than 1,500 t (cf. Annex 1, 8.7.1.1 and 8.7.1.2 EIAA). This is relevant for car disposal facilities in connection with the construction and operation of a facility for temporary storage of wastes, except for temporary storage until collection on the area where the waste is generated, if ferrous or non-ferrous scrap is generated in the volumes mentioned above.

The immission control law authorisation of these facilities is **supervised** by the immission control authorities responsible under state law. The specific responsibilities are defined at state level¹⁶⁴. For instance in Lower Saxony, the State Industry Supervisory Authorities are responsible (No. 8.1. and

¹⁵⁹ Stripped vehicles should always be drained, since according to the definition in § 2 Para. 1 item 17 ELV Ordinance, a stripped vehicle is ‘an end-of-life vehicle treated in a dismantling facility according to the specification of Annex No. 3 for the purpose of further recovery’.

¹⁶⁰ Admissibility under construction law, which is very important for the smaller facilities which are subject to construction law only, is not affected.

¹⁶¹ AC Augsburg, judgement of 23/01/2013, Au 4 K 12.295, BeckRs 2013, 47023, No. 48.

¹⁶² Directive 2010/75/EU of the European Parliament and of the Council of 17/10/2010 on industrial emissions (integrated pollution prevention and control) OJ EC L 334, p. 17-119.

¹⁶³ Act on Environmental Impacts Assessment in the version published on 24/02/2010 (FLG I p. 94), last amended by the Act of 21/12/2015 (FLG I p. 2490).

¹⁶⁴ Cf. e.g. for Lower Saxony, the Ordinance on the Responsibilities in the Areas of Occupational Safety Pursuant to Laws Related to Immission Control, Explosive Materials, Genetic Engineering, Radiation Protection and other Fields (Ord. Resp. Envir. Occ. Saf.) of 27/10/2009 (LS GLO 2009, 374) or for BW the Ordinance by the State Government (of Baden-Württemberg) and the Ministry of the Environment, Nature Protection and Transport on competences relating to emission issues (Immission Protection Competence Ordinance – IPCO) of 11/05/2010 (GLO No. 8, p. 406), last amended by the Ordinance of 30/10/2015 (LS GLO p. 272).

8.1.1. Ordinance on Environmental Protection and Labour Protection). The material benchmarks of immission-related requirements follow, in particular, from the Technical Instructions on Air Quality (TI Air¹⁶⁵)¹⁶⁶ and the Technical Instruction on Protection Against Noise (TI Noise¹⁶⁷). So if a FICA permit is missing for a dismantling facility, the immission control authority responsible under state law is to be contacted. On the other hand, compliance with construction law requirements is in the competence of the building supervisory authorities responsible under state-level construction law¹⁶⁸. For instance in Lower Saxony, § 57 of the Building Code of Lower Saxony (BCLS¹⁶⁹) sets forth that the lower-instance building supervisory authorities are basically responsible for all issues of building supervision. These are the region of Hannover, all districts, district-free and large independent towns, and a number of other towns which generally have over 30,000 inhabitants. The region of Hannover exercises technical supervision over the lower-instance building supervisory authorities assigned to it, so it acts as a reviewing authority in such matters.

As it regards **water law**, the question is whether the facility (e.g. a storage place, dismantling facility or shredder) possesses a discharge permit under the state-level water act (e.g. § 98 Para. 1 of the Water Act of Lower Saxony – WAL¹⁷⁰) (water law authorisation/permit for direct/indirect emissions). Thus, light liquid and coalescence separators must be installed according to the wastewater management plan of the area: Areas for drainage, dismantling, storage of liquids and component parts carrying liquids, and for compacting are to be connected to a light liquid separator (e.g. acc. to DIN 1999) unless they are roofed. The responsible authority is the lower-instance water management authority. E.g. in Lower Saxony, pursuant to § 127 Para. 2 Sentence 1 WAL, the responsibilities of the lower-instance water management authorities are assumed by the districts, the district-free and large independent towns.

Smaller end-of-life vehicle dismantling facilities (fewer than five end-of-life vehicles per week) are subject to building law requirements to the extent that constructed facilities such as workshops or administrative buildings (see e.g. § 2 Para. 1 item 8 BCLS) require permits or notification (§ 59 Para. 1 BCLS).

Incidentally, questions of **construction planning law** are also frequently addressed in connection with waste storage areas with car wrecks and used parts, mostly with regard to building permits¹⁷¹. A storage area used for the storage of end-of-life vehicles and component parts constitutes a built structure (see e.g. § 2 Para. 1 item 8 BCLS), which means that a building permit is required (§ 59 Para. 1 BCLS)¹⁷². Normally, areas used for storage purposes (§ 62 Para. 1 item 3 BCLS for built structures not qualifying as buildings in industrial areas and industry sites) are not exempted from the authorisation requirement. If facilities requiring permits under the Federal Immission Control Act, such as larger dismantling facilities or shredders, count as built structures, they are to be regarded as special

¹⁶⁵ Technical Instructions on Air Quality – TI Air of 24/07/2002 (GMBI p. 511).

¹⁶⁶ AC Saarlouis, order of 07/11/2011, 5 L 778/11, BeckRS 2011, 55725: Limitations on the output performance of a large shredder because of dust.

¹⁶⁷ Technical Instructions on Protection Against Noise – TI Noise of 26/08/1998 (GMBI No. 26/1998 p. 503).

¹⁶⁸ The German approach is different from the British, for instance (cf. Regulation 22A on End-of-Life Vehicles (Amendment) Regulations 2010/1094 amending End-of-Life Vehicles Regulations 2003/2635), which provides for centralised state control.

¹⁶⁹ Lower Saxony Building Code (BCLS) of 03/04/2012 (LS GLO 2012, 46), last amended by the Act of 23/07/2014 (LS GLO p. 206).

¹⁷⁰ Lower Saxony Water Act (WAL) of 19/02/2010 (LS GLO No. 5/2010 p. 64), last amended by the Act of 12/11/2015 (LS GLO p. 307).

¹⁷¹ Cf. only FAC, order of 14/04/2000, 4 B 28/00, NVwZ-RR 2000, 758; AC Augsburg, judgement of 23/01/2013, Au 4 K 12.295, BeckRs 2013, 47023, No. 49 ff.

¹⁷² HAC München, judgement of 21/12/1999, 2 B 94.1741, BeckRs 1999, 25988.

buildings under § 2 Para. 5 BCLS. § 62 Para. 1 Sentence 3 BCLS expressly states that special buildings are not to be exempted from the authorisation requirement. If, for instance, a simple storage area does not require a permit under immission control law, an exemption from the building permit requirement will only be possible if the building planning law conditions are met (the plan is admissible in the scope of applicability of a development plan under § 30 or in an unplanned inner area under § 34 of the Federal Building Code – FBC¹⁷³). In such a case, the developer is only required to submit a notification of the plan; but the special information obligation should be considered for waste storage above a set volume (§ 62 Para. 3 Sentence 2 BCLS). Areas of other use in outskirts areas (cf. § 35 Para. 2 i.c.w. Para. 3 FBC) are also not to be excluded from the requirement of a building permit. If there is no building permit and the facility cannot actually be authorised, the competent building authority will issue a removal order (§ 79 Para. 1 Sentence 1 and 2 BCLS). Thus, the building supervisory authority may order total or partial removal of the facility if it has been constructed or changed against public law requirements, provided that there is no other way to restore lawful conditions; or any use in conflict with public law requirements may be prohibited (§ 79 Para. 1 Sentence 2 item 4 and § 58 Para. 1 Sentence 1 BCLS).

In Lower Saxony, for instance, the responsibilities of the lower-instance building supervisory authority (cf. §§ 57 Para. 1 Sentence 1, § 58 Para. 2 BCLS) are assumed by the districts, the district-free towns and the large independent towns.

4.6.2 MV garages

MV garages repair, store defective vehicles or also remove parts from them. With this background, the authorisation requirements for MV garages are briefly detailed below. After that, we will examine whether it is possible to treat end-of-life vehicles without being recognised as a dismantling facility under the ELV Ordinance. Finally, MV garages functioning as acceptance or collection facilities, under § 2 Para. 1 item 14 and 15 ELV Ordinance respectively, will be presented.

4.6.2.1 Excursus: Authorisation requirements for MV garages

MV garages are regularly **authorised under construction law**. In the framework of the examination related to the building permit it is assessed, among other items, whether the planned construction is in accordance with construction planning law¹⁷⁴. The building permit must be requested from the lower-instance building supervisory authorities. In Lower Saxony, pursuant to § 57 Para. 1 of the State Building Code of Lower Saxony (BCLS), these are the districts, the district-free and larger independent towns. Pursuant to § 58 Para. 1 and 2 BCLS, the construction supervisory authorities are responsible for monitoring and promoting the compliance of facilities, plots and building operations with the local building law. In addition to building law conditions, building permits regularly include (e.g. on the basis of § 72 of the Hmb Building Code) conditions of labour safety law, fire protection law, wastewater law and immission control law etc.¹⁷⁵

A MV garage is typically regarded as a facility not subject to authorisation pursuant to §§ 22 ff. FICA. The mere operation of a MV garage, which typically does not involve waste recovery, is not named in the 4th OIFICA (cf. § 4 Para. 1 Sentence 3 FICA), which has so far been decisive, and as a result, it

¹⁷³ Building Code in the version published on 23/09/2004 (FLG I p. 2414), last amended by the Act of 20/10/2015 (FLG I p. 1722).

¹⁷⁴ Cf. Supreme Administrative Court for the State of Nordrhein-Westfalen, judgement of 19/05/2015 – 10 D 115/12.NE –, juris.

¹⁷⁵ Cf. e.g. the examples from the Transparency Portal of Hamburg, a. o. http://daten.transparenz.hamburg.de/Data-port.HmbTG.ZS.Webservice.GetRessource100/GetRessource100.svc/a6ece7be-6fe6-499f-b53b-b79e7cd1bb83/Genehmigung_nach_HBauO.pdf.

does not require authorisation. For the construction and operation of the facility, the requirements to be met are those of §§ 22-25 FICA on facilities not subject to authorisation. The same applies to the requirements of the Ordinances adopted on the basis of § 23. If a permit is required in the particular case, the closure and removal of facilities operated without a permit by the immission control authority takes place pursuant to § 20 FICA and these may be ordered in parallel if further operation of the facility is possible regardless of the removal of the objects pertaining to the facility. This is particularly important for waste storage facilities. ‘This is particularly the case’, as stated in the order¹⁷⁶, ‘if the facility concerned does not have any (or only has insignificant) means of production, so it can be further operated after removal of the objects pertaining to the facility’¹⁷⁷.

However, under certain circumstances, a MV garage may be established without a building permit as the plan does not require authorisation under construction law. For instance, pursuant to § 62 Para. 1 BCLS, the establishment of special (non-residential) buildings of building categories 1 and 2 in industrial areas and in industry sites, of built structures which are not buildings in industrial areas and industry sites, and of buildings and facilities auxiliary to the building, are not subject to authorisation if the construction sites concerned are established by the development plan in the sense of § 30 Para. 1 or 2 FBC and the conditions of § 62 Para. 2 BCLS are met.

Contrary to the immission control permit, the building permit has no concentration effect, i.e. further permits, such as the **water law** permit, need to be requested separately, if necessary (Lower Saxony State Office for Water Management, Shore and Nature Protection 2012). So the operation of a MV garage is necessarily linked with different water polluting substances¹⁷⁸ (oils, cleaning substances, lacquers and solvents etc.) (cf. Structure and Authorisation Directorates North and South Rheinland-Pfalz 2011). From the aspect of water protection, the requirements of the Federal Water Act (FWA¹⁷⁹) are to be considered, in particular regarding the treatment of water polluting substances (§§ 62 and 63 FWA). These are currently detailed¹⁸⁰ in the Ordinance on Installations for Handling Substances Hazardous to Water (OIHSHW¹⁸¹) and supplemented by e.g. §§ 101-103 of the Water Act of Lower Saxony – WAL¹⁸²).

If the plan for a MV garage is submitted for authorisation or notified of in another official proceeding (e.g. building permit), there is no need for a separate notification of the planned treatment of substances hazardous to water under the state-level water act; in such a case, the competent authority decides after consultation with the lower-instance water management authority. In Lower Saxony, these are the districts, the district-free and larger independent towns (§§ 129 Para. 1 Sentence 1, 128 Para. 1 Sentence 1 WAL).

Wastewater from a MV garage is generally emitted to the public sewage system. Pursuant to § 58 FWA, this so-called indirect emission is subject to a permit if the wastewater from the MV facility has

¹⁷⁶ o. ref. No. 40

¹⁷⁷ AC Karlsruhe, order of 05/02/2016 – 9 K 5063/15 –, juris (LS. 2)

¹⁷⁸ General administrative regulation (GAR) to the FWA on the grouping of water polluting substances into water pollutant categories of 17/05/1999 (BAnz. No. 98a, p. 3), last amended by GAR of 27/07/2005 (BAnz. No. 142a, p. 3).

¹⁷⁹ Federal Water Act – FWA) of 31/07/2009 (FLG I. No. 51, p. 2585), last amended by the Act of 04/08/2016 (FLG I p. 1972).

¹⁸⁰ Ordinance on Installations for Handling Substances Hazardous to Water (OIHSHW) of 31/03/2010 (FLG I p. 377).

¹⁸¹ The OIHSHW will foreseeably be repealed by the Federal Ordinance on Installations for Handling Substances Hazardous to Water (FOIHSHW) (cf. Ollig/Grunow, W+B 2015, 31, 37). The Federal States Bayern and Rheinland-Pfalz have proposed the adoption of the Federal Ordinance on Installations for Handling Substances Hazardous to Water (BR-Drs. 144/16 of 18/03/2016, <http://www.bundesrat.de/bv.html?id=0144-16>) as a consequence of the decision made in the 941st session held on 29/01/2016 (BR-Drs. 629/15, 17).

¹⁸² Lower Saxony Water Act (WAL) of 19/02/2010, last amended by the Act of 12/11/2015 (LS GLO p. 307).

the characteristics described in Annex 49 of the Wastewater Ordinance (WwO¹⁸³). The Annex referred to applies to wastewater in the case of which the mass of pollutants is largely generated by facilities which regularly produce wastewater containing mineral oil during the depreservation, cleaning, maintenance, repair and recovery of vehicles and vehicle parts. If the MV facility has a wastewater treatment installation (e.g. separator), a further water law permit is required besides the one for indirect emissions. The applicable requirements are DIN EN 858, Parts 1 and 2 ‘Installations for separation of light liquids’, DIN 1999-100 ‘Installations for separation of light liquids, Requirements on installations for separation in accordance with DIN EN 858’ and DIN 1999-101 ‘Additional requirements on installations for separation in accordance with DIN EN 858-1, DIN 858-2 and DIN 1999-100 for light liquids with biodiesel or Fatty Acid Methyl Ester (FAME) content’. In addition to Annex 49, Annex 27 WwO may also be relevant to certain MV facilities depending on their equipment, which applies, for instance, to scrapyards with company service stations and waste management (e.g. shredding) without end-of-life vehicle recovery. Pursuant to § 61 FWA, the operator of the separator is required to ensure that the facility is operated and maintained by competent staff. Both the indirect emissions permit and the permit for wastewater treatment facilities are issued by the lower-instance water management authority. However, certain types of facilities fall within the responsibility of the trade supervisory body¹⁸⁴.

Furthermore, in a MV garage, diverse **wastes** are generated which are also classified as industrial waste and, partly, hazardous waste, due to the related risks to man and nature. The operators of MV garages as producers of hazardous wastes (§ 3 Para. 5 CSCA) are required to supply supporting documentation under § 50 Para. 1 CSCA. Waste authorities have the possibility to plan supervision in a particular case pursuant to § 51 Para. 1 item 2 i.c.w. § 10 Para. 2 items 2, 3, 5-8 CSCA and in thus, to request that operation logs are kept to record the generation of hazardous wastes¹⁸⁵. Obligations under waste law also include the obligation to appoint a waste coordinator (§ 59 CSCA).

Finally, the provisions of the Hazardous Substance Ordinance are applicable to the treatment of **hazardous substances**. This requires, among other things, the appointment of a hazardous substances coordinator. Furthermore, the requirements of the Workplaces Ordinance (WPIO¹⁸⁶) are also relevant to all MV garages, which serve labour safety purposes. Finally, the authorisation requirement for (company) petrol service stations (diesel only service station are excluded) under § 18 Para. 1 item 6 of the Ordinance on Industrial Safety and Health (OISH¹⁸⁷) is to be mentioned, which comprises the building permit for the construction of a service station building but does not comprise a water law authorisation for the operation of a wastewater treatment facility, which may be necessary in certain cases.

¹⁸³ Ordinance on the Requirements on Wastewater Emissions into Waters (Wastewater Ordinance-WwO) of 17/06/2004 (FLG I p. 1108), last amended by the Ordinance of 01/06/2016 (FLG I p. 1290).

¹⁸⁴ Cf. the Lower Saxony Decree ‘Responsible authorities for the treatment of substances hazardous to water in facilities subject to the immission control supervision of the State Trade Supervisory Bodies’ of 26/07/2005 (ref. no.: 22-62003/105/01).

¹⁸⁵ In any case, it must be noted that dismantling facilities are already required by the ELV Ordinance to keep operating logs.

¹⁸⁶ Workplaces Ordinance (WPIO) of 12/08/2004 (FLG I p. 2179), last amended by the Ordinance of 31/08/2015 (FLG I p. 1474).

¹⁸⁷ Ordinance on Industrial Safety and Health in the Provision of Work Equipment and its Use at Work, on Safety in Operating Systems Requiring Inspection and on the Organisation of Operational Labour Protection (Ordinance on Industrial Safety and Health – OISH) of 03/02/2015 (FLG I. p. 49), last amended by § 15 of the Ordinance of 02/06/2016 (FLG I. p. 1257).

4.6.2.2 Possibilities for treatment of end-of-life vehicles without being recognised as a dismantling facility under the ELV Ordinance

In the only possible legal scenario, a MV garage, which is not an authorised dismantling facility, accepts a second-hand vehicle for repair and the transition to an end-of-life vehicle occurs within the garage. This can be the case if the owner of the vehicle (potentially after consultation with the garage about the costs of repair) gives up the intention to have the vehicle repaired for economic reasons, and its sale as a second-hand vehicle is excluded.

If an end-of-life vehicle is generated in a garage, for instance according to the above described scenario, pursuant to § 4 ELV Ordinance, it must be transferred to an authorised dismantling facility (or an acceptance or collection facility).

If the MV garage, which is not an authorised dismantling facility, performs draining and pollutant extraction of the end-of-life vehicle in the above described scenario this is to be regarded as treatment, which, in accordance with the former explanations, may not be performed in such MV garages under the effective law.

As explained above (see Chapter 4.2.2), according to the current view, in a case of the AC München¹⁸⁸ concerning continuous removal of parts in a MV garage, functional difference is made depending on whether the vehicle remains roadworthy. If roadworthiness is eliminated, this means that the second-hand vehicle becomes an end-of-life vehicle according to the definition of waste (transition from a second-hand vehicle to an end-of-life vehicle), which cannot/should not be repaired or sold as a MV any more (cf. § 3 CSCA). Since a MV garage can only become a dismantling facility in the sense of the ELV Ordinance by way of accreditation in accordance with the ELV Ordinance, in light of the transfer obligation in § 4 ELV Ordinance, it follows that the MV garage has to transfer the vehicle to an authorised dismantling facility or an authorised acceptance or collection facility.

The legal situation in Austria is different. There, garages are granted permission to dismantle end-of-life vehicles without the necessary authorisation as a dismantling facility under the ELV Ordinance, on the grounds that they can demonstrate suitable equipment and technical competence for carrying out works on vehicles and, partially, on end-of-life vehicles, provided that they have only become end-of-life vehicles in the garage (cf. FMAFEW 2015). This means that garages are allowed to treat end-of-life vehicles created in their operation¹⁸⁹. Nevertheless, garages may not accept vehicles which are already end-of-life vehicles. The permission is combined with the obligation to document the activities in the Austrian electronic data register and the obligation to transfer treated stripped vehicles to a dismantling facility.

4.6.2.2.1 MV garages functioning as acceptance or collection facilities under § 2 Para. 1 item 14 and 15 ELV Ordinance

In certain cases, MV garages or individual operational areas function as **acceptance or collection facilities under § 2 Para. 1 item 14 and 15 ELV Ordinance**. If a MV garage is recognised as an end-of-life vehicle acceptance or collection facility, it is only allowed to accept end-of-life vehicles (cf. § 2 Para. 1 item 14 and 15 ELV Ordinance). Pursuant to No. 2.1.1 of the Annex to the ELV Ordinance, acceptance and collection facilities act on behalf of authorised dismantling facilities on the basis of contractual provisions, with the aim to forward end-of-life vehicles to these facilities. Treatment and

¹⁸⁸ AC München, judgement of 30/08/2016 – file number 17 K 15.3371, BeckRS 2016, 51323.

¹⁸⁹ See § 37 Para. 2 Z 3a Waste Management Act – WMA 2002 and § 37 Para. 3 Z 4 lit. a WMA 2002. Cf. to the details Decree of the Austrian Federal Minister of Agriculture, Forestry, the Environment and Water Management regarding the ELV Ordinance (version: April 2015), <https://www.wko.at/Content.Node/Service/Umwelt-und-Energie/Abfall/Altfahrzeuge/Erlass-AltfahrzeugeVO-Stand-April-2015.pdf>, p. 6 under 5.

recovery activities are not permitted in acceptance and collection facilities. Pursuant to § 5 Para. 2 ELV Ordinance, acceptance and collection facilities have to fulfil the respective requirements of the Annex to the ELV Ordinance. These are regulated under No. 2. For example, No. 2.1.3 of the Annex to the ELV Ordinance states that acceptance facilities must have the required permission of use under building law according to the purpose of their operation and must comply with the relevant legal provisions, in particular those relating to environmental protection and labour safety. Pursuant to No. 2.4 of the Annex to the ELV Ordinance, this applies accordingly to collection facilities. If these facilities are MV garages, the responsible motor vehicle guild takes over the certification of the facility (§ 5 Para. 3 Sentence 7 ELV Ordinance). The facility needs to be re-examined every year by an expert (§ 5 Para. 3 Sentence 4 ELV Ordinance).

4.6.3 Regulatory (and criminal) law (course of action for dismantling in not authorised facilities, illegal export, not permitted storage of end-of-life vehicles etc.)

Criminal and regulatory law first considers the facts of the case to be examined in connection with the MV, which may be prosecuted as a crime or also as a minor offence (violation of administrative law) under certain circumstances.

4.6.3.1 Criminal law

Unlawful and culpable storage of certain wastes (cf. Wittek 2014) outside of authorised waste disposal facilities constitutes a crime under § 326 PC. With regard to the unauthorised disposal of end-of-life vehicles, the alternatives in the facts of the case concerning the qualification of the waste according to type, condition or volume are to be considered ‘lasting pollution of or other adverse change to water [...] or soil (§ 326 Para. 1 item 4 a PC). Action elements of the crime in § 326 Para. 1 PC include, in particular, collection, recovery, storage, depositing or removal. So anyone who buries an end-of-life vehicle in the woods and attempts to dispose of it in this way, fulfils the facts of unauthorised treatment of wastes. Other actions, in particular if the operation liquids are not removed from the stripped vehicle/end-of-life vehicle, are to be judged on a case-by-case basis¹⁹⁰. Especially if there is still waste oil in the vehicle, the act may constitute a case of environmental crime¹⁹¹. This is punishable with imprisonment of up to 5 years. Illegal transport of wastes from Germany may also fulfil the facts of § 326 Para. 2 PC. § 326 Para. 2 item 1 PC applies to wastes in the sense of § 2 item 1 RSW. As a result, violations of the RSW are punishable if the volume of wastes concerned is not insignificant, and regardless of whether the wastes are subject to notification obligation (this generally applies to hazardous wastes) (cf. Kropp 2012). Anyone who operates a facility which is subject to authorisation in the sense of FICA under the 4th OIFICA without authorisation is also punishable (§ 327 Para. 2 item 1 PC). This can be the case if a shredder is used for end-of-life vehicle recovery or end-of-life vehicles are stored at a waste storage facility¹⁹². The above-mentioned acts with relevance to the environment under §§ 326 and 327 PC may qualify as particularly severe cases of environmental crimes (§ 330 PC) if they cause irrevocable damage to the environment or they are committed for

¹⁹⁰ RAC Celle, judgement of 15/10/2009, NuR 2011, 531 m. Comm. Krell, Giving away a vehicle which is not roadworthy any more and the objective facts of § 326 I item 4a PC NuR 2011, 487.

¹⁹¹ Answer of Parliamentary State Secretary Ulrich Klinkert on 31/01/1995 to the question of MP Erika Reinhardt (CDU/CSU): ‘Does the Federal Government agree with me that the unlawful parking of vehicles which still contain residual substances like waste oil is to be summed up as an ‘environmental crime’, and what possibilities does the Federal Government see for acting against such ‘environmental crimes’? BT-Drs. 13/386 of 03/02/1995, <http://dipbt.bundestag.de/doc/btd/13/003/1300386.asc>, No. 92 (downloaded on 03/02/2015).

¹⁹² Cf. e.g. RAC Köln, order of 13/02/1990, 2 Ws 648/39, BeckRS 2014, 08714; Henzler/Pfohl, Unauthorised operation of facilities for the storage and treatment of spent motor vehicles, wistra 2004, 331-335; on building law questions cf. HAC München, judgement of 21/12/1999, 2 B 94.1741, BeckRs 1999, 25988.

commercial gain (§ 330 Para. 1 item 1 and 4 PC). The crimes under §§ 326, 327 PC may be additionally sanctioned (§ 74a PC), e.g. with the seizure of the instruments used in committing the crime.

The failure to pay motor vehicle tax is punishable under § 370 Para. 1 item 1 FC i.c.w. §§ 1, 5 MVTC.

4.6.3.2 Administrative offences under the ELV Ordinance and other legal acts

The obligation under § 4 ELV Ordinance that anybody disposing of, wanting to dispose of or having to dispose of a vehicle is required to transfer such vehicle exclusively to an approved acceptance facility, an approved collection facility or an accredited dismantling facility is enforced with a sanction of fine. That is, the violation of this requirement may result in an administrative proceeding (§ 11 Para. 1 item 4 ELV Ordinance). § 11 Para. 1 ELV Ordinance contains further elements which may be prosecuted as administrative offences under the Administrative Offences Act (AOA)¹⁹³. According to § 69 Para. 3 i.c.w. § 69 Para. 1 CSCA, the fine may amount up to a hundred thousand euros. The garage owner's involvement is to be considered in the sense of § 14 Para. 1 AOA.

Pursuant to § 11 Para. 2 ELV Ordinance, the following acts also constitute administrative offences:

- ▶ the failure to issue a Certificate of Destruction, or if it is issued in undue time or incorrectly or incompletely (§ 11 Para. 2 item 1 ELV Ordinance),
- ▶ the issue of a Certificate of Destruction by a facility which is not an authorised dismantling facility (§ 11 Para. 2 item 2 ELV Ordinance), and
- ▶ engaging a facility which is not an authorised acceptance/collection facility (§ 11 Para. 2 item 3 ELV Ordinance),
- ▶ if the operator of the dismantling facility fails to document that the parts specified in No. 3.2.3.3 Sentence 1 of the Annex to the ELV Ordinance have been recovered (§ 11 Para. 2 No. 4 ELV Ordinance).

These actions are administrative offences in the sense of § 69 Para. 2 item 15 CSCA. They are punishable with a fine of up to EUR 10,000 (§ 69 Para. 2 item 15 i.c.w. § 69 Para. 3 CSCA).

The violation of the information obligation mentioned in § 7 Para. 1 ELV Ordinance by failure to present the certification or supervisory certificate or its incorrect, incomplete or late presentation also constitutes an administrative offence (§ 11 Para. 2 item 6 ELV Ordinance) punishable with a fine of up to EUR 10,000 (§ 69 Para. 2 item 15 i.c.w. § 69 Para. 3 CSCA i.c.w. § 11 Para. 2 ELV Ordinance).

Other acts of law besides the ELV Ordinance also determine acts punishable by fine, including the following examples:

- ▶ So an administrative offence proceeding may be instituted against a natural person if a 'wild' disposal of an end-of-life vehicle violates obligations of waste law, water law or, somehow, that of nature conservation.
- ▶ § 69 Para. 1 No. 1 CSCA defines the unauthorised use of the supervision mark by a disposal facility (§ 56 Para. 4 Sentence 2 CSCA) as an administrative offence.
- ▶ The Waste Shipment Act also contains a series of acts subject to fine in § 18.
- ▶ The Customs Administration Act defines tax offences in § 31.
- ▶ The Building Codes at the state level also define cases of administrative offence. For example, according to § 80 Para. 1 item 10 BCLS, anyone who performs a building operation or has a building

¹⁹³ Administrative Offences Act, version published on 19/02/1987 (FLG I. p. 602), last amended by the Act of 18/07/2016 (FLG I. p. 1666).

operation performed (e.g. a waste storage area) without the required building permit (§ 59 Para. 1 BCL) or in deviation from the building permit commits an administrative offence.

The administrative authority in charge of the prosecution of administrative offences generally the same as the authority responsible for the enforcement of the corresponding statutory provisions (§ 36 Para. 1 No. 1 AOA). The local jurisdiction for implementing the administrative fine proceeding is determined in § 37 Para. 1 AOA. According to that, the responsible administrative authority is the one in whose district the administrative offence was committed or discovered or where the person concerned resides at the time when the administrative fine proceeding is instituted.

4.7 Insurance law

Insurance law provisions and obligations in connection with end-of-life vehicles are contained primarily in rules on vehicle registration. More specifically, § 23 ff VRO provides for the monitoring of the liability insurance coverage of vehicles. § 23 VRO regulates the so-called proof of insurance. Thus, according to Para. 1, ‘the proof of the existence of a motor vehicle liability insurance under § 3 Para. 1 Sentence 2 is to be presented (...) to the registration authority in the form of a confirmation of insurance. A confirmation of insurance is also required if the vehicle shall be re-registered after deregistration in accordance with § 14 Para. 6.’ For the factual phase of temporary deregistration of motor vehicles (as mentioned above, § 14 VRO still speaks of the uniform process of deregistration only), which lasts for a period longer than two weeks but not longer than eighteen months, insurance law provides that the unrestricted vehicle insurance will automatically transform into a suspended non-contributory insurance¹⁹⁴.

With regard to end-of-life vehicles, it must be emphasised that the vehicle owner has a statutory obligation to take out an insurance for the vehicle. It covers possible damage claims arising from the law of liabilities which a MV user may be exposed to. The legal ground is provided in § 1 of the Liability Insurance Act (LIA)¹⁹⁵. Other frequently used insurances in connection with second-hand vehicles are the partially or fully comprehensive (CASCO) insurances and other insurances. The legal provisions on insurance contracts are set out in the Act on Insurance Contracts¹⁹⁶.

If the vehicle is a total loss, the wreck (accident vehicle) must be decommissioned; the general rules on vehicle registration apply (see above). First, the car insurer receives a notification of damage so that it can start the insurance technical handling of the damage and poss. inspect the wreck.

If the compulsory insurance cover ceases for a vehicle for any reason, and the registration authority which has assigned the licence plate learns of the lack of insurance coverage (§ 25 Para. 1 VRO), is required to decommission the vehicle without delay (§ 25 Para. 4 VRO). Therefore it orders the owner to either have the licence plate cancelled and present the documents of the vehicle or provide confirmation of a new insurance policy within a short time¹⁹⁷.

Insurance law, being a subfield of business law, belongs to the scope of responsibility of the Federal Ministry for Economy and Energy (FMEAE). Still, certain supervisory tasks over the insurance industry are performed by the Federal Ministry of Finance (FMF). The private and public insurance companies which are involved in the private insurance business regulated by the Insurance Supervision Act

¹⁹⁴ RAC Thüringen, judgement of 13/03/2012, 4 U 151/11, RuS 2012, 331-334 (LS. 2).

¹⁹⁵ Compulsory Insurance Act of 05/04/1965 (FLG I p. 213), last amended by the Ordinance of 31/08/2015 (BGB I p. 1474).

¹⁹⁶ Act on Insurance Contracts (Insurance Contracts Act – ICA) of 23/11/2007 (FLG I p. 2631), last amended by the Act of 19/02/2016 (FLG I p. 254).

¹⁹⁷ AC Saarland, order of 27/10/2010, 10 L 1817/10, zit. nach juris, No. 5; see also AC Münster, court decision of 01/09/2010, 7 K 454/10, zit. nach juris.; AC München, judgement of 28/04/2009, M 23 K 09.1112, zit. nach juris.

(ISA¹⁹⁸) and reside in Germany, if they operate nationwide, are supervised by the Federal Financial Supervisory Authority (FFSA) or the State Supervisory authorities (gen. the State Ministries of Economy¹⁹⁹).

4.8 Legal grounds of statistical surveys

The legal grounds for statistical surveys are granted in federal law. In the following, we will describe the different legal grounds.

4.8.1 Vehicle register (stock, deregistration, re-registration)

First, we will discuss the statistical surveys related to the vehicle register.

§ 23 Para. 2 Sentence 1 VRO provides that ‘the confirmation of insurance (...), except for export licence plates, is to be transmitted by the insurer to the registration authority via the insurer’s community facility or to be made available by the registration authority for download in an automated process’. Contrarily, pursuant to § 24 VRO, the MV registration office will inform ‘the insurer to assure insurance protection under the MV compulsory insurance’, on ‘the assignment of a licence plate’, among other things, and ‘transmit the particulars specified in § 35, if necessary.’

As opposed to Austria, in Germany, there is no central clearing body of the insurers. Since 1999, the Austrian Central Statistical Office (ACSO) has received the data of registration and vehicle stock not from the official MV registration points (district authorities and Federal Police Headquarters) but from the central clearing body of the Association of Austrian Insurance Companies (AAIC) (cf. Gabriel, Stock and Kanzian 2000, p. 29). According to our information, no surveys similar to those in Austria on the stocks held by second-hand vehicle traders (cf. Gabriel, Stock and Kanzian 2000, p. 37) are available in Germany.

The **vehicle register** (held by the MV registration authorities) is also regulated in vehicle registration law. The Central Vehicle Register (CVR) of the Federal Motor Transport Authority (FMTA) exists alongside local vehicle registers. The CVR contains the particulars of vehicles and owners of all vehicles possessing licence plates or insurance identifiers (currently about 60 m vehicles), which are transmitted by the local registration offices and, additionally, by the insurers. Procedures subject to notification include in particular new registrations, transfers of ownership, de-registrations, search notes (references to thefts or recalls, etc.) and (e.g. structural) changes to the motor vehicles or trailers. The objective of the central vehicle register (hereinafter also referred to as CVR) is clearly defined in § 32 Road Traffic Act (RTA²⁰⁰). § 33 of the Vehicle Registration Ordinance (VRO²⁰¹) provides for the transmission of data to the Federal Motor Transport Authority. The data are transmitted to the insurers pursuant to § 35 VRO, to the financial authorities (MV tax) pursuant to § 36 VRO, and to the authorities responsible for the implementation of the Act on Federal Benefits, the Act on Traffic Safety, the Act on Traffic Services and the operations of disaster control pursuant to § 37 VRO. Data transfer from the federal motor vehicles agency to the registration offices is based on § 38 VRO. The so-called automated downloading procedure is regulated in §§ 39 ff. VRO.

Every year, the FMTA publishes statistical figures of decommissioned vehicles in Germany (cf. FMTA n.d a, FMTA n.d. b). No **statistics** are available in Germany on **re-registrations** of decommissioned

¹⁹⁸ Insurance Supervision Act (ISA) of 01/04/2015 (FLG I p. 434), last amended by the Act of 26/07/2016 (FLG I p. 1824).

¹⁹⁹ E.g. in Lower Saxony the Ministry of Economy, Employment and Traffic, cf. the Insurance Supervision Act of Lower Saxony (LSISA) of 28/03/1990 (LS FLG 1990, p. 125), last amended by the Act of 08/12/2010 (LS FLG No. 30/2010, p. 557).

²⁰⁰ Version published on 05/03/2003 (FLG I. p. 310, 919), last amended by the Act of 24/05/2016 (FLG I. p. 1217).

²⁰¹ Of 03/02/2003 (FLG I p. 139), last amended by the Act of 18/07/2016 (FLG I p. 1679).

vehicles. However, there are statistical figures on the re-registration of vehicles abroad which were previously decommissioned in Germany (cf. FMTA 2013b p. 25), collected on the basis of Directive 1999/37/EC, Article 5(2) (REGINA)²⁰². From the legal point of view, apart from the general execution requirement, there is no quality assurance rule for the data notifications. The primary objective of this database is to fight against international crime (cf. FMTA 2013c, p. 3) but not in the field of waste law. Moreover, the draft submitted by the EU Commission with the title ‘Regulation simplifying the transfer of motor vehicles registered in another Member State within the Single Market’²⁰³, which is still in the legislative process, serves only to facilitate intra-European trade within the Single Market, including the legally secure issue of temporary licence plates (cf. European Parliament 2015a; European Parliament 2015b). Although it is also of relevance for vintage vehicles²⁰⁴, this group of vehicles is not in the focus of this study on data gaps.

The vehicle register (§§ 31, 32 Para. 1 item 6 RTA) also serves waste law purposes; more specifically, the vehicle register is maintained also for storing data on measures for the implementation of the law on end-of-life vehicles. Therefore, pursuant to § 35 Para. 2 item 1a RTA, the manufacturers may request information from the vehicle register on Certificates of Destruction. If required for the purposes specified in § 32 Para. 2, the vehicle and owner details stored according to § 33 Para. 1 RTA may be transmitted to vehicle manufacturers and vehicle importers, as well as to their legal successors so that they can check the data on the recovery of vehicles according to the law on end-of-life vehicles.

Pursuant to § 37 RTA, the FMTA may only transmit data to public instances (in particular, authorities) of other states under strictly defined conditions. This is meant in particular for the transmission of vehicle and owner details. So the FMTA may only transmit such details to these instances provided that it is necessary

- a) for administrative measures in the field of road traffic,
- b) for the supervision of insurance protection in the context of the compulsory motor vehicle liability insurance,
- c) for the prosecution of violations of law in the field of road traffic or
- d) for the prosecution of crimes in connection with road traffic or otherwise with motor vehicles, trailers, licence plates or vehicle documents, driver’s licences.

The transmission of vehicle and owner details to private instances or third parties for the enforcement of legal claims in the form of a simple query from the register also requires, under § 39 Para. 1 RTA, for the potential data recipient to present with the indication of the licence plate number concerned, that he/she needs the data to enforce, secure or execute to fulfil or protect against legal claims in connection with participation in road traffic or to take private legal action for violations committed in road traffic.

²⁰² Information exchange between Member States on re-registrations based on Council Directive 1999/37/EC of 29 April 1999 on the registration documents for vehicles (Art. 9). Cf. also ‘Interpretative communication on procedures for the registration of motor vehicles originating in another Member State’, SEC(2007)169 final, OJ C 68, 24/3/2007.

²⁰³ COM(2012)164 final – 2012/0082 (CoD)

²⁰⁴ Federation International Vehicules Anciens (2015); cf. to The roadworthiness test and the extension of the national electronic register by Directive 2014/46/EU, which has amended Directive 1999/37/EC as a part of the so-called ‘Roadworthiness Package’.

4.8.2 Waste statistics

Regarding data collection on the wrecks of end-of-life vehicles, the **Environmental Statistics Act** (ESA²⁰⁵) is of relevance. Pursuant to § 3 Para. 1 item 1 ESA, data on waste disposal (including waste input and output data) are collected from the operators of facilities subject to authorisation where wastes are disposed of. The obligation to provide information follows from § 14 Para. 1 ESA i.c.w. § 15 Federal Statistics Act. The violation of the information provision obligation, for instance by not supplying information, is an administrative offence under § 23 Para. 1 i.c.w. § 15 Para. 1 Sentence 2, Para. 2 and 5 Sentence 1 Federal Statistics Act, punishable by a fine of up to five thousand euros. From this perspective, it is irrelevant whether the dismantling facility or shredder is actually authorised; the licencing requirement is sufficient.

The provision of information besides the information obligation of authorised dismantling facilities and shredders mentioned above is mandatory only to the extent that § 3 Para. 1 item 1 ESA refers to the operators of facilities subject to authorisation rather than operators of authorised facilities. Consequently, it depends on whether the facilities are actually authorised (or accredited). As a logical consequence, other persons who illegally dismantle end-of-life vehicles outside of facilities subject to authorisation (e.g. dismantling of end-of-life vehicles in a MV garage not accredited as a dismantling facility) are theoretically required to provide information for environmental statistical purposes²⁰⁶. Such not authorised facilities (e.g. MV garages without authorisation to operate as a dismantling facility) are subject to authorisation and thus, obliged to provide information under ESA i.c.w. the Federal Statistics Act. The only exception is ‘hobby-backyard mechanics’, but in their case the precondition is that they do not operate a facility and nevertheless illegally dismantle end-of-life vehicles.

The contact details of all authorised end-of-life vehicle disposal facilities are centrally collected by the so-called **Joint Agency for End-of-Life Vehicles** (JAELV) for the 16 Federal States (§ 7 Para. 2a ELV Ordinance). All experts are required to notify the Joint Agency for End-of-Life Vehicles of any dismantling facility, shredder and other facilities for the further treatment of end-of-life vehicles to which they grant authorisation. But the JAELV does not have any end-of-life vehicle data or statistics, it only holds a list of authorised facilities.

4.8.3 Export-related statistics

In the field of vehicle exports, difference must be made between transfers from Germany to other EU Member States and exports to states outside of the customs territory of the EU:

1. Since the completion of the internal market, statistical notifications of the flow of goods (including second-hand vehicles) have come from sales tax notifications and not from the foreign trade statistics fed by customs authorities, as before. The Intra-trade Data Collection Software (German abbreviation: IDES) is used. The so-called Intra-Community Trade Statistics (Intrastat) is based on Regulation (EC) No. 638/2004 on Community statistics relating to the trading of goods between Member States, as well as the EC Regulations No. 1901/2000 und No. 1917/2000 (General Data Protection Regulation, GDPR)²⁰⁷. The notification obligation towards the Federal Statistical Office exists in Germany on the basis of Art. 7 GDPR i.c.w. § 18 Para. 1 and § 15 FSA.

²⁰⁵ Environmental Statistics Act of 16/08/2005 (FLG I p. 2446), last amended by Art. 1 of the Act of 26/07/2016 (FLG I p. 1839).

²⁰⁶ For the admissibility of differential taxation for sales tax purposes under § 25a STA, cf. FC Münster of 27/4/1999, 15 K 7988/98 U; FC Berlin-Brandenburg judgement of 01/10/2015 – 7 K 7183/13, the proceeding C-471/15 is pending before the ECJ.

²⁰⁷ Regulation (EC) No. 638/2004 of the European Parliament and of the Council of 31/03/2004 on Community statistics relating to the trading of goods between Member States and repealing Council Regulation (EEC) No. 3330/91 (OJ L 102

2. Companies registered for VAT purposes in Germany are exempted from the notification obligation if their transports to other EU Member States or the goods they receive from there did not exceed the value of EUR 500,000 in the previous year. The Federal Statistical Office created an Intra-Trade Statistics from the individual Intrastat notifications (cf. Hamburg Chamber of Trade 2013, Destatis, Leitfaden zur Intrahandelsstatistik (Guidelines to intra-trade statistics), 2016). Eurostat published the so-called Eurostat-Comext-Databank (intra-EU27Trade) (cf. Merz and Mehlhart 2012, p. 3).
3. Exports to states outside of the EU customs territory are recorded in the **Foreign Trade Statistics** maintained by the Federal Statistical Office in Wiesbaden (cf. Destatis 2013). The legal basis is provided by Regulation (EC) No. 471/2009²⁰⁸ i.c.w. Regulation (EU) No. 92/2010²⁰⁹ and Regulation (EU) No. 113/2010²¹⁰, the Federal Statistics Act²¹¹, the Foreign Trade Act²¹² and the Ordinance on the Implementation of the Act on the Statistics on Cross-Border Trade²¹³. The data are based on ‘the data submitted to the customs authorities in the course of the IT procedure ATLAS or customs declarations received on paper, which are provided on the basis of Regulation (EEC) No. 2913/92 (Customs Code) and its implementing provisions’ (Zoll (Customs) 2014).

Message exchange in ATLAS takes place between different subsystems. One of the subsystems is the Automated Export System (AES), which enables automated data transfer (cf. Zoll (Customs) 2014).

The Federal Statistical Office forwards the data of the foreign trade statistics to Eurostat to allow for the creation of statistics at European level.

In accordance with § 20 of the Ordinance on the Implementation of the Act on the Statistics on Cross-Border Trade (CBTSIA²¹⁴), the MV selling transactions concluded by dependents of foreign armed forces in Germany are specifically recorded in the foreign trade statistics. Pursuant to § 20 Para. 2 CBTSIA: ‘If foreign goods which have been imported by foreign military forces or their members themselves or acquired by them as non-Community goods in the statistical territory are sold to other persons and exported by the latter, this has to be reported as exportation out of free circulation with the remark ‘foreign armed forces’. Acquired vehicles stationed in the country which are under the control of the sending states, are, simply stated, preferentially treated by way of the sales tax exemp-

of 07/04/2004, p. 1) – GDPR, last amended by Regulation (EU) No. 659/2014 of the European Parliament and the Council of 15/05/2014 (OJ L 189 of 27/06/2014, p. 128).

²⁰⁸ Regulation (EC) No. 471/2009 of the European Parliament and of the Council of 06/05/2009 on Community statistics relating to external trade with non-member countries and repealing Council Regulation (EC) No. 1172/95 of 06/05/2009, No. L 152/23 of 16/06/2009.

²⁰⁹ Commission Regulation (EU) No. 92/2010 of 02/02/2010 implementing Regulation (EC) No. 471/2009 of the European Parliament and of the Council on Community statistics relating to external trade with non-member countries, regarding data exchange between customs authorities and national statistical authorities, compilation of statistics and quality assessment, No. L 31/4 of 03/02/2010.

²¹⁰ Commission Regulation (EU) No. 113/2010 of 09/02/2010 implementing Regulation (EC) No. 471/2009 of the European Parliament and of the Council on Community statistics relating to external trade with non-member countries, regarding trade coverage, definition of the data, compilation of statistics on trade by business characteristics and by invoicing currency, and specific goods or movements, No. L 37/1 of 10/02/2010.

²¹¹ Federal Statistics Act of 22/01/1987 (FLG I p. 462, 565), last amended by § 1 of the Act of 21/07/2016 (FLG I p. 1768).

²¹² Foreign Trade Statistics Act (FTSA) in the Federal Law Gazette Part III, subsection number 7402-1, published clean version, last amended by the Ordinance of 31/08/2015 (FLG I p. 1474).

²¹³ Ordinance on the Implementation of the Act on the Statistics on Cross-Border Trade (CBTSIA) in the version published on 29/07/1994 (FLG I p. 1993), last amended by the Ordinance of 31/08/2015 (FLG I p. 1474).

²¹⁴ Ordinance on the Implementation of the Act on the Statistics on Cross-Border Trade in the version published on 29/07/1994 (FLG I p. 1993), last amended by § 300 of the Ordinance of 31/08/2015 (FLG I p. 1474).

tion for transports and other services provided to foreign troops stationed in the country and their civilian component in accordance with Art. 67 Para. 3 of the Supplementary Agreement to the NATO Status of Forces Agreement (SANSFA)²¹⁵ (cf. FMF 2004). Art. 10 Para. 1 SANSFA states that the stationed forces are entitled to register the vehicles used by members of the force or of the civilian component for themselves. 'The authorities of a force may register and license motor vehicles and trailers of the force or the civilian component, of members of the force or of the civilian component, or of dependents.' Art. 10 Para. 1ter SANSFA states that the German authorities may require that registration in accordance with paragraphs 1 and 1bis of this Article be notified by the authorities of the force to the competent German authorities for their records. Details, for instance which registration data are to be notified on, are agreed on between the German authorities and the authorities of the forces. Article 11 SANSFA requires third-party liability insurance of any private motor vehicle, trailer or aircraft of the scope of persons concerned.

The Federal Environmental Agency also maintains the **Transfrontier shipment of wastes statistics**, which belongs to the environmental statistics. Data collection is based on § 4 item 2 Environmental Statistics Act (ESA).

4.8.4 Theft statistics

Statistics on the number of vehicles stolen in Germany and possibly exported illegally exist inasmuch as the German insurance sector records CASCO-insured vehicles (GIA 2014). However, it seems there is no legal obligation to do so.

With a different focus, crimes related to pass. cars are recorded in the criminal statistics held by the police. The legal ground at federal level is provided by the Act on the Federal Criminal Police Office and the cooperation between the Federation and the States in criminal police matters – Federal Criminal Police Office Act (FCPOA²¹⁶) (see there § 2 Para. 6 item 2). The Federal Criminal Police Office assumes that in 2014, according to the records of INPOL-Stolen Property, 18,549 pass. cars were stolen and not recovered (cf. FCPO 2015)²¹⁷. The FCPO stresses that the number of cases has been generally 'at a permanently high case number level' ever since 2009 (ebd., p. 12).

There are no statistics on recovered and re-registered vehicles.

4.9 Data protection law

The question is whether any rules exist on data processing in connection with the treatment of MVs. In particular, it must be examined if there are any restrictions of data protection law which would regulate the processing of data suitable for identifying car wrecks or render it more difficult.

4.9.1 Vehicle identification number as a point of reference

Council Directive 76/114/EEC of 18/12/1975 on the approximation of the laws of the Member States relating to statutory plates and inscriptions for motor vehicles and their trailers, and their location

²¹⁵ Supplementary Agreement to the Agreement between the Parties to the North Atlantic Treaty regarding the Status of their Forces with respect to Foreign Forces stationed in the Federal Republic of Germany of 03/08/1959 (FLG 1961 II p. 1218), last amended by the Amendment to the NATO Status of Forces Supplementary Agreement of 28/09/1994 (FLG II p. 2598), cf. also the Act on the NATO Status of Forces Agreement and Additional Agreements (ANSFA) of 18/08/1961 (FLG III 57-1), last amended by the Ordinance of 31/08/2015 (FLF I p. 1474).

²¹⁶ Federal Criminal Police Office Act (FCPOA) of 07/07/1997 (FLG I p. 1650), last amended by the Act of 26/07/2016 (FLG I p. 1818).

²¹⁷ For comparison: The number of stolen trucks in 2014 amounted to 1,524.

and method of attachment²¹⁸ has introduced a uniform system throughout Europe of Vehicle Identification Numbers (VIN), regarding the technical development, which has replaced the free assignment of chassis numbers practiced beforehand. The European law provisions were updated and detailed by Commission Regulation (EU) No. 19/2011 of 11/01/2011 concerning type-approval requirements for the manufacturer's statutory plate and for the vehicle identification number of motor vehicles and their trailers and implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor.

Under German law, the manufacturer of a vehicle is required to attach a VIN on any registered vehicle (§ 59 Para. 1 item RVRO). In accordance with § 33 Para. 1 item 1 RTA i.c.w. § 47 Para. 1 item 1 RTA²¹⁹, these VINs are stored in the Central Vehicle Register (CVR) held by the Federal Motor Transport Authority (FMTA).

By means of the VIN it is possible to seamlessly reconstruct the lifetime ('history') of a new vehicle through second-hand vehicle to the wreck of the end-of-life vehicle, which enables us to fill in the missing data relating to car wrecks. Since vehicles are used by persons, the legal question arises whether the collection and use of personal data is admissible in the context of the life of a vehicle.

In the further examination, difference is made between the actors depending on whether the data are handled by public bodies or non-public bodies.

4.9.2 Collection of Vehicle Identification Numbers by economic actors

Since April 2011, different car liability insurers have had private law contracts with an information agency of the insurance sector²²⁰, which developed the Reference and Information System (RIS). In cases of reported accident damage, the insurers share both the MV licence plate number and the Vehicle Identification Number. In the background, there is an attempt to fight against insurance fraud by multiple reporting (on the basis of expert opinions) of (possibly fake) accidents to different insurers²²¹.

As to whether it is lawful to transfer both the VIN and the statutory licence plate number to the company operating the Information System, several courts have decided on requests for the deletion of data²²². In the context of this research project, it is interesting to consider the question **if the basically device-related MV licence plate number and the Vehicle Identification Number are to be regarded as personal data**. The Federal Data Protection Act (FDPA²²³) is only applicable if that is the case.

²¹⁸ Official Journal No. L 024 of 30/01/1976 p. 0001 – 0005.

²¹⁹ The Vehicle Register Ordinance (VRO) of 20/10/1987 (FLG I p. 2305), last amended by § 98 G. of 21/06/2005 (FLG I p. 1818) was in effect from 29/10/1987 to 28/02/2007, then repealed by § 12 of the Ordinance of 25/04/2006 (FLG I p. 988).

²²⁰ informa Insurance Risk and Fraud Prevention GmbH, Baden-Baden.

²²¹ Cf. German Insurance Association (Ed.) Hinweis- und Informationssystem der deutschen Versichere (Reference and Information System of German Insurers) – RIS. Was es ist und was es leistet (What is it and what it's good for), Berlin 2016, http://www.gdv.de/wp-content/uploads/2016/07/HIS_Infoblatt_lang_Internet_Neu_2016.pdf.

²²² AC Kassel, judgement of 07/05/2013 – 435 C 584/13, <https://openjur.de/u/624274.html>; LC Coburg, judgement of 07/11/2012, 12 C 179/12, published at https://www.kanzlei-hoenig.de/wp-content/uploads/2013/07/ag_coburg_his_loeschung.pdf; LC Pforzheim, judgement of 03/02/2014 – 3 C 368/13.

²²³ Federal Data Protection Act (FDPA), version published on 14/01/2003 (FLG I. p. 66), last amended by the Act of 25/02/2015 (FLG I. p. 162).

§ 3 Para. 1 FDPA, similarly to e.g. § 3 Para. 1 of the Lower Saxony Data Protection Act²²⁴, defined personal data as ‘individual data relating to the personal or material relationships of an identified or identifiable natural person’. Art. 2 lit. a of Directive 95/46/EC (Data Protection Directive) contains more details. It defines personal data as ‘any information relating to an identified or identifiable natural person’ (‘data subject’). An identifiable person is one who can be identified, directly or indirectly, in particular by reference to an identification number or to one or more factors specific to his physical, physiological, mental, economic, cultural or social identity²²⁵.

When saving into the Reference and Information System (RIS) no data are saved in the file which would directly identify the claimant but only characteristics of the pass. car he owned at the time of the car accident. Neither the owner’s name nor any of his other personal characteristics are stored. The owner can still be identified indirectly through the VIN²²⁶. The same applies to the MV licence plate number. The identifiability relevant in this case (cf. Dammann 2011) cannot be dismissed as totally improbable. The efforts required (query to FMTA or the local MV registration office) are discussed. At this point, the requirement to prove the existence of public interest is not relevant (d.o. LC Kassel²²⁷). Accordingly, both the MV licence plate number and the VIN are to be regarded as personal data.

The follow-up question is whether there is **unauthorised storage**. This is the precondition for the admissibility of a request for deletion in the case of data storage by non-public bodies (§ 35 Para. 2 Sentence 2 item 1 FDPA). On the other hand, if the forwarding of personal data (§ 28 Para. 1 item 2 FDPA) to the information agency and the commercial storage is permitted by law (§ 4 Para. 1 FDPA), the request for deletion will not be approved. A legal basis for the storage of the specific vehicle data is provided here by § 29 Para. 1 item 1 FDPA. The provision is applicable pursuant to § 27 FDPA, since the recorded VINs are processed, used or collected for that purpose as personal data by non-public bodies, or the data are processed, used or collected for that purpose in or from non-automated files. According to that, the storage of personal data for the purpose of transfer is admissible if there

²²⁴ Data Protection Act of Lower Saxony (DPALS), version of 29/01/2002 (LS GLO p. 22), last amended by the Act of 12/12/2012 (LS GLO p. 589).

²²⁵ On the question whether (at least dynamic IP addresses) are personal data in the sense of the Data Protection Act, see the order for reference of the Federal Supreme Court (order of 28/10/2014, ref. no. VI ZR 135/13) to the European Court of Justice (case C-582/14). In his final opinion of 12/05/2016, Advocate-General Campos Sánchez Bordona answered the question in the affirmative, still, he held that, under certain circumstances, storage by website operators might be lawful. Cf. also Herbst, Was sind personenbezogene Daten? (What are personal data?) (MVwZ 2016, 902 (903)).

²²⁶ AC Coburg, judgement of 07/11/2012, 12 C 179/12, published at http://www.kanzlei-hoenig.de/wp-content/uploads/2013/07/ag_coburg_his_loeschung.pdf (downloaded on 26/01/2016).

²²⁷ AC Kassel, judgement of 07/05/2013 – 435 C 584/13: ‘[...] already the storage of the plaintiff’s personal data in the sense of § 3 FDPA is missing. Such data are only given if they relate to a specific identified person or, in any case, an identifiable person. None of the data referred to by the plaintiff in this case, in the form they are stored in the file extract Bl. 91 d.A. presented by the respondent, contain anything that would directly identify the plaintiff. Neither his name nor any of his other personal characteristics are stored. The only characteristics stored are those of the pass. car he owned at the time of the car accident.

These, however, do not make his person identifiable, so no data of an identifiable person are concerned either. A person is identifiable if the authority holding the data is able to restore connection to the person searched by using the knowledge, means, possibilities and reference materials available to it, without a disproportionate effort (Gola/Schomerus, § 3 FDPA No. 10). This is not the case here. The data stored are a MV licence plate number [...] and a Vehicle Identification Number. In the present case, nothing indicates that the defendant or the company named in the claim, which operates the data-storing information system would be able to reconstruct the plaintiff as the owner from the system, using the means available to it. In any case, the plaintiff failed to demonstrate that this could be possible. The court does not deny that with these data, further data queries can be made at the federal motor vehicle agency or the local MV registration office. However, this would require an additional effort, and some special interest in making the query on the part of the authority concerned should be demonstrated. In this case, it cannot be regarded as a not disproportionate effort any more.’

is no reason to assume that the data subject has legitimate interest in the exclusion of collection and storage. The LC Kassel and the Federal Commissioner for Data Protection and Freedom of Information²²⁸ as well as the Data Protection Commissioner of Baden-Württemberg²²⁹ presumed that a legitimate interest exists in the storage of the data collected, and potentially, in their forwarding to the connected insurers. They claimed that the system served the interest of the insured community. This leads to the easier handling of cases where the question of unauthorised use of MV liability and CASCO insurance arises once a damage event was settled on a fictitious basis, i.e. without presentation of a specific invoice on repair costs. They maintained that storage of the data did not affect the legal sphere of the person concerned (cf. Gola, Klug and Körrfer 2010, § 29 FDPA, No. 10; 12). It is decisive that reference is made to the vehicle and not to the person in order to establish if the same has already suffered comparable damage before.

This view has been confirmed by the Regional Court of Kassel²³⁰. The court dismissed a request for the deletion of transmitted and stored RIS data on the basis of § 35 FDPA after a car accident. The storage of data in the RIS files, e.g. on MV licence plate numbers and Vehicle Identification Numbers after a car accident, does not violate § 29 Para. 1 item 2 FDPA.

‘Regardless of whether the stored data are personal data, the data storage is admissible if it is permitted by law and there is no reason to assume that the data subject has a legitimate interest in the exclusion of collection, storage or modification of the data. Thus, the interests need to be assessed in the particular case based on the principle of proportionality, comparing the data subject’s privacy rights and the importance attached to the publication and use of the data for him with the interests of the authority storing the data and the third parties for whose purpose the data are stored. For this assessment, the data subject’s interest is to be classified as minor if the particular data are not very sensitive and an insurer cannot gain any information from the data on the risk assessment as the liability quotients are not on file.’²³¹

The RC Kassel held that it was the special interest of the MV insurance sector to prevent deceitful action by the multiple settlement of the same damage on the basis of an expert opinion.

With a view to clarifying the above-discussed, legally doubtful issues independently of any legal dispute in a way that supports practical implementation, the Association of the Automotive Industry (AAI), together with the data protection authorities at the federal and state levels, concluded a voluntary agreement at the beginning of 2016 (cf. AAI 2016). As a fundamental position, the arrangement states that data relating to a vehicle are to be regarded as personal data as soon as they are attached to the Vehicle Identification Number or the MV licence plate number²³². There is no further specifica-

²²⁸ Printed version from 10/12/2012 <https://fragdenstaat.de/anfrage/his-auskunftssystem-der-versicherungswirtschaft/> (downloaded on 26/01/2016).

²²⁹ State Commissioner for Data Protection (ed.) Datenschutzrechtliche Hinweise zum HIS (Data protection law aspects of RIS) (version of 01/06/2012), published at <https://fragdenstaat.de/files/foi/6310/2012-10-26-ld-bw-gesamt.pdf> (downloaded on 26/01/2016).

²³⁰ RC Kassel, judgement of 25 February 2014 – 1 S 172/13 –, juris citation, practice in damage cases 2014, 208-210 = DAR 2014, 391-394, NJW-RR 2014, 854-857.

²³¹ RC Kassel, judgement of 25 February 2014 – 1 S 172/13 –, juris citation, practice in damage cases 2014, 208-210 = DAR 2014, 391-394, NJW-RR 2014, 854-857.

²³² According to the relevant part of the Joint Clarification on the term ‘person-related’: During the use of a modern motor vehicle, a great deal of data are created and processed permanently. Especially by consulting further information, the data concerned can be traced back to the owner or also the driver and the passengers, and can contain information on the personal and material relationships of an identifiable person. The data on MV use are regarded as personal data as

tion on the particular data concerned. Regarding the admissibility of data collection and data processing, general reference is made to the measures and requirements specified in the Act: Thus, '(admissibility) can be based on § 28 Para. 1 Sentence 1 item 1 or 2 FDPA, §§ 11 ff. Telecommunications Act or on a consent which fulfils the conditions of § 4a FDPA' (cf. AAI 2016).

The conclusion is that when the VIN is recorded in a garage, dismantling facility or shredder, or the VIN is otherwise used during the transition of a second-hand vehicle to an end-of-life vehicle, a requirement for the protection of personal data exists. The facility which reads the VIN or handles it must be able to justify its collection or use by showing that the facts of the case correspond to a statutory legal ground or that a consent was given.

In many cases, the owner of the vehicle does not agree to the collection or use of his/her VIN, so the consent which would justify the act under §§ 4, 4a FDPA is not given. Collection for the realisation of their own contractual purposes with the client (§ 28 Para. 1 item 1 FDPA) is also not justifiable most of the time for the disposal of end-of-life vehicles. This would be the case if the collection obligation under § 3 Para. 1 Sentence 1 ELV Ordinance, which states that the manufacturer of the vehicle is required to take back all end-of-life vehicles of their make from the last owners was defined as a contractual obligation vis-a-vis the owner as well. But the obligation specified in the ELV Ordinance is the manufacturer's obligation under public law. Its product liability only exists vis-a-vis the state or the public law on waste management services.

Consequently, the only question is whether there is a way to justify the protection of any legitimate interest of the responsible body (§ 28 Para. 1 item 2 FDPA). A further prerequisite is that the data subject's legitimate interest in the exclusion of processing or use may not be overriding. This depends on the purpose of the collection and use of personal data (here the VIN). As already explained above, according to the case law, a legitimate interest in the collection and commercial forwarding of the VIN to a database of the industry, here the Reference and Information System (RIS) of Informa Insurance Risk and Fraud Prevention GmbH (an information agency of the insurance sector), is admissible.

4.9.3 Collection of the Vehicle Identification Numbers by authorities

Finally, we should discuss the collection and further use of the VIN by the authorities as public bodies (§ 2 Para. 2 FDPA). The FMTA is a responsible body in the sense that it is a body which collects, processes and uses personal data for its own purposes or orders the same from third parties (§ 2 Para. 1 FDPA). The admissibility of the collection, processing or use of personal data by public bodies is regulated in § 12 ff FDPA. Apart from the storage of VINs by the FMTA as a federal authority (§ 33 Para. 1 item 1 RTA i.c.w. § 4 Para. 1 FDPA) in the form of the Central Vehicle Register, no other use is currently made of the VIN data at federal level²³³.

With respect to end-of-life vehicle recovery, the relevant issue is the usability of data by the waste management authorities as state authorities (§ 2 Para. 2 FDPA). As the states implement the Closed Substance Cycle Act as a federal law, and no special data provision law applies at state level, §§ 12 ff FDPA are relevant here. If the waste management authority finds an end-of-life vehicle which was disposed of outside of the authorised waste disposal facilities, it will trace back the last owner using the VIN of the end-of-life vehicle. Data transfer by FMTA is based on § 15 FDPA (data transfer to public bodies). The actual use by the waste management authority counts as data use according to § 3 Para. 5 FDPA, which has to be admissible under § 4 Para. 1 FDPA.

defined in the Federal Data Protection Act (FDPA) if they are attached to the Vehicle Identification Number or the MV licence plate number.'

²³³ In the absence of specific information, the potential use of VINs by news agencies and police authorities will not be discussed here.

Pursuant to § 14 Para. 1 FDPA, the use of data, here the use of VIN information, is admissible if it is necessary for the performance of tasks within the scope of responsibility of the body concerned, and if it occurs for the purpose for which the data were collected. As soon as the waste authority uses the VINs, it does not serve the purpose of vehicle stock administration but that of the pursuit of an environmentally sound waste management system (i.e. proper and harmless recovery and disposal commensurate with the public good). So there is a change of purpose. In accordance with § 14 Para. 2 FDPA, the storage, modification and use of data for other purposes is admissible only when this is intended or mandatorily required by a legal provision (item 1) or when necessary to protect against serious disadvantages for the common welfare, danger to public security, or protecting significant interests of the common welfare (item 6) or when required for the prosecution of criminal or regulatory violations, the enforcement or execution of penalties or sanctions as defined in § 11 Para. 1 item 8 PC etc. (item 7). We have not found any (waste law) provision which would be subject to item 1. The search for a VIN to prevent danger under road traffic law becomes necessary probably only exceptionally, namely when in the absence of a statutory licence plate, the prosecution of the owner is only possible with the use of the VIN. But VIN investigation is of high relevance for the investigation of administrative offences or environmental crimes (§§ 324, 324a, 326 PC), for instance, if not drained vehicles are found out in the nature without statutory licence plates. Such administrative offences also include those stipulated in the ELV Ordinance. In many cases, recovery in ways other than those prescribed (§ 11 Para. 1 items 4 and 5 ELV Ordinance) or the verification of the documentary proofs of recovery (§ 11 Para. 2 item 2 ELV Ordinance) is concerned. Because of the extensive offences punishable with fines, the waste authorities responsible for the enforcement of the ELV Ordinance are quite often allowed to resort to the VIN in order to tackle administrative offences relating to end-of-life vehicles. This is already possible under the effective law, without the need for any supplementation or amendment to the existing legal provisions.

Regarding the treatment of VIN, the practice of the German authorities differs from that of the authorities in the other states. In particular, no VIN is fed back from the recovery facility to the national vehicle register, as it happens in the Netherlands (cf. Wallau n.d. p 42). If the last owner in the Netherlands transfers the end-of-life vehicle to an end-of-life vehicle recovery firm (organised in the executive body Auto Recycling Nederland BV – ARN), the latter issues a Certificate of Destruction and deletes the end-of-life vehicle (which was recorded on commissioning) from the MV register via online connection to the Rijkdienst voor het Wegverkeer (DVA). In the next step, the end-of-life vehicle recovery firm sends the number of accepted end-of-life vehicles to the ARN, which will in turn check with the DVA if they are actually decommissioned Dutch pass. cars. Daily data exchange ensures, most importantly, that no multiple records are made of end-of-life vehicles.

4.10 Summary of the legal issues

As shown by the analysis, the legal background for the whereabouts of (end-of-life) vehicles is rather complex.

4.10.1 An overview of the legal framework

The following table specifies the most important individual provisions which may affect the whereabouts of end-of-life vehicles (the list is not exhaustive).

Table 33: The most important provisions which may affect the whereabouts of end-of-life vehicles

| Section | Keyword | Provision | Source of law, legal ground in EU law, if any | Binding force | Judicial practice, if any | Legislative competence | Administrative competence |
|-----------------|--|---|--|---|--|------------------------|---|
| Decommissioning | Decommissioning of MV /Declaration on whereabouts abolished / Certificate of Destruction | § 14 VRO / § 27a Para. 1 Sentence 1 RVRO a. F. / § 15 VRO | EU Directive 2014/46/EU; EU-Directive 1999/37/EC; § 6 Para. 1 item 2 RTA | D is binding with respect to the result to be achieved (288 Para. 3 TFEU) | | Federal | the states themselves are responsible for implementation (§ 30, 83 f. BL), communal responsibility to implement as their own matter |
| Decommissioning | End of MV tax liability upon decommissioning | § 5 Para. 4 Sentence 2 MVTC | MVTC | mandatory | BFH, order of 20/12/2010, II B 42/10, BFH/NV 2011, 655-656 | Federal | Federal (Federal Financial Administration) |

| Section | Keyword | Provision | Source of law, legal ground in EU law, if any | Binding force | Judicial practice, if any | Legislative competence | Administrative competence |
|----------|---|--|---|--|--|------------------------|---|
| Recovery | Waste definition, distinction vehicle/waste | § 2 Para. 1 item 2 ELV Ordinance i.c.w. § 3 Para. 1 CSCA | CSCA, EU Waste Framework Directive 2008/98/EC | D is binding with respect to the result to be achieved; national law mandatory | EJC, judgement of 10/05/2007, Rs. C-252/05, Slg. 2007, I-3883 No. 28 (Thames Water Utilities); FAC 92, 359 (362); AC München, judgement of 07/11/2013, M 17 K 12,624, BeckRs 2014, 49914; HAC RP, order of 24/08/2009, 8 A 10623/09, NVwZ 2009, 1508; AC Berlin, order of 03/04/2014, AC 10 L 49.14, BeckRs 2014, 50031; HAC München, order of 22/07/2014, 20 CS 14.1272; AC Arnsberg, judgement of 29/09/2014, 8 K 1863/13, juris; AC Karlsruhe, order of 05/02/2016, 9 K 5063/15, juris; AC München, judgement of 30/08/2016, 17 K 15.3371, BeckRs 2016, 51323 | Federal | the states themselves are responsible for implementation (§ 30, 83 f. BL), communal responsibility to implement as their own matter |

| Section | Keyword | Provision | Source of law, legal ground in EU law, if any | Binding force | Judicial practice, if any | Legislative competence | Administrative competence |
|----------|---|---|--|--|---|------------------------|---|
| Recovery | Basic obligation of waste recovery | § 7 Para. 2 Sentence 1 CSCA i.c.w. § 6 Para. 1 CSCA | EU Directive 2000/53/EC on end-of-life vehicles (End-of-Life Vehicles Directive) | D is binding with respect to the result to be achieved; national law mandatory | | Federal | the states themselves are responsible for implementation (§ 30, 83 f. BL), communal responsibility to implement as their own matter |
| Recovery | Requirements for proper and harmless recovery of end-of-life vehicles and stripped vehicles | § 2 Para. 1 items 14-16 ELV Ordinance | ELV Ordinance | mandatory | | Federal | the states themselves are responsible for implementation (§ 30, 83 f. BL), communal responsibility to implement as their own matter |
| Recovery | Assignment of a facility number to a dismantling facility | § 27 Para. 3 NachwV | CSCA | mandatory | AC Göttingen, judgement of 22/07/2010, ref. no. 1 A 25/10, openJur 2012, 50823, https://openjur.de/u/325810.html (downloaded on 17/01/2015), No. 18. | Federal | the states themselves are responsible for implementation (§ 30, 83 f. BL), communal responsibility to implement as their own matter |

| Section | Keyword | Provision | Source of law, legal ground in EU law, if any | Binding force | Judicial practice, if any | Legislative competence | Administrative competence |
|----------------|---|---|---|---|---|------------------------|--|
| Waste shipment | Waste shipment; Distinction second-hand vehicle / end-of-life vehicle | Regulation (EC) No. 1013/2006 of the European Parliament and of the Council on shipments of waste (RSW), Commission Regulation (EC) No. 1418/2007 concerning the export for recovery of certain waste listed in Annex III or IIIA to Regulation (EC) No. 1013/2006 to certain countries to which the OECD Decision on the control of transboundary movements of wastes does not apply; Waste Shipment Act; Correspondents' Guidelines No 9 on the shipment of waste vehicles. | | EC-R mandatory; WSA mandatory; Correspondents' Guidelines No. 9 non-binding | AC München, judgement of 05/09/2013, M 17 K 12.4459, BeckRS 2014, 47513; AC Bremen, order of 16/04/2008, 5 V 837/08, zit. nach juris., No. 12 | Federal | Pursuant to § 11 WSA, the federal states are responsible for inspections; with the involvement of Customs and the Federal Office for Goods Transport; FEA is the authority to approve transits via Germany; Contact point for queries at FEA |

| Section | Keyword | Provision | Source of law, legal ground in EU law, if any | Binding force | Judicial practice, if any | Legislative competence | Administrative competence |
|----------------|---|---|--|---------------|---|------------------------|--|
| Waste shipment | Proof of arrival of a vehicle at the recipient within the EU | § 4 item 1b i.c.w. § 6a STA; § 17a Para. 2 Sales Tax Implementing Ordinance (STIO) | | mandatory | | Federal | Federal (Federal Financial Administration) |
| Waste shipment | Declaration in so-called commercial traffic (commercial dealers); simplified oral procedure if the exported vehicle, in the case of export to a state outside of the customs territory of the Community does not reach 'the value and weight limit (EUR 1,000 and 1,000 kg) (threshold values to be calculated acc. to § 2 Para. 4 FTA) | Art. 162-166, 182 UCC R (EU) No. 952/2013 (§ 216 Para. 2 CCIO); Regulation (EC) No. 638/2004 on Community statistics relating to the trading of goods between Member States | (Transitional Delegating Act, TDA) (or Council Regulation (EEC) No. 2913/92 establishing the Community Customs Code); Customs Administration Act | mandatory | FC Rheinland-Pfalz, judgement of 28/06/2012, 6 K 2615/09, BeckRS 2012, 95902; BFH, order of 03/05/2010, XI B 51/09, BFH/NV 2010, 1872-73; LS. FC, judgement of 23/04/2009, 16 K 261/05, zit. nach juris; FC Düsseldorf, judgement of 31/01/2014, 1 K 3117/12 U. | Federal | Federal (Federal Financial Administration) |

| Section | Keyword | Provision | Source of law, legal ground in EU law, if any | Binding force | Judicial practice, if any | Legislative competence | Administrative competence |
|------------------|--|---|---|---------------|---|------------------------|---|
| Waste facilities | Facilities approved depending on capacity | § 4 FICA i.c.w. 4th OIFICA, No. 8.9 and 8.12 of Annex 1, see Table 2 and Table 3 i.c.w. Annex 1, 8.7.1.1. and 8.7.1.2 to EIAA | FICA | mandatory | AC Augsburg, judgement of 23/01/2013, Au 4 K 12.295, BeckRs 2013, 47023, No. 48 | Federal | the states themselves are responsible for implementation (§ 30, 83 f. BL), communal responsibility to implement as their own matter |
| Waste facilities | Approval or notification of built structures | e.g. § 2 Para. 1 item 8 and § 59 Para. 1 BCLS | FBC | mandatory | | Federal | the states themselves are responsible for implementation (§ 30, 83 f. BL), communal responsibility to implement as their own matter |
| Criminal law | unlawful and culpable storage of certain wastes outside of authorised waste disposal facilities | § 326 Para. 1 PC | PC | mandatory | RAC Celle, judgement of 15/10/2009, NuR 2011, 531 | Federal | states are responsible for implementation as for their own matters (§ 30, 83 f. BL) |
| Criminal law | illegal waste shipment in not insignificant volume from or through the territorial scope of this Act | § 326 Para. 2 PC | PC | mandatory | | Federal | states are responsible for implementation as for their own matters (§ 30, 83 f. BL) |

| Section | Keyword | Provision | Source of law, legal ground in EU law, if any | Binding force | Judicial practice, if any | Legislative competence | Administrative competence |
|-------------------|---|--|---|---------------|---------------------------|------------------------|---|
| Road traffic law | Removal of not registered, potentially also not functional vehicles parked in public street space | e.g. § 2 item 1b LSAPSO i.c.w. § 32 Para. 1 RTO and poss. §§ 14 Para. 1, 18 RALS | | mandatory | | Federal/State | the states themselves are responsible for implementation (§ 30, 83 f. BL), communal responsibility to implement as their own matter |
| Law of statistics | Annual notification obligation of all end-of-life vehicle recovery firms regarding their waste input (and output) and their facilities (§ 3 Para. 1 item 1 ESA) | Environmental Statistics Act (ESA) | ESA | mandatory | | Federal | Federal (Federal Statistics); States |

| Section | Keyword | Provision | Source of law, legal ground in EU law, if any | Binding force | Judicial practice, if any | Legislative competence | Administrative competence |
|---------------------|--|--|--|--|---------------------------|------------------------|---|
| Data protection law | The manufacturer of a vehicle is required to attach a VIN on any registered vehicle; VINs may be stored in the Central Vehicle Register (CVR) held by FMTA | § 59 Para. 1 item RVRO; § 33 Para. 1 item 1 RTA, | Council Directive 76/114/EEC of 18/12/1975 on the approximation of the laws of the Member States relating to statutory plates and inscriptions for motor vehicles and their trailers, and their location and method of attachment; Commission Regulation (EU) No. 19/2011 of 11/01/2011 on type approval | D is binding with regard to the result to be achieved ; R is mandatory | | Federal | the states themselves are responsible for implementation (§ 30, 83 f. BL), communal responsibility to implement as their own matter |

4.10.2 Conclusion

The points of the legal framework conditions mentioned below are particularly relevant for statistical issues relating to the whereabouts of vehicles which have been finally decommissioned in Germany.

Decommissioning

The obligation to register a motor vehicle in Germany depends on whether it is driven on public roads (active traffic) or parked in public street space (passive traffic). There is no distinction between temporary and final decommissioning. If the vehicle had been transferred to an authorised dismantling facility before it was decommissioned, the facility has to issue a Certificate of Destruction, which is to be presented by the last owner upon decommissioning. If the vehicle remains abroad for the purpose of disposal or if it is not disposed of as waste, the last owner has to declare this to the MV registration office.

The tax liability terminates upon decommissioning. There is no legal ground to assume that the MV tax liability would only terminate once the declaration on the final whereabouts of the vehicle was made.

In general, specific information on the whereabouts of the vehicle is only available in the context of decommissioning if the Certificate of Destruction is available in the CVR. The former declaration on the whereabouts of the vehicle (§ 27a RVRO a.F.) with a specific indication has been abolished in order to simplify administrative proceedings. Nevertheless, some regional authorities still require the owner to make a declaration without formalities on the whereabouts of the vehicle, relying on § 15 VRO.

Differentiation between second-hand vehicles and end-of-life vehicles

The differentiation is relevant to this project in different contexts:

- ▶ Export: Decision if exportation can/must take place as waste or as second-hand vehicle (not waste).
- ▶ Unauthorised dismantling in facilities that are not authorised dismantling facilities, such as MV garages: the questions concerned in this case are to what extent and under what conditions it is allowed to permanently remove parts from vehicles.
- ▶ Sale of vehicles, e.g. via online platforms: here the question is whether facilities which are not authorised dismantling facilities may accept vehicles which cannot or should not be approved for road traffic any longer.

A vehicle is not a second-hand vehicle but an end-of-life vehicle if it constitutes waste as defined in the EC Waste Framework Directive 2008/98/EC. In the case of export (waste shipment), a specific set of criteria or indicators apply, although it is in the form of Correspondents' Guidelines, and as such, legally not binding. In the national context: In accordance with the Closed Substance Cycle Act (CSCA), all substances or objects are to be considered as waste if their owner disposes of (§ 3 Para. 2 CSCA), wants to dispose of (§ 3 Para. 3 CSCA) or must dispose of (§ 3 Para. 4 CSCA) them. The waste definition of CSCA, with its objective and subjective terms provides the general basis for making the distinction in Germany.

In the practice of the implementing authorities, actual delineation between second-hand vehicles and end-of-life vehicles is generally made on a case-by-case basis. The aspects of relevance for the decision are basically roadworthiness and economic considerations.

The operation of MV garages and dismantling facilities

MV garages may only accept end-of-life vehicles if they are authorised acceptance and collection facilities or accredited dismantling facilities. MV garages may only treat end-of-life vehicles if they are accredited dismantling facilities.

Export statistics

For the transfer of second-hand vehicles to another EU Member State, the limits for notification to the intra-trade statistics is so high that it is impossible to make a reliable statement as to the number of transferred second-hand vehicles. For this reason, the intra-trade statistics play hardly any role for intra-EU transfers; the re-registration statistics of the FMTA are more relevant.

Second-hand vehicles exported to a non-EU Member State are all recorded in the customs procedure (in different procedures). Still, the information flow between the customs authorities of the Member States is incomplete.

4.11 Further remarks on certain instruments

In the description of the legal framework, different instruments for the statistical recording of decommissioned vehicles are mentioned which are currently not used in Germany, or not any more, still, they appear again and again in the discussions on the potential improvements of data recording. In the following, we will discuss why it is not recommended from an expert's point of view to re-introduce these instruments for the establishment of the fate of decommissioned vehicles.

4.11.1 Change of paradigm in permit rights

If the tax and insurance obligation is linked to holding, like in the Netherlands, by way of example (see Chapter 4.1.4) and not to the use on public roads like in Germany, similarly to the current German system, this provides only limited protection from decommissioning without regard to the permitted ways. The so-called fake export, i.e. a merely pretended export of second-hand vehicles concerns a relevant number of vehicles in the Netherlands (de Jong 2015). According to this, fake exports and illegal dismantling occurs in the Netherlands to vehicles on the order of 30,000 to 40,000 a year. Projected to the situation in Germany, this would correspond to a flow of about 250,000 vehicles²³⁴. It shows that the linking of tax and insurance obligation to the holding of the MV instead of its use on public road systematically even presents a potential of non-compliant action. Thus, a change of paradigm in the German system along these lines would require much effort (need for legal adjustment, huge administrative burden and high costs on the part of the economic stakeholders concerned in connection with the transition and compliance with the new rules), but it would not result in the total elimination of further existing end-of-life vehicles without any statistical records. In addition to linking the tax and insurance obligation to the holding of the vehicle (regardless of authorisation to take part in public road traffic), the establishment of some other very demanding mechanisms would be required in the form of online information flows, such as the connection of vehicle traders to a central register or direct deregistration if the vehicle is sold to a new holder (see the Dutch system, Chapter 4.1.4).

²³⁴ Calculation based on the number of new registrations per Member State in 2013 ((NL: 449,350, D: 3,206,042; Data based on: ACEA 2016).

In our expert opinion, the consistent use of the existing possibilities in Germany (Declaration on the whereabouts of the vehicle (§ 15 Para. 2 VRO see Chapter 4.1.1.1) and the recommended improvements on the information flow (see Recommendations 15) are regarded as reasonable ways (see to this the following Subchapter).

4.11.2 Proof of whereabouts

As discussed in Chapter 4.1.1.1, between 1998 and 2002, last owners had the obligation under § 27a Para. 1 Sentence 1 RVRO to make a detailed declaration on the whereabouts of the vehicle to the MV registration office if it was decommissioned without a Certificate of Destruction. This declaration of whereabouts was abolished basically for the reason that it ‘required considerable enforcement efforts on the part of the authorities, however, without providing real assistance to the competent authorities in terms of monitoring due to the comparatively simple methods of circumventing it’²³⁵.

Various stakeholders (e.g. authorised dismantling facilities, waste recovery associations, the VDA, see a. o. comments at the Experts’ Workshop ‘Certificate of Destruction’ held on 29/02/2016 in Berlin) demand the re-introduction of the declaration of whereabouts in the old form so as to enable the monitoring of decommissioned vehicles.

However, a reintroduction of the declaration of whereabouts would only make sense if the authorities had a relative possibility to check the reported details and the revealed possibilities of circumventing could be eliminated, otherwise no improvement of the taxation and information impact could be expected from this tool. On the other hand, monitoring possibilities for the authorities are restricted by temporal, personnel and legal capacities (such as the lacking possibility for a comparison between the VINs of export vehicles and the VINs in the declarations of whereabouts), but also by data protection considerations against a declaration of whereabouts: so one of the reasons for deletion of the old format was that road traffic law should not record the whereabouts but only regulate the authorisation to road traffic (claimed the FMTDI at the Experts’ Workshop ‘Certificate of Destruction’ on 29/02/2016 in Berlin).

It should be considered that a declaration of whereabouts in the old format could only help to determine the first whereabouts after a decommissioning. Already if a vehicle is resold, this function is lost, and the monitoring of the later whereabouts of the vehicle is only possible for the authorities with considerably greater efforts, if at all. It can be presumed that decommissioned vehicles are rarely exported by the last owner himself, much rather taken abroad by specialised exporters or private individuals after having been decommissioned and then sold. Consequently, even a stricter declaration of whereabouts, combined with the compulsory presentation of supporting documents at sale or exportation were only suitable for recording the whereabouts of vehicles with limitations.

Even so, a more detailed declaration of whereabouts will not be of help in cases where the second-hand vehicle is decommissioned and the actual whereabouts (end-of-life vehicle, sale) becomes evident only at a later stage. According to the statements of the MV registration offices asked, this is the case in 95 % of decommissioned vehicles, since the main motivation is the termination of the tax payment obligation (MV registration office Kaiserslautern 2016, MV registration office Bad Dürkheim 2016, MV registration office Westerwaldkreis 2016). In cases where the whereabouts are not obvious (e.g. export, recovery), the MV registration authority would have to inquire after a while what happened to the vehicle. This increases the efforts required, with the possibility to check the data remaining restricted (e.g. for the indication “storage on private area”).

²³⁵ BT-Drs. 14/8343 (page 28): justification for § 4 (amending the Road Vehicle Registration Ordinance) item 1 (amended version of § 27a of the RVRO).

An obligation to submit subsequent declarations of whereabouts if the whereabouts change after decommissioning would have little added value, while the possibilities for monitoring compliance with the rule would be limited. The competent authority would only learn later on, if the vehicle was commissioned in the country again, if the declarations had been correctly made in the meantime (and even this only to a limited extent in the case of a series of transactions).

As discussed, § 15 Para. 2 VRO provides that the disclosure of whereabouts is required upon decommissioning without a Certificate of Destruction (see Chapter 4.1.1.1), which information must be stored in the local registration records by the MV registration office according to § 31 Para. 1 item 27 of the VRO, and in the Central Vehicle Register according to § 30 Para. 1 item 27 of the VRO. For the assessment it should be considered that the possible gradual benefits of a new (or extended) equivalent of the 'old' declaration of whereabouts under § 27a Para. 1 Sentence 1 RVRO should be weighed against

- ▶ the increased administrative load; and
- ▶ the efforts related to the implementation and enforcement of a new legal basis; and
- ▶ the limited detailing of data on whereabouts due to the data protection requirements or the efforts related to a possible modification of the data protection requirements

and compared to possible alternatives. According to this expert opinion, taking into consideration the previous experiences and the assessment outlined before, it would be more reasonable to reinforce the existing proof of whereabouts under § 15 VRO (see Chapter 6.7.1, Recommendations 15).

4.11.3 Financial incentives

The financial incentives to be considered are not meant as an advance recycling fee, which would serve to cover the costs of end-of-life vehicle recovery (as it is the case in other countries, e.g. the Netherlands). The purpose of a financial incentive would instead be some kind of motivation to handle the vehicle concerned as an end-of-life vehicle rather than a second-hand vehicle. Such financial incentives for the decommissioning of a MV with a Certificate of Destruction (like a 'scrapping bonus') would be a means in conflict with the hierarchy of waste economy defined in § 6 CSCA. The deviation from the hierarchy could be justified if, on the whole, it demonstrably led to the better protection of health and the environment (§ 7 Para. 2 CSCA). So far, such evidence has been provided, to some extent (Höpfner et al. 2009), with regard to emissions but not with regard to raw materials²³⁶.

The control system could have an impact on the area where the vehicle concerned should be regarded as an end-of-life vehicle but is actually handled as non-waste. Such an allocation of economic aspects to the distinction between end-of-life vs. second-hand vehicles is not available for the time being.

The higher the amount of the incentive, the greater the potential control impact could be. With a fixed amount, more impact could be expected for old small vehicles than for newer, bigger ones. So as not to generate an unintended impact, the amount of incentive should be determined flexibly.

²³⁶ This could be attained by demonstrating that further use as a second-hand vehicle or disposal at a non-authorised dismantling facility would lead to lesser resource recovery. However, the analysis of the disposal situation, e.g. in the framework of the research project 'Evaluation and extrapolation of the methodology for the determination of end-of-life vehicle recycling rates by shredding tests under the EC End-of-Life Vehicle Directive 2000/53/EC', (Sander et al., 2016) has not provided any conclusion of this kind.

The corresponding financial steering mechanisms should be developed accordingly (possibly in line with the development of legally binding criteria for the differentiation between end-of-life vs. second-hand vehicles).

4.11.4 The Swiss system for the assessment of accident vehicles

The Swiss system for the assessment of vehicles involved in an accident ('Punkteschema') (see Luther 2016) represents a highly practice-oriented approach which can be used as a support for decision making on temporary classification. As a means for the assessment of the status of the vehicle, the vehicle surface is divided into damage zones. 'Damage points are assigned to these damage zones and the wheel suspensions. If the total of damage points is more than 55, the vehicle may not be exported without a BAFU authorisation. A zone is considered damaged if

- ▶ the suspensions do not ensure the technical, mechanical function any more;
- ▶ the suspension parts are twisted, distorted or torn off; or
- ▶ the body component is strongly deformed, distorted or damaged by fire.' (Frey et al.. 2016)

Therefore, the method significantly differs from the CG9 approach, which reflects the consensus of all EU Member States and is, therefore, considered as a suitable starting point for the development of simplified methods in Germany.

5 Actual whereabouts of vehicles in the reference year 2013

After having identified the possible whereabouts of decommissioned vehicles and the possible reasons for the failure of statistical recording as well as the relevant fields of law, this Chapter attempts to identify and detail, as fully as possible, the actual whereabouts of finally decommissioned vehicles in a reference year. As a reference year, 2013 was selected, as the database is the most complete as compared to the years 2014 or 2015.

As an initial situation, the FEA data on the whereabouts of decommissioned vehicles in Germany are used from the report to the European Commission (see also Chapter 2). On the basis of the conclusions of Chapter 3 und 4, literature research, structured interviews, workshops and surveys (e.g. by means of standardised questionnaires and primary data evaluation) were conducted.

Naturally, there is some data uncertainty, especially in the fields where the figures on the number of vehicles are based on expert judgements. Individual values are used instead of value ranges for better practical use, which should be understood as approximations to the real flows of vehicle.

5.1 Permanently decommissioned vehicles

Up until 2006, the total annual number of permanently decommissioned vehicles was still directly available, as this information was stored in the Central Vehicle Register (CVR) of the Federal Motor Transport Authority (FMTA)²³⁷. Since 2007, no distinction has been made between permanently and temporarily decommissioned vehicles, so the proportion of permanent decommissioning can only be estimated. In the annual reports, the FEA calculated with a proportion of 40 % (FMENCBNS and FEA 2015, footnote 13 there).

The FMTA differentiates decommissioned motor vehicles according to vehicle categories. Under the heading ‘passenger cars’, vehicles of the vehicle category M1 are recorded, while under the heading ‘trucks’, vehicles of the categories N1-N3 are summed up. In 2013, 8,149,973 passenger cars and 466,880 trucks were decommissioned (FMTA n.d. a). The number of trucks with a weight <3.5 t amounted to 361,499 vehicles (FMTA n.d. c). So far, only the number of pass. cars has been considered in statistics on whereabouts (see Figure 10 and Figure 11).

According to recital 10 of the End-of-Life Vehicles Directive, vintage cars are not covered by this Directive²³⁸. On the other hand, no exact statistics are available on the number of vintage cars. For the calculation of the proportion of permanent decommissioning, these should normally be deducted. Nevertheless, it must be noted that this differentiation is not made in any of the reference data, including the published FMTA figures on decommissioning, the REGINA statistics and also the foreign trade statistics, and it is actually impossible to take it fully into consideration. The above-mentioned statistics also include these vehicles. There is no way to eliminate this data uncertainty, but in any case, it was assessed as being of insignificant volume, e.g. at the workshop on the distinction between end-of-life and second-hand vehicles on 21/03/2016 in Berlin.

In the framework of the project, the Federal Motor Transport Authority conducted an empirical research on the proportion of temporarily decommissioned vehicles both in the vehicle category M1 and in the vehicle category N1 (see Chapter 5.1.1 and 5.1.2).

²³⁷ ‘Permanently decommissioned’ only refers to decommissioning in Germany. Such vehicles may be recommissioned abroad.

²³⁸ Directive 2000/53/EC of the European Parliament and of the Council of 18/09/2000 on end-of-life vehicles.

5.1.1 Methodological notes

There is no information in the CVR regarding decommissioned vehicles, neither on temporary, nor on permanent decommissioning. But if the same vehicles are re-registered, a corresponding entry is made in the CVR (cf. FMTA 2016). If no more entry is made in the CVR for a certain vehicle, it can be regarded as a permanent decommissioning. The longer the period examined, the more reliable this conclusion will be.

For this reason, in the evaluation performed, all follow-up notifications regarding a decommissioned vehicle are regarded within a definite period in order to determine the proportion of vehicles which have not re-appeared for registration, and can thus be classified as permanently decommissioned.

The year 2010 was chosen as the base year for the present evaluation. This allowed for the exclusion of undesired side effects from the two preceding years (distortion due to the significantly increased number of permanently decommissioned vehicles because of the so-called ‘environmental bonus’), reaching as current results as possible, and ensuring a maximum length of the period investigated. Statistically processed CVR notifications of the preceding year are available for addition to the analysis up until 2014, which adds up to a total period of investigation of four years. Accordingly, all CVR notifications made within a four-year period concerning a vehicle decommissioned in 2010 were taken into consideration.

A vehicle can be decommissioned several times within a year. In such cases, the last decommissioning (decom.) in 2010 is taken as the start date of the four-year period.

The notifications to the CVR included in Table 34 below (last column) are available in the statistics for analysis, and have also been included in this analysis.

Table 34: Notifications to the CVR

| CVR notification (process step) | Entry to CVR | Data available in statistics |
|---|--------------|------------------------------|
| Notification of rectification | x | |
| Reversal of an approval phase | x | |
| Scheduling a vehicle for civil emergency preparedness by the consumer. | x | |
| Requiring notification on storage for decommissioning | x | |
| Requiring notification on storage due to transfer of ownership or change of licence plate | x | |
| Notification incidents | x | |
| Notification incidents for red licence plate | x | |
| Notification of transmission barrier, modification of details relating to a transmission barrier or contesting the accuracy of holder details | x | |
| Notification on the assignment of a driver’s record book | x | |
| Insurance data only for GIA | x | |
| Rectification based on error messages from MV crime proceedings or reports from citizens, only for customs administration | x | |
| First registration of a brand new vehicle (new registration) | x | x |
| Registration of a second-hand vehicle without entry to the CVR | x | x |

| CVR notification (process step) | Entry to CVR | Data available in statistics |
|--|--------------|------------------------------|
| Transfer from another registration district without change of ownership | x | x |
| Transfer from another registration district with change of holder | x | x |
| Transfer to another holder in the same registration district | x | x |
| Other changes within the registration office, beyond usual process steps | x | x |
| Notifications of information on alienation (acquirer) or seized vehicle or right of disposal over the ZB II | x | x |
| Decommissioning of the vehicle pursuant to § 14 Para. 1 VRO | x | x |
| Issue of replacement documents after decommissioning | x | |
| Invalid licence plates under § 30 Para. 6 VRO | x | |
| Red licence plate is invalid due to return or withdrawal | x | |
| Changes to a red licence plate (address, validity period) | x | |
| Issue of a white licence plate in accordance with § 30 Para. 6 | x | |
| Issue of a red licence plate | x | |
| Issue of a temporary licence plate | x | x |
| Re-registration after decommissioning for the same holder, with or without other modification in the scope of process step 6 | x | x |
| Notification on a Certificate of Destruction | x | x |
| Assignment of a white licence plate under § 30 Para. 1 item 4 VRO | x | |
| Answer to a report acc. to § 25 Para. 1 VRO | x | |
| Change of insurer | x | |
| Basis of report (transmitted from vehicle information and measures) | x | x |
| Answer to a report acc. to § 25 Para. 1 VRO for a decommissioned vehicle | x | |

Source: FMTA (2016)

Depending on presentation to the registration offices, these report a Certificate of Destruction in a separate, additional process step or as a supplementary note to decommissioning. The results presented contain a differentiated presentation of this situation. Depending on the type of Certificate of Destruction and the existence of further notifications in the CVR after decom., the following case scenarios are distinguished and shown separately in the table of results:

1. Decom. incl. Certificate of Destruction but no further notification in CVR after decom.,
2. Decom. without Certificate of Destruction but also here no further notification in CVR after decom.,
3. Decom. with Certificate of Destruction submitted subsequently but no further notification in CVR after decom.,

4. Decom. with Certificate of Destruction submitted subsequently and further notification in CVR after decom.,
5. Decom. without Certificate of Destruction but further notification in CVR after decom.,
6. implausible cases.

Eventually, vehicles with the scenarios 1,2,3 and 4 can be regarded as permanently decommissioned.

The figures published by FMTA regarding the annual number of decommissioning cases are regarded as the initial volume for the calculation of permanently decommissioned vehicles. It must be noted, though, that the same vehicle can be decommissioned several times within a year. The published statistics calculate with the number of decommissioning cases and not that of vehicles. Thus the first step is to establish the number of vehicles decommissioned once or several times. The resulting figure will be the basis for the calculation of the proportion of actually decommissioned vehicles in a given year.

The number of decommissioning cases per vehicle was determined for the years 2010 (= base year of evaluation) and 2014 (= subject year of official statistics on decom.) (see Table 35 and Table 36)²³⁹ below. In both years, 4.3 % of all M1 vehicles were affected by more than one decommissioning cases. This means that the decommissioning cases of M1 vehicles shown in the statistics must be reduced by about 4% to get the number of M1 vehicles affected by decommissioning in the year concerned.

Table 35: Number of decom. for M1 vehicles and M1 vehicles according to their cases of decom. in 2010 and 2014

| Viewing area | | Number in 2010 | % | Number in 2014 | % |
|--|------------------------|----------------|-------|----------------|-------|
| Total number of decom. for M1 vehicles | | 7,185,123 | - | 8,138,212 | - |
| Number of M1 vehicles with at least 1 decom. | Total | 6,870,277 | 100.0 | 7,779,942 | 100.0 |
| | of which with 1 decom. | 6,571,797 | 95.7 | 7,441,549 | 95.7 |
| | of which with 2 decom. | 283,094 | 4.1 | 319,826 | 4.1 |
| | of which with 3 decom. | 14,511 | 0.2 | 17,406 | 0.2 |
| | of which with 4 decom. | 787 | 0.0 | 1,070 | 0.0 |
| | of which with 5 decom. | 74 | 0.0 | 71 | 0.0 |
| | of which with 6 decom. | 11 | 0.0 | 11 | 0.0 |
| | of which with 7 decom. | 3 | 0.0 | 2 | 0.0 |
| | of which with 8 decom. | 0 | - | 1 | 0.0 |
| | of which with 9 decom. | 0 | - | 1 | 0.0 |

²³⁹ Strictly speaking, all decommissioning cases which could be assigned to a M1 or N1 vehicle were counted. This means, first, that a vehicle was identified as a M1/N1 vehicle if it had at least one decommissioning as a M1/N1 vehicle. If the vehicle was re-registered within the year concerned, but as a commercial vehicle or heavy commercial vehicle (this happens on occasion), and then it was commissioned again as such, this decommissioning is not counted.

| Viewing area | | Number in 2010 | % | Number in 2014 | % |
|--|-------------------------|----------------|------|----------------|------|
| Percentage of M1 vehicles with at least 1 decom. | of which with 11 decom. | 0 | - | 3 | 0.0 |
| | of which with 13 decom. | 0 | - | 1 | 0.0 |
| | of which with 15 decom. | 0 | - | 1 | 0.0 |
| | | - | 95.6 | - | 95.6 |

Source: FMTA (2016)

Regarding the vehicle category N1, in 2010 4.1%, while in 2014 3.7% of all N1 vehicles had more than one decommissioning cases. Here as well, this means that the decommissioning cases of N1 vehicles shown in the statistics must be reduced by about 4% to get the number of N1 vehicles affected by decommissioning in the year concerned.

Table 36: Number of decom. for N1 vehicles and N1 vehicles according to their cases of decom. in 2010 and 2014

| Viewing area | | Number in 2010 | % | Number in 2014 | % |
|--|------------------------|----------------|-------|----------------|-------|
| Total number of decom. for N1 vehicles | | 353,949 | | 384,900 | |
| Number of N1 vehicles with at least 1 decom. | Total | 339,380 | 100.0 | 370,502 | 100.0 |
| | of which with 1 decom. | 325,477 | 95.9 | 356,819 | 96.3 |
| | of which with 2 decom. | 13,270 | 3.9 | 13,027 | 3.5 |
| | of which with 3 decom. | 602 | 0.2 | 603 | 0.2 |
| | of which with 4 decom. | 29 | 0.0 | 48 | 0.0 |
| | of which with 5 decom. | 2 | 0.0 | 4 | 0.0 |
| | of which with 6 decom. | 0 | - | 1 | 0.0 |
| Percentage of N1 vehicles with at least 1 decom. | | | 95.9 | | 96.3 |

Source: FMTA (2016)

5.1.2 Results

Table 37 and Table 38 below show the frequencies of the case scenarios mentioned in Chapter 5.1.1 ²⁴⁰. According to that, the analysis has shown that 66.7 % of all M1 vehicles and 58.6 % of all

²⁴⁰ The differences between the total figures of M1 and N1 vehicles with decommissioning cases in 2010 (M1-Fahrzeuge Σ = 6,870,277 vs. Σ = 6,855,694; N1 = 339,380 vs. Σ = 338,784) can be explained with a different logic of data generation: The official decom. figures, which constitute the basis of the calculation, also contain decommissioning cases from the preceding years if they were reported to FMTA in 2010. These 'latecomers' had to be removed from

N1 vehicles with at least one decommissioning in 2010 re-appeared in the registration procedure in some form within the four years following their last decommissioning, so a permanent decommissioning within this time period could be excluded. The reverse of the conclusion is that 33.3 % of the M1 vehicles concerned and 41.4 % of the N1 vehicles concerned were permanently decommissioned. As a considerable possibility it should be noted that vehicles counted as permanently decommissioned could still display some activity in the CVR after the lapse of the four-year period examined here. This means that the percentage of permanent decommissioning cases indicated here shows the maximum percentage, and could possibly be lower in fact.

the decom. database for the facility analysis because there were no corresponding follow-up notifications for these cases. For the analysis for updating the percentage of decommissioning cases, decommissioning cases reported between 2011 and 2014, which actually took place in 2010, were also taken into account. However, there is no need for an analogous selection for the calculation, since the surplus of 'latecomers' of the previous year is roughly compensated by the decommissioning cases in 2010 which are entered in the CVR in the following year only.

Table 37: M1 vehicles with decom. in 2010

| Examined cases | Decom. incl. Certificate of Destruction but no further notification in CVR after decom. | Decom. without Certificate of Destruction but also here no further notification in CVR after decom. | Decom. with Certificate of Destruction submitted subsequently but no further notification in CVR after decom. | Decom. with Certificate of Destruction submitted subsequently and further notification in CVR after decom. | Decom. without Certificate of Destruction but further notification in CVR after decom. | Total |
|--|---|---|---|--|--|------------------------|
| M1 vehicles without follow-up CVR notification in the period of decom. + 4 years | 84,131 veh. 3.8% | 2,151,838 veh. 96.2% | | | | 2,235,969 veh. 100% |
| M1 vehicles with follow-up CVR notification in the period of decom. + 4 years | | | 27,045 veh. 0.6% | 21,441 veh. 0.5% | 4,571,239 veh. 99% | 4,619,725 veh. 100% |
| Total M1 vehicles with decom. in 2010 | 84,131 veh. 1.2% | 2,151,838 veh. 31.4% | 27,045 veh. 0.4% | 21,441 veh. 0.3% | 4,571,239 veh. 66.7% | 6,855,694 veh. 100% |

Source: KBA (2016)

Table 38: M1 vehicles with follow-up CVR notification in the period of decom. + 4 years

| Examined cases | Decom. with Certificate of Destruction submitted subsequently but no further notification in CVR after decom. | Decom. with Certificate of Destruction submitted subsequently and further notification in CVR after decom. | Decom. without Certificate of Destruction but further notification in CVR after decom. | Total |
|--|---|--|--|------------------------|
| Follow-up CVR notifications in the 1st year after decom. | 25,041 veh. 92.6% | 20,419 veh. 95.2% | 4,332.430 veh. 94.8% | 4,377,890 veh. 94.8 |
| Follow-up CVR notifications in the 2nd year after decom. | 1,275 veh. 4.7% | 827 veh. 3.9% | 178,777 veh. 3.9% | 180,879 veh. 3.9% |
| Follow-up CVR notifications in the 3rd year after decom. | 460 veh. 1.7% | 150 veh. 0.7% | 40,704 veh. 0.9% | 41,314 veh. 0.9% |
| Follow-up CVR notifications in the 4th year after decom. | 269 veh. 1% | 45 veh. 0.2% | 19,328 veh. 0.4% | 19,642 veh. 0.4% |
| Total | 27,045 veh. 100% | 21,441 veh. 100% | 4,571,239 veh. 100% | 4,619,725 veh. 100% |

Source: KBA (2016); indicators per year: M1 vehicles according to the length of the time lapsed from decom. to first follow-up CVR notification

Table 39: N1 vehicles with decom. in 2010

| Examined cases | Decom. incl. Certificate of Destruction but no further notification in CVR after decom. | Decom. without Certificate of Destruction but also here no further notification in CVR after decom. | Decom. with Certificate of Destruction submitted subsequently but no further notification in CVR after decom. | Decom. with Certificate of Destruction submitted subsequently and further notification in CVR after decom. | Decom. without Certificate of Destruction but further notification in CVR after decom. | Total |
|--|---|---|---|--|--|----------------------|
| N1 vehicles without follow-up CVR notification in the period of decom. + 4 years | 711 veh. 0.5% | 138,998 veh. 99.5% | | | | |
| N1 vehicles with follow-up CVR notification in the period of decom. + 4 years | | | 341 veh. 0.2% | 332 veh. 0.1% | 198,402 veh. 99.7% | 199,075 veh. 100% |
| Total N1 vehicles with decom. in 2010 | 711 veh. 0.2% | 138,998 veh. 41% | 341 veh. 0.1% | 332 veh. 0.1% | 198,402 veh. 58.6% | 338,784 veh. 100% |

Source: KBA (2016)

Table 40: N1 vehicles with follow-up CVR notification in the period of decom. + 4 years

| Examined cases | Decom. with Certificate of Destruction submitted subsequently but no further notification in CVR after decom. | Decom. with Certificate of Destruction submitted subsequently and further notification in CVR after decom. | Decom. without Certificate of Destruction but further notification in CVR after decom. | Total |
|--|---|--|--|-----------------------|
| Follow-up CVR notifications in the 1st year after decom. | 282 veh. 82.7% | 313 veh. 94.3% | 183,854 veh. 92.7% | 184,449 veh. 92.7% |
| Follow-up CVR notifications in the 2nd year after decom. | 35 veh. 10.3 | 16 veh. 4.8 | 10,378 veh. 5.2% | 10,429 veh. 5.2% |
| Follow-up CVR notifications in the 3rd year after decom. | 17 veh. 5% | 3 veh. 0.9% | 2,755 veh. 1.4 % | 2,775 veh. 1.4% |
| Follow-up CVR notifications in the 4th year after decom. | 7 veh. 2.1% | - | 1,415 veh. 0.7% | 1,422 veh. 0.7% |
| Total | 341 veh. 100% | 332 veh. 100% | 198,402 veh. 100% | 199,075 veh. 100% |

Source: KBA (2016); indicators per year: N1 vehicles according to the length of the time lapsed from decom. to first follow-up CVR notification

The effects of the recalculated decommissioning percentages are illustrated with the figures published by FEA in reporting year 2013 regarding the reporting to the Commission on the whereabouts of end-of-life vehicles (see Table 41 and Table 42 below). According to that, the number of permanently decommissioned vehicles of the vehicle category M1 decreased by approx. 0.7 m to 2.6 m in the reporting year 2013. Considering some 144,000 vehicles of the vehicle category N1, about 2.74 m vehicles of vehicle categories M1 and N1 were permanently decommissioned in 2013.

Table 41: Figures published and recalculated in FMENCBNS and FEA (2015) regarding the whereabouts of end-of-life vehicles of the vehicle category M1 in 2013

| Data area | Annual report on end-of-life vehicles 2013 (FMENCBNS and FEA 2015) | FMTA recalculations |
|--|--|---------------------|
| Decom. to M1 vehicles (permanent and temporary decom.) | 8,149,973 | 8,149,973 |
| Decrease: AuBS -> M1 vehicles with decom. | - | 4,3 % |
| Total number of decommissioned M1 vehicles | - | 7,799,524 |
| Proportion of permanent decom. | 40 % | 33.3 % |
| Permanent decom. | 3,259,989 | - |
| Permanently decommissioned M1 vehicles | - | 2,599,841 |

Table 42: Figures published and recalculated in FMENCBNS and FEA (2015) regarding the whereabouts of end-of-life vehicles of the vehicle category N1 in 2013

| Data area | Annual report on end-of-life vehicles 2013 (FMENCBNS and FEA 2015) | FMTA recalculations |
|--|--|---------------------|
| Decom. to N1 vehicles (permanent and temporary decom.) | n/a | 361,499 |
| Decrease: AuBS -> N1 vehicles with decom. | n/a | 3,9 % |
| Total number of decommissioned N1 vehicles | n/a | 347,401 |
| Proportion of permanent decom. | n/a | 41.4% |
| Permanent decom. | n/a | - |
| N1 vehicles with permanent decom. | n/a | 143,824 |

Due to recalculation of the proportion of multiple decommissioning cases and permanently decommissioned vehicles in all decommissioning cases, the proportion for M1 vehicles has changed from 40 % to 33.3 %, while the figure for N1 vehicles has been determined at 41.4 %. As a result, the figure to be taken as the basis of further examinations is 2.74 m permanently decommissioned vehicles, in whose case the question of their whereabouts arises.

5.2 Exportation as a second-hand vehicle

5.2.1 Exportation as a second-hand vehicle to a non-EU Member State

In the scenario ‘exportation to a non-EU state’, the vehicle is decommissioned without a Certificate of Destruction and exported to a non-EU state. It cannot be established whether a re-registration actually takes place in the country. It is also possible that the vehicles are officially exported as second-hand vehicles, but in fact, they are disassembled in the country of destination at non-authorised facilities. According to the foreign trade statistics published by Destatis, in 2013 344,551 vehicles of the vehicle category M1 (FMENCBNS and FEA 2015) and 41,157 vehicles of the vehicle category N1 were exported from Germany to a non-EU state (Total: 385.708 vehicles)²⁴¹. Exports recorded in customs statistics amount to 341,265 vehicles for the vehicle category M1 and 32,765 vehicles for the vehicle category N1, which were exported from Germany to a non-EU state in 2013 (Total: 374.030 vehicles). As a possible explanation for the difference of 11,678 vehicles between the Destatis and the customs figures, Destatis claimed that the customs figures only contained vehicles which were not only declared but also had an export confirmation. In the case of N1 vehicles the difference of some 8,400 vehicles could allegedly be led back to the fact that for these vehicles, no confirmation on the actual exportation was transmitted by the foreign customs office of exit to the German export customs office. Customs would adjust their figures accordingly, and these vehicles were not included any more. The Federal Statistical Office allegedly assumes that these vehicles were actually exported and does not take them out of the figures, which results in the difference established. Missing export confirmations should primarily occur in cases of exportation by private individuals. Also, this seems to be most relevant for exports to the Ukraine via the Polish customs offices of exit: according to customs figures, 14,880 vehicles were exported there, while Destatis figures show 19,831 vehicles, which means a difference of as many as 5,000 vehicles (Destatis 2016a).

Thus, some uncertainty remains as to whether these additional vehicles captured by the foreign trade statistics were actually exported, although, considering the total figures, they are of lesser importance both for N1 vehicles (approx. 8,400 vehicles) and for M1 vehicles (approx. 3,300 vehicles). With regard to the possible reasons for the difference mentioned by Destatis, it seems reasonable to assume that these vehicles were actually exported and thus the use of the Destatis figures, as in reports to the Commission so far, is justifiable.

Regardless of this remaining uncertainty it can be established, in any case that, until now, statistics on whereabouts (FMENCBNS and FEA 2015) have only considered pass. cars (M1 vehicles). In the following evaluations in the framework of this project, vehicles of the vehicle category N1 and the following commodity codes were also taken into consideration:

²⁴¹ As a matter of fact, the classification of commodity codes in the Combined Nomenclature does not exactly correspond to the definitions of EC vehicle categories. The permitted total weight for vehicles of category N1 is set to 3.5 t in the EC classification. The Combined Nomenclature of the Common Customs Tariffs defines the first grade for motor vehicles for the purpose of commodity transport at ‘5 t or less’ (commodity codes 87042139, 87042199, 87043139, 87043199). The resulting data uncertainty must be taken into account for the calculation and interpretation. In the following, it will be assumed that the majority of these vehicles fall within the vehicle category N1.

Table 43: Relevant commodity codes for the registration of exports of second-hand vehicles from vehicle classes M1 and N1 in foreign trade statistics and the number of second-hand vehicles from vehicle classes M1 and N1 according to the Federal Statistical Office and German customs

| Commodity code | Description | Number in 2013 according to the Federal Statistical Office | Nr in 2013 according to German Customs |
|---|---|--|--|
| Passenger cars and other motor vehicles, with properties mainly intended for the transport of persons | | 344,551 | 341,265 |
| | Other vehicles with an reciprocating internal combustion piston engine with extraneous ignition: | | |
| 87032190 | With a cylinder capacity of 1,000 cm ³ or less (used) | | |
| 87032290 | With a cylinder capacity of more than 1,000 cm ³ but less than 1,500 cm ³ (used) | | |
| 87032390 | With a cylinder capacity of more than 1,500 cm ³ but less than 3,000 cm ³ (used) | | |
| 87032490 | With a cylinder capacity of more than 3,000 cm ³ (used) | | |
| | Other vehicles with an internal combustion piston engine with self-ignition (diesel or semi-diesel): | | |
| 87033190 | With a cylinder capacity of 1,500 cm ³ or less (used) | | |
| 87033290 | With a cylinder capacity of more than 1,500 cm ³ but less than 2,500 cm ³ (used) | | |
| 87033390 | With a cylinder capacity more than 2,500 cm ³ (used) | | |
| Motor vehicles for the transport of goods with a permissible total weight of 5 tonnes²⁴¹ or less: | | 41,157 | 32,765 |
| | With an internal combustion piston engine with self-ignition (diesel or semi-diesel): | | |
| 87042139 | With an engine with a cylinder capacity of more than 2,500 cm ³ (used) | | |
| 87042199 | With an engine with a cylinder capacity of 2,500 cm ³ or less (used) | | |
| | With an internal combustion piston engine with extraneous ignition: | | |
| 87043139 | With an engine with a cylinder capacity of more than 2,800 cm ³ (used) | | |
| 87043199 | With an engine with a cylinder capacity of 2,800 cm ³ or less (used) | | |
| Total | | 385,708 | 374,030 |

Source: Federal Statistical Office 2015c and German Customs (internal data)

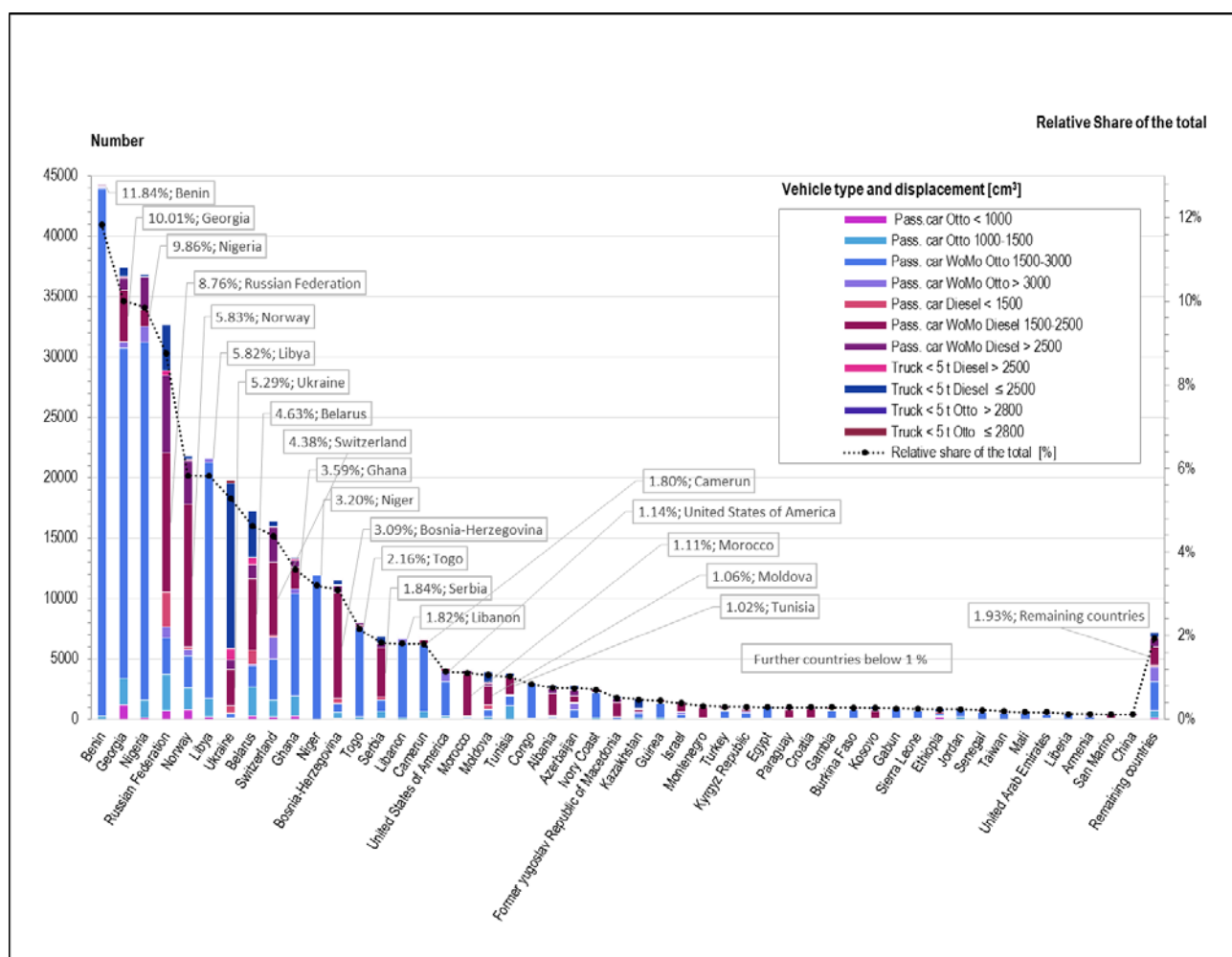
According to the representatives of Czech authorities, North and Central African countries are still an important target for second-hand vehicles from Germany. Achievable selling prices for German second-hand cars are partly significantly higher than the prices achievable in Germany. The technical requirements for both roadworthiness and the monitoring thereof are substantially lower in these countries than in Germany, so the vehicles could be used much longer, thus representing a higher economic value (Manhart 2015).

The following is an analysis of the exports of second-hand vehicles registered by the customs authority in 2013.

5.2.1.1 Evaluation of the customs authority statistical data

German customs provided data specifically for this project on all exports of second-hand vehicles to non-EU countries for 2013, which were specifically evaluated by the authors of the study. Based on this information, 374,030 vehicles from vehicle classes M1 and N1 (see also Table 43), exported to non-EU countries, were declared in 2013. The following Figure 31 contains a breakdown by target country, type of vehicle and displacement.

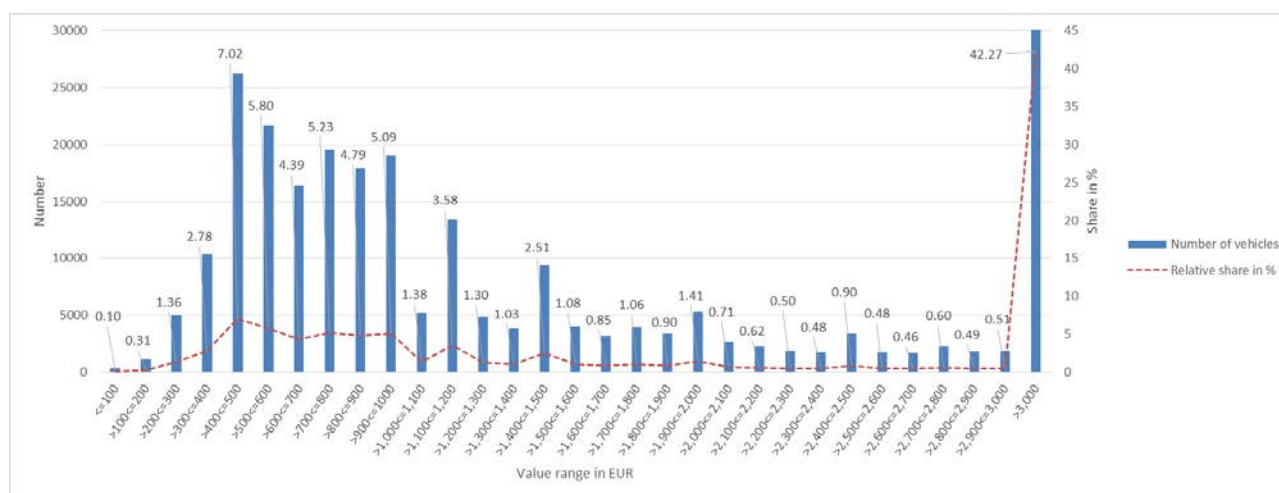
Figure 31: Number of second-hand vehicles from vehicle classes M1 and N1 exported from Germany to the target country in 2013



Source: Own representation, basis of data: information provided by German customs, Otto = Otto engine, WoMo = mobile home, Diesel = diesel engine

The information supplied by German Customs regarding the export of second-hand vehicles from Germany also include the values indicated in the export declarations of the vehicles. The evaluation of these export data by the authors of this study showed that 38.5% of the exports in the vehicle class M1 had a value of > EUR 3,000 and could therefore not be considered for the single-stage export procedure, unless special provisions were in place in the Member States. In the case of vehicles which are supposed to be assigned to the vehicle class N1, the proportion of vehicles with a value of > EUR 3,000 was 81.7%. Distribution according other value categories for both vehicle classes is shown in the following Figure 32.

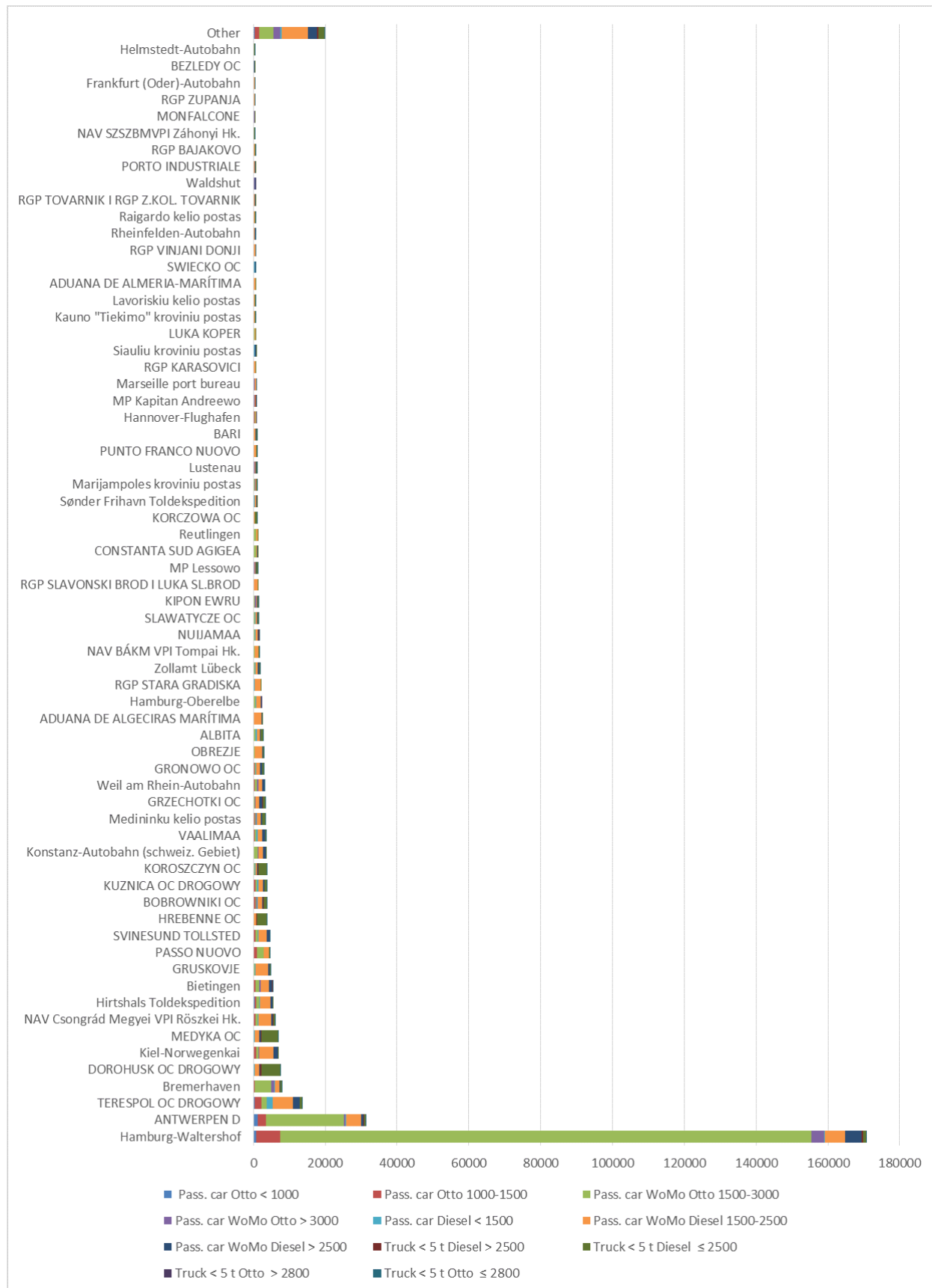
Figure 32: Value distribution of M1 and N1 MVs in non-EU countries



Source: Own representation, basis of data: information provided by German Customs
(Y axis limited to 30,000, number of exports over EUR 3,000 was 158,000)

The most important exit point from the customs territory of Germany for second-hand vehicles from vehicle classes M1 and N1 is Hamburg-Waltershof, followed by Antwerp (see Figure 33), given that these are the exit points for goods to be transported by sea via the ports of Hamburg and Antwerp.

Figure 33: Exports of second-hand vehicles from the vehicle classes M1 and N1 exported from Germany to non-EU countries in a breakdown by exit point from the customs territory and displacement

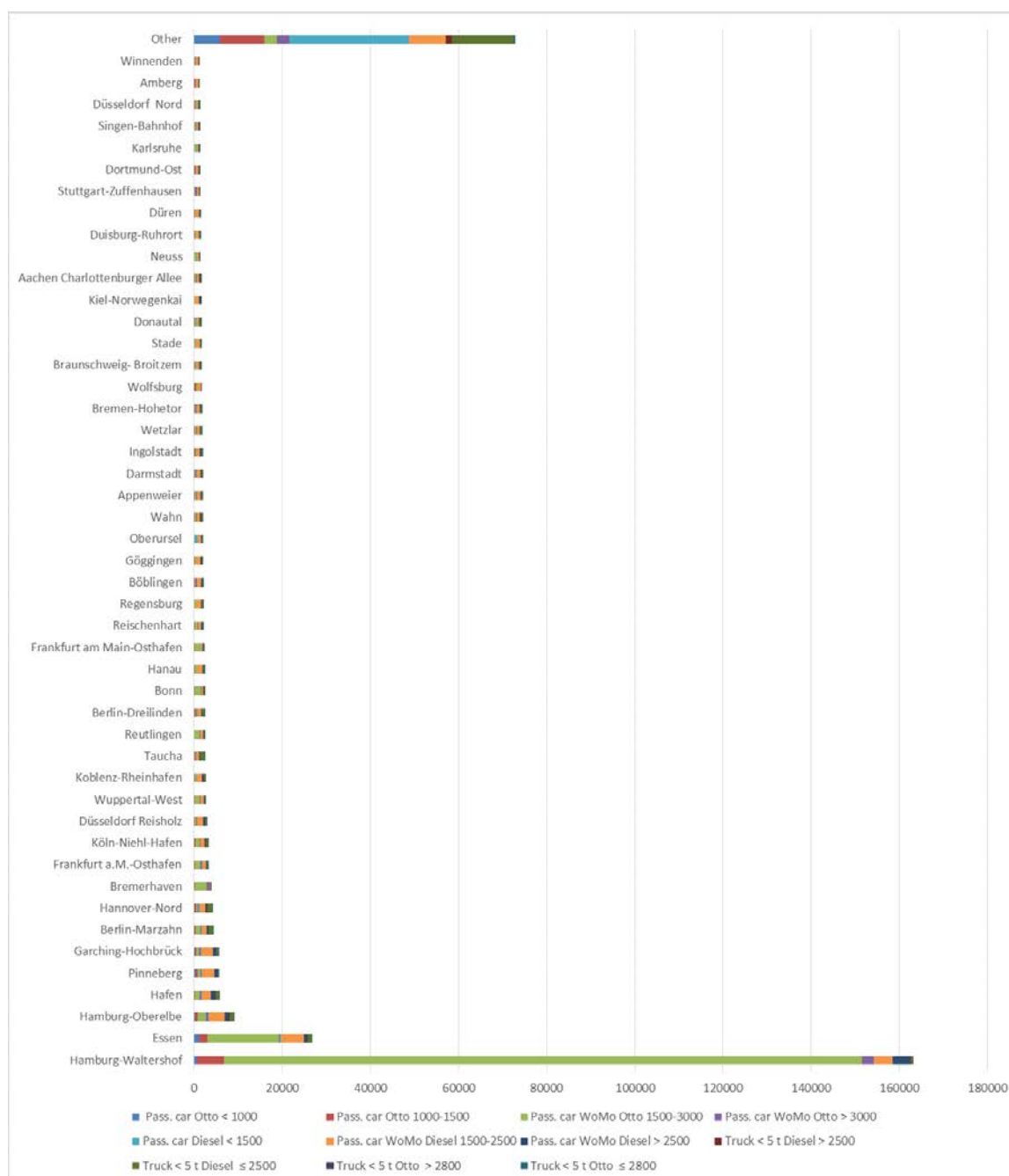


Source: Own representation, basis of data: information provided by German Customs, Otto = Otto engine, Diesel = diesel engine, WoMo = mobile home

Exports are declared at the customs office of export. Here again, Hamburg-Waltershof was the place with the strongest statistics, followed by Essen (probably due to the large car market located in the city, with a large number of sales transactions for second-hand vehicles declared for export immediately after sale on site ²⁴² (see Figure 34)).

²⁴² <http://www.autokino-automarkt.de/index.php/unsere-standorte/automarkt-essen>

Figure 34: Exports of second-hand vehicles from vehicle classes M1 and N1 exported from Germany to non-EU countries in a breakdown by customs office of export and displacement



Source: Own representation, basis of data: information provided by German Customs, Otto = Otto engine, Diesel = diesel engine, WoMo = mobile home

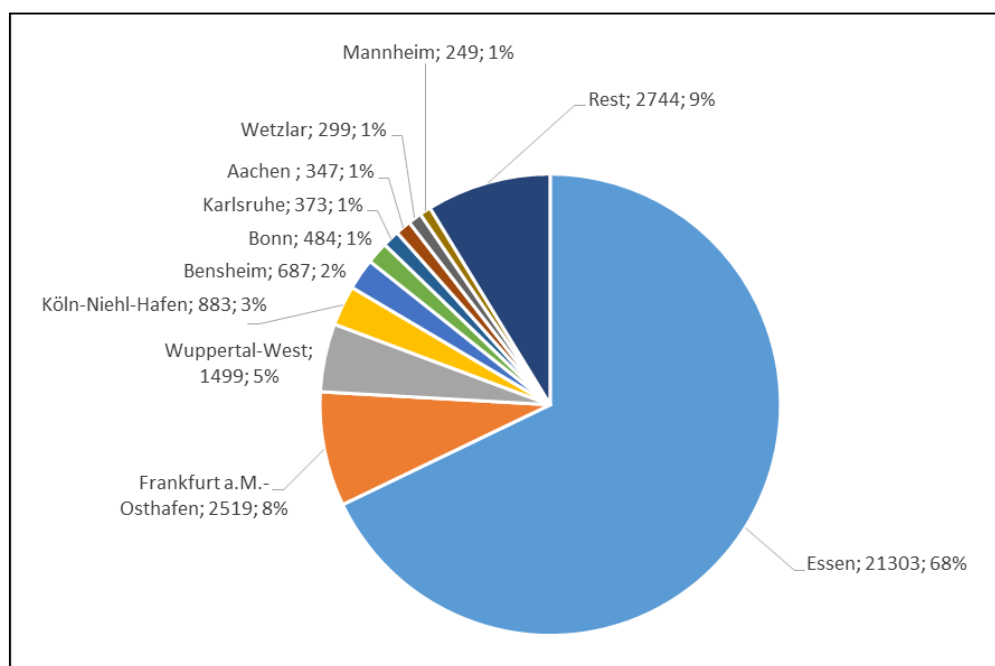
When evaluating the total number of second-hand vehicle exports from Germany, it should be taken into consideration that some of the second-hand vehicles exported via exit points from the customs territory of Germany may be approved in another EU Member State for the last time, but could reappear in German foreign trade statistics if these vehicles were exported by means of the single-stage export procedure (see in this regard also the comments on the customs procedures in Chapter 4.5.2 and Chapter 5.2.1.2 of this report). The statistics should ideally be adjusted for these vehicles. A large proportion of these vehicles leave the EU via the port of Hamburg (see in this regard also the statistics

on the exit points from the customs territory in Figure 33). The port of Hamburg is also used to forward vehicles from the Scandinavian region and Poland. According to the estimates of several players in the second-hand vehicle export market in Hamburg, the share of these vehicles is around 5-10% (personal discussions with export agents at the port of Hamburg in August-October 2015). Accordingly, 8,000 to 16,000 vehicles should be deducted from the approximately 160,000 second-hand vehicles exported via Hamburg by means of the single-stage export procedure. The 385,708 vehicles reflected in foreign trade statistics should be reduced by a corresponding number (average: 12,000 vehicles), so that a total of about 374,000 vehicles exported to non-EU countries and reflected in the foreign trade statistics, approved in Germany for the last time, should be used as a starting point. As these statements could not be further verified or substantiated, and the number of such vehicles did not significantly influence the total number, we decided not to deduct a definite number of vehicles. However, this aspect should be taken into consideration when evaluating the flow of information between EU Member States (see the following subchapter).

5.2.1.2 Export statistics for vehicles approved in Germany for the last time

The information provided by German Customs to the authors of the study on exports of second-hand vehicles contains no vehicle with a foreign customs office of export. Customs statistics for 2013 include 31,387 second-hand vehicles declared for export at a German customs office of export and leaving the EU via the exit point in Antwerp (see Figure 35).

Figure 35: Top 10 customs offices of export for second-hand vehicles from Germany with an exit point in Antwerp in 2013, indicating the number of vehicles exported and their share in percentage



Source: Own representation, basis of data: information provided by German Customs

The Belgian Customs maintain statistics on export declarations submitted at Belgian customs offices of export for second-hand vehicles exported to third countries²⁴³. For the year 2013, these statistics contain 116,732 second-hand vehicles from the vehicle class M1 with the indication 'country of

²⁴³ For product groups Nos. 87032190, 87032290, 87032390, 87032490, 87033190, 87033290 and 87033390.

origin: DE'. There is no information provision by Belgian Customs to German Customs with respect to these vehicles (Belgian Customs 2015). This was confirmed by the Federal Financial Directorate North (Bundesfinanzdirektion Nord 2015).

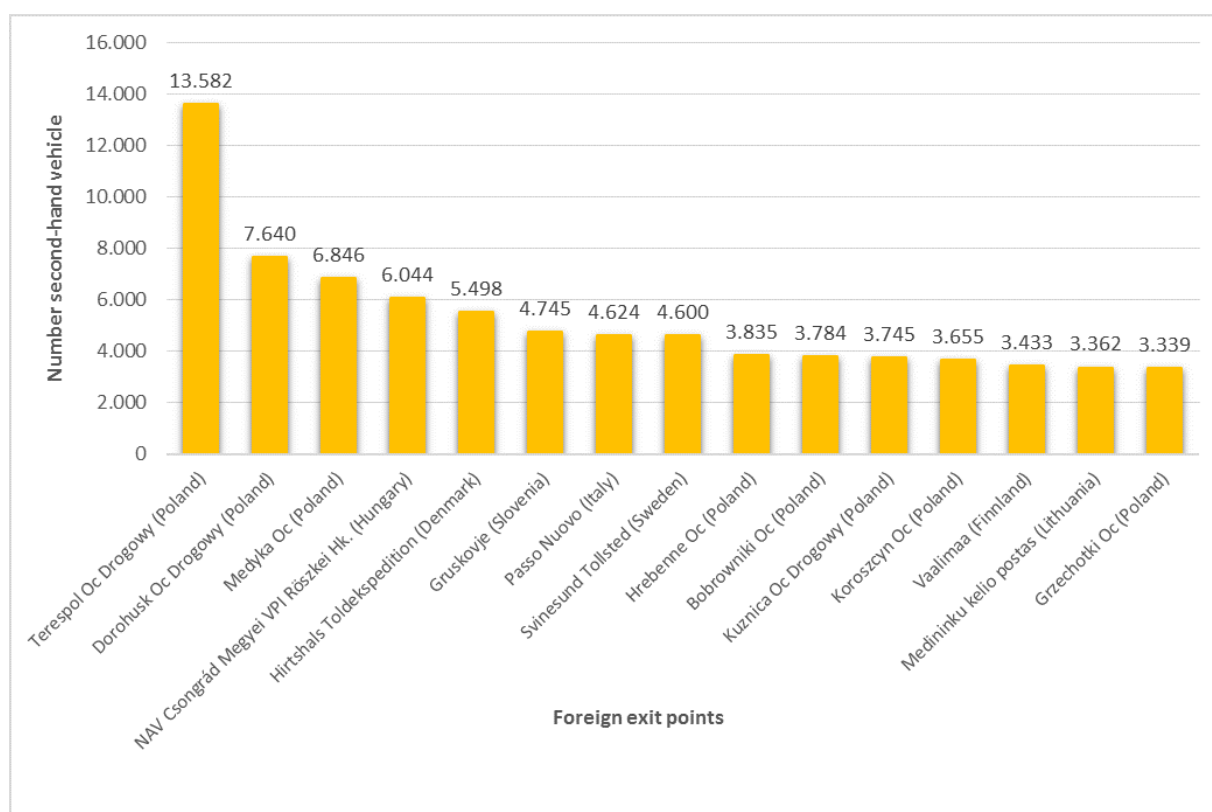
According to a statement by the Federal Financial Directorate North, the German IT system ATLAS cannot be used to make export declarations at foreign customs offices (Bundesfinanzdirektion Nord 2015). One consequence of this is that exports by means of the single-stage procedure cannot be declared through the IT system in Antwerp. This was confirmed by a haulier based in Hamburg, who stated he arranged the export of second-hand vehicles with a value of less than EUR 3,000 through Antwerp with the help of a Belgian customs agent who makes the export declarations for him. The haulier based in Hamburg has no information on whether the customs declarations of the Belgian customs agent always state Germany as the country of origin. The Belgian customs agent forwards the export confirmation received from the Belgian customs authority to the haulier based in Hamburg. According to his knowledge, there is no information provision to German authorities (pers. discussion with haulier on 22/09/2015 in Hamburg). It is not known whether this is the standard procedure used by hauliers of second-hand vehicles.

In 2013, 169,402 second-hand vehicles from the vehicle class M1 and 1,254 second-hand vehicles from the vehicle class N1 were exported via the port of Hamburg (basis of data: information provided by German Customs). Several vehicle export market players at the port of Hamburg reported that at least as many vehicles intended for export are exported from Germany via Antwerp, possibly even more (personal discussions with export agents at the port of Hamburg in August-October 2015 in Hamburg).

In conclusion, it can be stated that: Second-hand vehicles from Germany exported by means of the single-stage procedure or through customs agents from another EU Member State (exit point from the customs territory) are not systematically covered by German customs statistics. Based on the example of Belgium, it can be concluded that at least 116,732 second-hand vehicles belonging to vehicle class M1, which were last approved in Germany, were statistically not recorded in 2013.

This statistical gap represents a systematic gap in the flow of information. Therefore, it is to be assumed that similar gaps also exist for other exit points. Some information on which countries could be particularly relevant in this respect can be obtained by looking at the foreign exit points with the highest volumes of second-hand vehicle export from Germany in 2013 (see Figure 36).

Figure 36: TOP 15 foreign exit points for second-hand vehicles from vehicle classes M1 and N1 from Germany in 2013 (without Antwerp)



Source: Own representation, basis of data: information provided by German Customs

Poland takes the lead in terms of both the number of second-hand vehicles exported and the number of exit points (see Figure 37).

Figure 37: Distribution of the TOP 15 foreign exit points for second-hand vehicles from vehicle classes M1 and N1 from Germany in 2013 (without Antwerp)



Basis of data: Own representation based on a map from maps.google.com

Vehicles with a value of not more than EUR 3,000 do not necessarily have to be declared in the single-stage export procedure, but can also be exported by means of the two-stage export procedure (see Chapter 4.5.2). This is often used, according to the Federal Statistical Office, because declaration in Germany is easier for enterprises (Federal Statistical Office 2015a). Looking at the two-stage export declarations reflected in foreign trade statistics and taking into consideration the stated vehicle value, it is apparent that the share of vehicles with a value of not more than EUR 3,000 varies greatly depending on the Member State (adding up all exit points per country). While 85.5% of second-hand vehicles leaving the EU via Belgium have a value of less than EUR 3,000²⁴⁴, the corresponding share at the exit points located in Poland is only 7.4%²⁴⁵. For Finland and the Baltic States of Latvia, Lithuania and Estonia, the share varies between 0.6 and 6.3% (see Table 45). A large proportion of registered second-hand vehicle exports from Germany to Russia, Belarus and Ukraine takes place through these four countries and Poland. Poland alone accounts for 59% (Russia), 77% (Belarus) and 97% (Ukraine) of all registered exports from Germany to these countries. Additionally, there are exports to Kazakhstan, the Republic of Moldova, Azerbaijan, Mongolia and other countries.

As shown by the evaluation of data supplied by German Customs regarding the export of second-hand vehicles from Germany to non-EU countries, exports via Member States such as Slovenia, Croatia, Hungary, Romania, Bulgaria and Greece have a significantly higher share of lower-priced second-hand vehicles. The main target countries of exports via the exit points of these Member States are Georgia, Azerbaijan and the Republic of Moldova, but also Bosnia and Herzegovina or Serbia.

²⁴⁴ This does not yet include the 116,000 second-hand vehicles originating from Germany but not reflected in foreign trade statistics, which are exported in Belgium by means of the single-stage export procedure. If these are taken into account, the share of second-hand vehicles under EUR 3,000 increases to 96.9%.

²⁴⁵ If only second-hand passenger cars are into account, the share of vehicles under EUR 3,000 via Polish exit points from the customs territory is only 2.9%.

In the case of countries like Denmark or Sweden, the low share of low-value vehicles according to data supplied by German Customs regarding the exports of second-hand vehicles from Germany to non-EU countries can be explained by the fact that exports from there are almost exclusively directed to Norway and the Faroe Islands, and the exports registered by the customs authority are of a higher value there.

The low rate for Spain can also be explained by the target countries. The evaluation of data supplied by German Customs regarding the export of second-hand vehicles from Germany to non-EU countries showed that the majority of second-hand vehicles via Spanish exit points goes to the Mediterranean countries of the Middle East and North Africa. These countries are also approached by shipping companies from Hamburg and Antwerp. Exports via the latter mentioned exit points are in many cases more advantageous logistically and economically. Proportionally, this may affect low-priced vehicles more than high-priced vehicles.

The particularly high share of low-value second-hand vehicles via Antwerp could be explained by the fact that the target countries are in West and North Africa and the Middle East.

Discussions with players in the second-hand vehicle export market (e.g. Hamburg hauliers, shipping companies, end-of-life vehicle recyclers, customs) led to a presumption that target countries in Eastern Europe, Russia and South-East Europe also have a high share of exported vehicles with a low value. This is not reflected in the above figures obtained from customs statistics. The low share can be explained by the systematically non-existent information flow from the one-stage procedure.

Assuming that the share of second-hand vehicles under EUR 3,000 in these countries should also be significantly higher, estimates are made for 50% and 75% of the total number of vehicles. This means that with an estimate of e.g. 50%, it is assumed that the number of second-hand vehicles with a value of less than EUR 3,000 is identical to the number of vehicles with a value of more than EUR 3,000. The statistically recorded lower number of vehicles with a value below EUR 3,000 is therefore assumed to be equal to the higher number of vehicles with a value of more than EUR 3,000. This increases the assumed total number of vehicles. The difference between the statistically recorded figure and the assumed total number expresses a contribution to the elimination of the statistical gap if the estimate is reliable. This calculation is presented in Table 44, showing the example of Poland:

Table 44: Estimate for second-hand vehicles from vehicle classes M1 and N1 with a value < EUR 3,000 exported from Germany through the example of Poland

| Initial situation respectively additional estimation | Subarea | Amount | Share |
|---|---------------------------|--------|--------|
| Current records for Poland (data source: data supplied by German Customs regarding the export of second-hand vehicles from Germany to non-EU countries) | Total number of vehicles | 53,558 | 100 % |
| | Vehicle value > EUR 3,000 | 49,586 | 92.6 % |
| | Vehicle value < EUR 3,000 | 3,972 | 7.4 % |
| Estimate for second-hand vehicles < EUR 3,000: share of 50 %: | Vehicle value > EUR 3,000 | 49,586 | 50 % |
| | Vehicle value < EUR 3,000 | 49,586 | 50 % |

| | | | |
|---|-----------------------------------|---------------------------|-------|
| | Total number of recorded vehicles | 99,172 | 100 % |
| | Additionally recorded vehicles | 49,586-3,972= 45,614 | |
| Estimate for second-hand vehicles < EUR 3,000: share of 75 %: | Vehicle value > EUR 3,000 | 49,586 | 25 % |
| | Vehicle value < EUR 3,000 | 148,758 | 75 % |
| | Total number of recorded vehicles | 198,344 | 100 % |
| | Additionally recorded vehicles | 148,758-3,972= 144,786 | |

The result for all EU Member States under review is as shown in the following Table 45.

Table 45: Comparison of the proportionate vehicle values via different countries of origin

| Country of origin | Total number of vehicles with an exit point in ... | Of which vehicles with a value < EUR 3,000 / vehicle (number of pieces) | Of which vehicles with a value < EUR 3,000 / vehicle (share in %) | Estimate for second-hand vehicles < EUR 3,000: share of 50 % | Estimate for second-hand vehicles < EUR 3,000: share of 75 % |
|--------------------------|--|---|---|--|--|
| Belgium (for comparison) | 31,559 | 26,987 | 85.51 | - | - |
| Poland | 53,558 | 3,972 | 7.42 | 45,614 | 144,786 |
| Slovenia | 8,795 | 4,203 | 47.79 | 195 | 9,573 |
| Lithuania | 8,400 | 527 | 6.27 | 7,346 | 23,092 |
| Hungary | 8,332 | 3,269 | 39.23 | 1,794 | 11,920 |
| Italy | 7,923 | 2,814 | 35.52 | 2,295 | 12,513 |
| Croatia | 7,716 | 3,862 | 50.05 | 0 | 7,700 |
| Finland | 5,698 | 34 | 0.60 | 5,630 | 16,958 |
| Denmark* | 5,664 | 23 | 0.41 | 0 | 0 |
| Romania | 4,740 | 1,817 | 38.33 | 1,106 | 6,952 |
| Sweden* | 4,733 | 18 | 0.38 | 0 | 0 |
| Spain* | 3,453 | 29 | 0.84 | 0 | 0 |
| Bulgaria | 2,806 | 614 | 21.88 | 1,578 | 5,962 |
| Greece | 1,624 | 220 | 13.55 | 1,184 | 3,992 |
| Latvia | 1,208 | 73 | 6.04 | 1,062 | 3,332 |
| Estonia | 297 | 2 | 0.67 | 293 | 883 |
| Total (without Belgium) | 124,947 | 21,477 | 17.19 | 68,097 | 247,663 |

With the 116,000 unregistered exports via Belgium added, this would result in a total between **184,000 and approximately 363,000** unregistered exports of second-hand vehicles from vehicle classes M1 and N1 to non-EU countries. It can be assumed there is a trend towards the lower range as the value distributions shown in Table 45 make a share of 75% of vehicles worth less than EUR 3,000 highly unlikely across all Member States. Furthermore, the figure for the share of vehicles in exports with a value below EUR 3,000 is only indicative. An inquiry sent to the Lithuanian, Polish and Dutch customs authorities showed there was a possibility that second-hand vehicles from Germany are exported via these Member States by means of the single-stage export procedure. However, unlike Belgium, there are no reliable statistics on this fact, and there is no regular information exchange with the authorities of other Member States (Lithuanian Customs 2016, Polish Customs 2016, Dutch Customs 2016). There are no further data for the verification of export figures. For the remaining part of the process, it is assumed, based on the above-described deductions, that these exports represent a similar volume of orders as exports via Antwerp.

According to current knowledge, the number of vehicles exported to non-EU countries must therefore be increased by a number in the order of 250,000. This figure includes exports via

Antwerp (approximately 116,000) and the exports of N1 vehicles (approximately 41,000) recorded by the Federal Statistical Office which were not taken into account yet. With the exports of M1 vehicles (approximately 344,000) taken into account so far, this results in a total number of approximately 590,000 M1 and N1 vehicles exported from Germany in 2013.

5.2.2 Transfer as a second-hand vehicle to an EU Member State

In the scenario ‘transfer to other EU Member States with re-registration’, the vehicle is taken out of service without a certificate of recycling and transported to another EU Member State for re-registration there. Currently, two data sources are available for the whereabouts of vehicles in this manner, namely the REGINA database and the internal trade statistics (see Chapter 3.2.1.2 for more details). The REGINA database included around 1.22 million vehicles in 2013²⁴⁶. In the intra-trade statistics, 138,614 used vehicles from Germany were registered in 2013 (as at June 2016).

Comparing the number of REGINA re-registrations with the figures of the intra-Community trade statistics in the context of other EU Member States, it can be concluded that at least 90% of vehicles transferred to and re-registered in other EU Member States are below the reporting threshold for internal trade statistics (EUR 500,000 per exporter per year, see Chapter 4.8.3).

At the same time, experts assess reports via REGINA from some Member States as being incomplete (FMTA 2015a, DVA 2015). This assessment is based on the following three criteria:

1. The number of transmitted notifications compared to those expected,
2. An evaluation of the reliability of the notification path (e.g. central, digital, regular mail, fax, e-mail, single, collective, etc.),
3. The frequency of inquiries from German regulatory authorities, because a corresponding notification from abroad has so far been absent.

The following Table 46 summarises notifications from abroad in 2014 regarding vehicles re-registered there which were previously approved in Germany and assigns to them an expert assessment of the Federal Motor Transport Authority (FMTA 2015 c) on the completeness of the information. This table includes all EU Member States, EEA (European Economic Area) countries Iceland, Liechtenstein and Norway and Switzerland, as well as Bosnia and Herzegovina. Other countries, in which fewer than 100 vehicles were re-registered from Germany, were not taken into account.

In its 2013 report to the European Commission, FEA determined the number of second-hand vehicle transfers based on information from REGINA and the trade statistics (the higher number was used in each case). The relevant data source is named in the last column of the following Table 46.

²⁴⁶ Within the REGINA re-registration statistics, all vehicles re-registered in a Member State and reported to FMTA are recorded, regardless of vehicle class. Thus, in addition to the vehicle classes M1 and N1, further vehicles can be captured in the statistics, which results in data uncertainty. The share of the respective vehicle classes can be evaluated by FMTA using a fee-based special evaluation process, since vehicle identification numbers are also stored in the feedback.

Table 46: Notifications from abroad in 2014 regarding vehicles re-registered there which were previously registered in Germany

| Country | Additional information | Quality of reports (rough estimate for completeness and correctness): Reliable | Quality of reports (rough estimate for completeness and correctness): Unreliable | Quality of reports (rough estimate for completeness and correctness): Cannot be assessed | Data source FEA for determining the number of vehicles (TS= trade statistics) |
|-------------------------------|----------------------------------|--|--|--|---|
| Austria | | | x | | TS |
| Belgium | | x | | | FMTA |
| Bosnia and Herzegovina | | | | x | n/a |
| Bulgaria | | x | | | FMTA |
| Croatia | Croatia – reporting since 9/2014 | x | | | TS |
| Cyprus | | | x | | TS |
| Czech Republic ²⁴⁷ | | x | | | FMTA |
| Denmark | | x | | | FMTA |
| Estonia | | x | | | FMTA |
| Finland | | x | | | FMTA |
| France | | x | | | FMTA |
| Greece | | | x | | TS |
| Hungary | | x | | | FMTA |
| Iceland | | x | | | n/a |
| Ireland | | | x | | FMTA |
| Italy | | | x | | TS |
| Latvia | | x | | | FMTA |
| Liechtenstein | | x | | | n/a |
| Lithuania | | x | | | FMTA |
| Luxembourg | | x | | | FMTA |
| Malta | | x | | | FMTA |
| Netherlands | | x | | | FMTA |

²⁴⁷ FMTA classifies the reporting behaviour of the Czech Republic as reliable. Note that actual players in the Czech Republic assume there is some under-coverage in the REGINA statistics due to the data acquisition software used (see Chapter 3.2.1.3 for more details).

| Country | Additional information | Quality of reports (rough estimate for completeness and correctness): Reliable | Quality of reports (rough estimate for completeness and correctness): Unreliable | Quality of reports (rough estimate for completeness and correctness): Cannot be assessed | Data source FEA for determining the number of vehicles (TS= trade statistics) |
|-------------|-----------------------------------|---|---|---|--|
| Norway | | x | | | n/a |
| Poland | | x | | | FMTA |
| Portugal | Portugal – reporting since 8/2014 | x | | | TS |
| Romania | | x | | | FMTA |
| Slovakia | | x | | | FMTA |
| Slovenia | | x | | | FMTA |
| Spain | | | x | | TS |
| Sweden | | x | | | FMTA |
| Switzerland | | x | | | n/a |
| UK | | | x | | FMTA |

Source: Columns 1-5: FMTA (2015c), last column: FEA (2015)

In most cases where the expert assessment of unreliable data is based on the REGINA statistics, FEA used intra-Community trade statistics (Greece, Italy, Austria, Spain, Cyprus). FEA used REGINA data only for the UK and Ireland, which are incomplete according to FMTA.

Table 47: Comparison of REGINA reports and trade statistics reports for other countries

| Country | Re-registrations acc. REGINA | Trade statistics | Rate (veh. in trade statistics divided by veh. in REGINA) |
|----------------|------------------------------|------------------|---|
| Croatia | 0 | 1,399 | No re-registration acc. REGINA |
| Cyprus | 0 | 232 | No re-registration acc. REGINA |
| Poland | 487,585 | 11,022 | 2% |
| Lithuania | 79,438 | 2,917 | 4% |
| Bulgaria | 43,701 | 1,827 | 4% |
| Romania | 191,265 | 10,446 | 5% |
| Czech Republic | 88,724 | 6,251 | 7% |
| Latvia | 26,769 | 1,935 | 7% |
| Sweden | 9,029 | 1,180 | 13% |
| Estonia | 14,651 | 2,387 | 16% |
| Finland | 14,910 | 2,520 | 17% |
| Hungary | 33,455 | 5,781 | 17% |
| France | 91,878 | 17,666 | 19% |
| Malta | 83 | 17 | 20% |
| Netherlands | 58,334 | 14,874 | 25% |
| Slovenia | 4,528 | 1,278 | 28% |
| Slovakia | 15,556 | 4,644 | 30% |
| Ireland | 34 | 12 | 35% |
| Luxembourg | 9,123 | 3,339 | 37% |
| UK | 714 | 356 | 50% |
| Belgium | 24,771 | 13,181 | 53% |
| Denmark | 4,985 | 3,527 | 71% |
| Italy | 9,646 | 13,329 | 138% |
| Spain | 3,180 | 5,461 | 172% |
| Austria | 3,281 | 10,074 | 307% |
| Greece | 164 | 893 | 545% |
| Portugal | 141 | 2,066 | 1465% |
| Total | 1,215,945 | 138,614 | Weighted average: 11% |

According to the comparison above, a weighted average of 11%²⁴⁸ of second-hand vehicles is represented in foreign trade statistics, which were actually reported as re-registered after transfer to another EU Member State.

²⁴⁸ Average value weighted by the number of vehicles, 114% arithmetic mean.

During data correction, various databases and information were added for the given Member States and corresponding adjustments were taken into account. For Austria, the figures from the trade statistics are about 40,000 vehicles below the number of second-hand vehicles registered in Austria in 2013 and previously registered in Germany (Statistik Austria 2016). For Italy, the importance of German second-hand vehicles is considered to be low (23,000 M1 and N1 vehicles in 2009 (Merz and Mehlhart 2011)). The market area in the Czech Republic, which has recently been particularly important for German second-hand vehicles, is now almost saturated according to various players in the Czech market (Kramarik 2015, Livora 2015). As a further reason, Czech players mentioned that, as they see it, the vehicles that had previously been particularly interesting for this market had also almost completely disappeared from the market due to the environmental bonus ('scrapping incentive'). The UK has the largest used vehicle market in Europe²⁴⁹. Even so, altogether only 1% of second-hand vehicles bought in the UK in 2013 came directly from abroad (EU 2015). The domestic second-hand vehicle market seems to be sufficiently large, and the market for imports is also limited by right-hand drive vehicles (ibid.).

In accordance with the studies and conclusions presented, the export figures indicated in the following Table 48 show a total number of approx. 1.37 million for second-hand vehicle exports in 2013. The REGINA figures were used for Member States for which FMTA had classified REGINA data as complete (see Table 46). Unit numbers from the trade statistics were used as a basis and multiplied by a correction factor of 9 for Member States for which FMTA had classified REGINA data as incomplete, unless other available data sources reflected different data (see previous paragraph). This is indicated in the 'Notes' column in the table for each case.

Table 48: Updated values for the transfer of second-hand vehicles to EU countries using available data sources and additional justified estimates

| Country | Re-registrations acc. REGINA | Transfer acc. intra-Community trade statistics | Completed values (including estimates, if any) | Note |
|----------------|------------------------------|--|--|--|
| Austria | 3,281 | 10,074 | 54,326 | Basis: Personal discussion with Statistik Austria 25/10/2016 |
| Belgium | 24,771 | 13,181 | 24,771 | |
| Bulgaria | 43,701 | 1,827 | 43,701 | |
| Croatia | 0 | 1,399 | 12,591 | |
| Cyprus | 0 | 232 | 2,088 | |
| Czech Republic | 88,724 | 6,251 | 88,724 | |
| Denmark | 4,985 | 3,527 | 4,985 | |
| Estonia | 14,651 | 2,387 | 14,651 | |
| Finland | 14,910 | 2,520 | 14,910 | |
| France | 91,878 | 17,666 | 91,878 | |
| Greece | 164 | 893 | 8,037 | |
| Hungary | 33,455 | 5,781 | 33,455 | |

²⁴⁹ No quantitative information is available on the relevance of imports from Germany.

| Country | Re-registrations acc. REGINA | Transfer acc. intra-Comm- unity trade sta- tistics | Completed values (including esti- mates, if any) | Note |
|-------------|---------------------------------|---|--|---|
| Ireland | 34 | 12 | 306 | as REGINA is higher than trade: here REGINA volumes; factor 9 applied from average deviation, as REGINA data classified as incomplete |
| Italy | 9,646 | 13,329 | 23,000 | Relatively low relevance of German second-hand vehicle imports for Italy according to Merz and Mehlhart (2011); 23,000 vehicles were taken into account according to this data source |
| Latvia | 26,769 | 1,935 | 26,769 | |
| Lithuania | 79,438 | 2,917 | 79,438 | |
| Luxembourg | 9,123 | 3,339 | 9,123 | |
| Malta | 83 | 17 | 83 | |
| Netherlands | 58,334 | 14,874 | 58,334 | |
| Poland | 487,585 | 11,022 | 487,585 | |
| Portugal | 141 | 2,066 | 18,594 | |
| Romania | 191,265 | 10,446 | 191,265 | |
| Slovakia | 15,556 | 4,644 | 15,556 | |
| Slovenia | 4,528 | 1,278 | 4,528 | |
| Spain | 3,180 | 5,461 | 49,149 | |
| Sweden | 9,029 | 1,180 | 9,029 | |
| Total | 1,215,945 | 138,614 | 1,370,080 | |
| UK | 714 | 356 | 3,204 | |

Thus, the sum of statistically documented transfers (from the maximum of REGINA and intra-Community trade statistics) amounts to 1,232,987 vehicles. The difference between transfers documented in the statistics and the completed transfer figures (incl. estimates) amounts to 1,370,080-1,232,987 = approx. 137,000 vehicles. According to current knowledge, the number of second-hand vehicles transferred to EU countries must therefore be increased by 137,000.

5.2.3 Transfer as a second-hand vehicle to an EU Member State without re-registration there

Furthermore, transfer as a second-hand vehicle is performed to an EU Member State with subsequent non-authorised dismantling, instead of re-registration there. According to discussions with authorities and economic operators in Poland, Lithuania and the Czech Republic, there is a high share of unauthorised treatment facilities in some of these Member States (Štátný 2015). In such illegal facili-

ties, as claimed by their legal competitors in interviews made with them, even the minimum environmental requirements are usually ignored (Nedelka 2015). This results in cost savings to such an extent that the import of end-of-life vehicles from Germany can be made profitable. Actions against such illegal businesses are difficult to implement in practice, primarily because the identification of actual responsible persons is made deliberately complicated through subcontractor relationships, especially by employing persons or enterprises not based in the EU (e.g. claims from Romania, Poland and the Czech Republic; Scholz AG 2015a; Pajer 2015; Nedelka 2015).

Recycling companies in various countries, particularly in Eastern Europe (e.g. the Czech Republic, Poland, Lithuania), reported in interviews there was a practice of halving and exporting end-of-life vehicles and re-assembling them in destination countries with high import duties or bans (Scholz AG 2015a; Pajer 2015). The corresponding business model is based on two elements: First, the transport costs of the export are significantly reduced by halving the vehicle. With this method, a significantly higher number of vehicles can be exported in a container at the same cost. Based on information from the Czech recycling company, non-authorised dismantling takes place both in Germany and in regions of the neighbouring countries close to the border with less strict controls on illegal dismantling activities (Pajer 2015). However, no authority reported any shipment of vehicle halves across the border in large volumes. Such players partly also use legal facilities hired for the short term for the non-authorised dismantling of vehicles, but the majority of dismantling operations is likely to take place illegally in backyards.

It was reported from France that one of the main objectives of the past few years had been to minimise the number of illegal recycling companies, after the share of illegal facilities had been estimated at 40% in 2012 (ARIA 2016). It was also reported for the UK and Portugal that these countries had taken great efforts and implemented successful measures against illegal facilities by means of country-wide campaigns and coordinated raids (EReg 2016).

However, the illegality of such facilities is often part of the grey zone: So, for instance, it was reported for the Czech Republic that the licenses for authorised dismantling facilities were granted for an indefinite period of time, and that, if audits are not regularly performed, the basis for re-approval may be entirely missing (Manhart 2015). This is further complicated by the fact that the operation of an authorised dismantling facility is actually subject by law to a contract with a manufacturer or importer: Out of the approx. 570 facilities, however, only about 200 have such a contract; historical import licenses for a very limited number of vehicles are partially used to issue such contracts in very large numbers and in obviously abusive ways.

On the basis of these and other discussions, talks with players in the market of end-of-life vehicle disposal in Germany, as well as the results of an on-site appointment at the vehicle market in Essen, the economic drivers for transferring for non-authorised dismantling seem to be comparable to those motivating whereabouts in Germany. The volume of non-authorised dismantling in other EU countries and non-authorised dismantling in Germany is assumed to be comparable (here: approx. 130,000 vehicles) (see also Chapter 5.3.2). With the approx. 10,000 vehicles recycled after an accident or similar occurrence in authorised dismantling facilities (see the following Chapter 5.3.1) with a Certificate of Destruction, approx. 140,000 vehicles remained abroad in 2013 without any re-registration.

5.3 Authorised and non-authorised dismantling in Germany and abroad

5.3.1 Dismantling in authorised dismantling facilities in EU Member States

There is the possibility that end-of-life vehicles from Germany are shipped to EU Member States for recycling in authorised dismantling facilities. A legal requirement for that is a notification, since the operation consists of a cross-border transport of hazardous waste (see Chapter 4.4.3). Based on statistics on cross-border waste transport, no end-of-life vehicles from Germany were notified of in 2013

for recycling in authorised dismantling facilities in other EU Member States (Federal Statistical Office 2015d).

FMTA maintains internal statistics with Certificates of Destruction from abroad, issued when the vehicles were withdrawn from service. In 2013, 10,092 end-of-life vehicles were statistically recorded in this way (FMTA 2015d). However, these are vehicles that suffered an accident in other EU countries and were subsequently recycled in authorised dismantling facilities, and not ones for which a notification should have been given.

The determination of whether the shipment of an end-of-life vehicle is taking place is made difficult by the complex demarcation between end-of-life and second-hand vehicles, along with the accompanying complicated control situation of the authorities. There are, for example, cases where audits by the authorities of an EU Member State found that vehicles from Germany recycled in authorised dismantling facilities in the given Member State had actually already been end-of-life vehicles at the time of crossing the border, without prior notification.

Despite these uncertainties, however, experts estimate that the recycling of end-of-life vehicles from Germany in authorised dismantling facilities of other EU Member States does not take place in relevant quantities without statistical records.

5.3.2 Dismantling in facilities other than authorised dismantling facilities in Germany

The following section describes the procedures and results of various activities providing a basis for estimating the number of statistically not recorded vehicles disassembled in other than authorised dismantling facilities in Germany. For that purpose, surveys and discussions were held at the site of and with authorised dismantling facilities, the sales of spare parts were investigated, and the incoming and outgoing flows of shredding facilities were examined.

5.3.2.1 Evaluation of the questionnaire for authorised dismantling facilities regarding non-authorised dismantling in Germany

Preliminary remark: In the present report, the term ‘non-authorised dismantling’ is used to describe players who disassemble vehicles outside authorised dismantling facilities. At the time when the questionnaire was conceived and implemented, the term ‘dismantler’ was used in the project with the same meaning. This means the term ‘dismantler’ referred to a facility disassembling vehicles which is, however not an authorised dismantling facility according to the ELV Ordinance. ‘Dismantlers’ may also remove operating liquids, as well as pollutants or hazardous substances. In order not to falsify the evaluation of the questionnaire, the term ‘dismantler’ is further used in the presentation of the survey and its results. The same applies to the term ‘used car’ instead of the term ‘second-hand vehicle’ used elsewhere in the report.

It should also be noted that, due the very small sample in some cases, the established correlations are quite uncertain from a statistical point of view and should therefore only serve as indicators. This applies to all further descriptions of possible statistical correlations in this Chapter.

In the period from 07/06/2015 to 06/11/2015, all authorised dismantling facilities in Germany were asked about the whereabouts and non-authorised dismantling of (end-of-life) vehicles. The survey was conducted in the form of a largely standardised questionnaire and was sent electronically via the mail distributor for e-car²⁵⁰, which included all dismantling facilities authorised at that time. The companies were informed that the data would only be processed and published anonymously. With

²⁵⁰ Efficient Computer Aided Recycling (e-car) is an IT software tool from project partner K.a.p.u.t.t. GmbH, specialised in operating management software for car recyclers and car manufacturers (www.kaputt-gmbh.de).

76 returned questionnaires, the response rate was 6.4 %, based on the number of authorised dismantling facilities included in the 2013 survey of the Federal Statistical Office (1,196). Of these, 70 questionnaires could be used for evaluation purposes. The respondents were asked to characterise the non-authorised dismantling facilities known to them in their area. The answers described the subjective impressions of respondents regarding the business models of non-authorised dismantling facilities and the quantitative relevance of this form of whereabouts for second-hand vehicles. The group of players in the actual focus of the investigation ('dismantlers') could not be asked as these players are difficult to identify, and, furthermore, they show a low willingness to provide information due to their illegal activities.

As a result of the low response rate and the selected survey method, there are considerable ambiguities in the assessment of the quality of responses, which must be taken into account when interpreting the results. Therefore, the results should be seen as perceptions of the business models and the possible quantitative relevance, rather than reliable insights.

Results of the survey

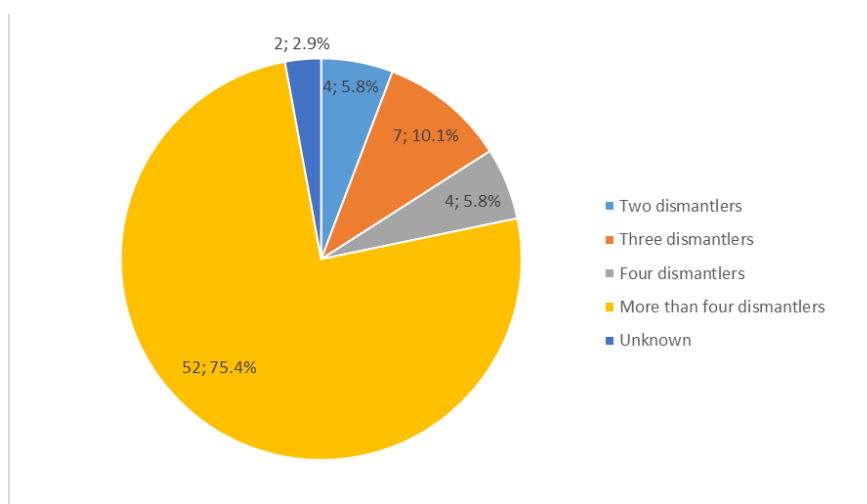
The questionnaire consisted of eleven questions altogether, divided into four sections. Section 1 discussed the quantitative relevance of non-authorised dismantling. Here only one answer per question was possible. Section 2 asked about business models for non-authorised dismantling. Unlike Section 1, more than one answer was possible here. Questions in the third section covered sales channels for spare parts and stripped vehicles from non-authorised dismantling. Again, multiple responses were allowed. In the fourth section, respondents had the opportunity to make proposals and suggestions for improvement.

Estimated number of non-authorised dismantling facilities

The first question was about known non-authorised dismantling facilities in the area of authorised dismantling facilities. The response options ranged from '1 dismantler' to 'more than 4 dismantlers'. It was also possible to specify 'not known'. With 52 authorised dismantling facilities and 75.4 % of respondents, a clear majority of the 69 responding authorised dismantling facilities indicated that more than four non-authorised dismantling facilities were known to them in their area. Four facilities (5.8%) indicated they knew four such facilities, seven facilities (10.1%) knew three, and, again, four (5.8 %) knew two non-authorised dismantling facilities. Two responding facilities (2.9%) indicated they knew no such facilities at all. Adding up the figures, this would result in $305+x$ known non-authorised dismantling facilities²⁵¹. However, due to the methodology used, it cannot be ruled out that there are some overlapping data, so dismantling facilities from the same region refer to the same non-authorised dismantling facilities. An analysis of the geographical distribution of the authorised dismantling facilities participating in the survey showed these were distributed relatively evenly over the territory of Germany. Therefore, the likelihood of overlaps seems to be quite low.

²⁵¹ $52 \cdot 5$ non-authorised dismantling facilities + $4 \cdot 4$ non-authorised dismantling facilities + $7 \cdot 3$ non-authorised dismantling facilities + $4 \cdot 2$ non-authorised dismantling facilities + x non-authorised dismantling facilities.

Figure 38: Data on the estimated number of non-authorised dismantling facilities in the area of respondents



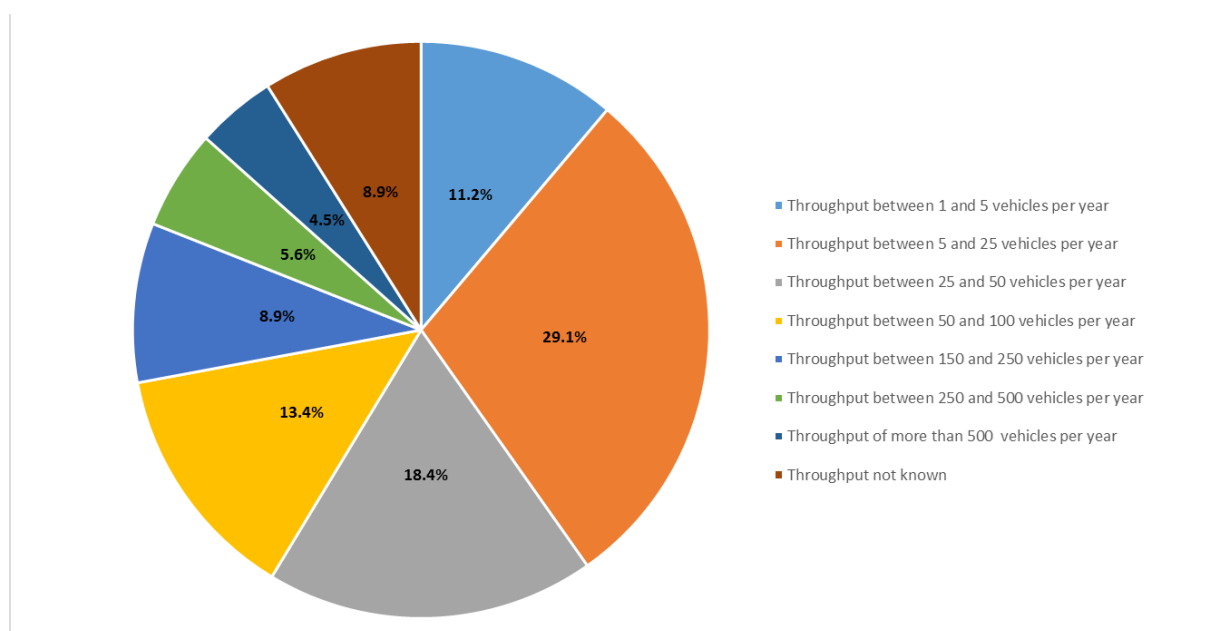
N = 69

Vehicle throughput per non-authorised dismantling facility

Question 2 refers to the estimated vehicle throughput per known non-authorised dismantling facility. Each dismantling facility had the opportunity to create a profile for four non-authorised dismantling facilities known to it in its area. Theoretically, this could have resulted in $70 \times 4 = 280$ profiles. However, only 67 questionnaires were suitable for evaluation for this question, so the maximum number of profiles would have been 268. In question 1, 56 of the responding dismantling facilities indicated they knew four or more dismantlers. This means not all respondents filled out all four profiles, so this question finally resulted in 179 profiles from the survey.

Based on the respondents' estimates, more than half of the characterised non-authorised dismantling facilities had a vehicle throughput of 50 or less annually. Therefore, non-authorised dismantling facilities seem to be small 'facilities' in most cases. More than one in ten non-authorised dismantling facilities (11.2 %) had a throughput of 1 to 5 vehicles, almost one in three (29.1 %) had a throughput of 5 to 25 vehicles, and nearly one in five non-authorised dismantling facilities (18.4 %) processed 25 to 50 vehicles. For 27.9 % of the facilities, throughput is estimated between 50 and 500 vehicles a year, while only 4.5 % had a throughput of more than 500 vehicles. For nearly one in ten non-authorised dismantling facilities (8.9 %), respondents could not or did not want to make an estimation.

Figure 39: Data on estimated vehicle throughput per non-authorised dismantling facility annually in percentage



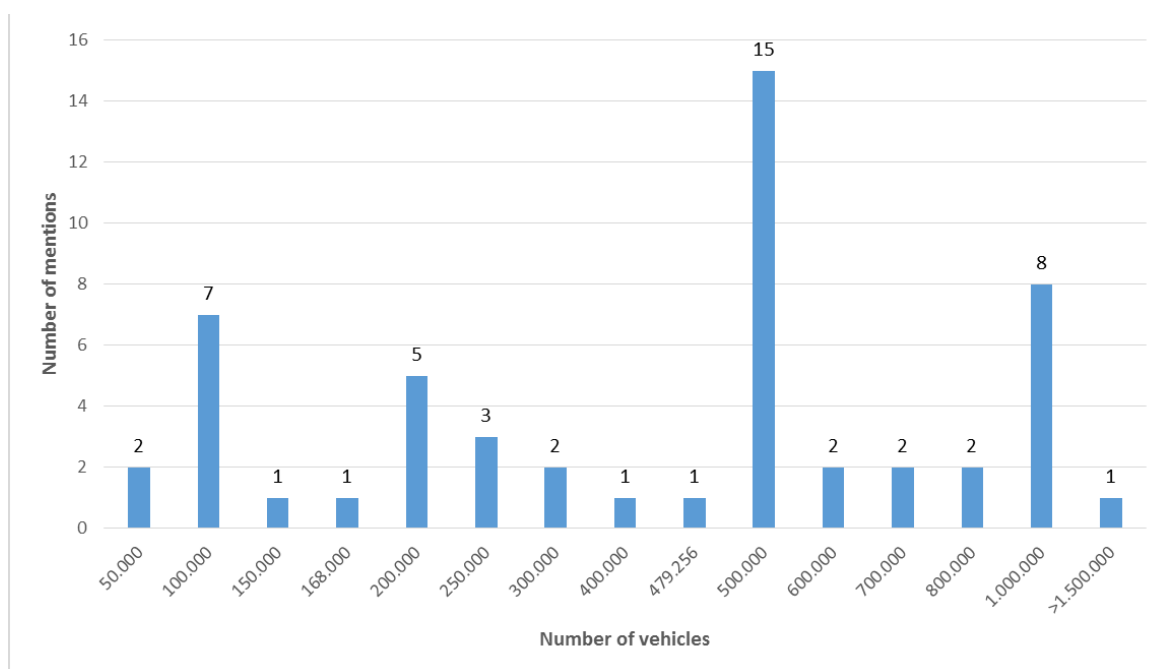
N = 179

Estimated number of end-of-life vehicles dismantled annually in non-authorised dismantling facilities in Germany

In question 3, respondents were asked to estimate the total number of vehicles annually processed in Germany at dismantling facilities not authorised in accordance with the End-of-Life Vehicle Ordinance. Possible answers were not specified here, respondents had to enter their own answers. 53 respondents entered figures between 50,000 vehicles a year to more than 1.5 million vehicles a year. In 41 of the responses (77.4 %), figures ranged between 200,000 and 1 million vehicles, and the answer most frequently given was 500,000 vehicles, with 15 (28.3 %) individual mentions²⁵². On average, the respondents estimated that 482,023 vehicles are assigned to non-authorised dismantling in Germany annually.

²⁵² Of which, the 1st quartile is at 200,000 vehicles, the median at 500,000 vehicles, and the 3rd quartile at 600,000 vehicles.

Figure 40: Data on the estimated number of vehicles dismantled annually in non-authorised dismantling facilities in Germany



N = 53

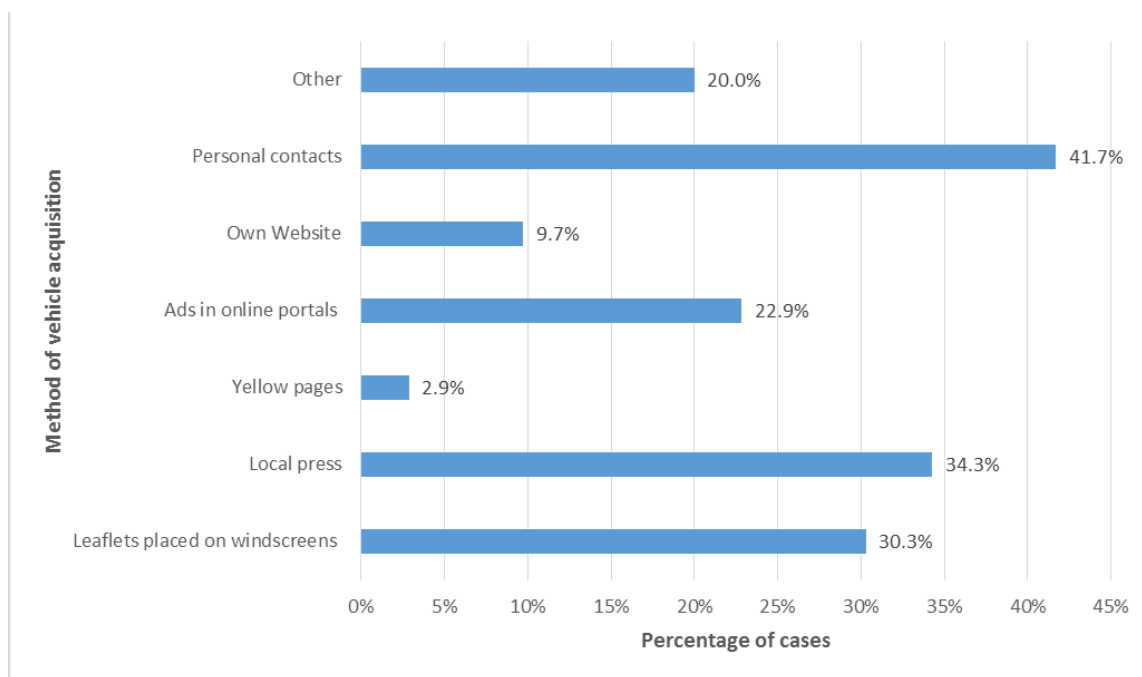
Method of vehicle acquisition

In question 5²⁵³, it was asked how non-authorised dismantling facilities acquired vehicles. Multiple answers were possible for this question too, so 1.6 answers were given on average for each non-authorised dismantling facility. The picture outlined by the respondents is quite heterogeneous. Approximately every third non-authorised dismantling facility (34.3 %) advertises itself in the local press or by means of leaflets placed on windscreens (30.3 %). Personal contacts are also a method of sourcing for 41.7 % of non-authorised dismantling facilities. Every fifth facility (22.9 %) also used ads in online portals as an advertising medium. However, only one in ten non-authorised dismantling facilities (9.7 %) advertise vehicles on their own website. In the opinion of the respondents, the Yellow Pages hardly play any role (2.9 %).

Furthermore, every fifth non-authorised dismantling facility (20 %) also resorted to other methods of acquiring vehicles (e.g. 'Contacts with car dealers or traders', 'Advertisements displayed on own vehicles').

²⁵³ As the analysis regarding Question 4 'Type of market presence' is partly based on results from the following questions, this question was moved to the end of the evaluation.

Figure 41: Data on the method of vehicle acquisition in percentage

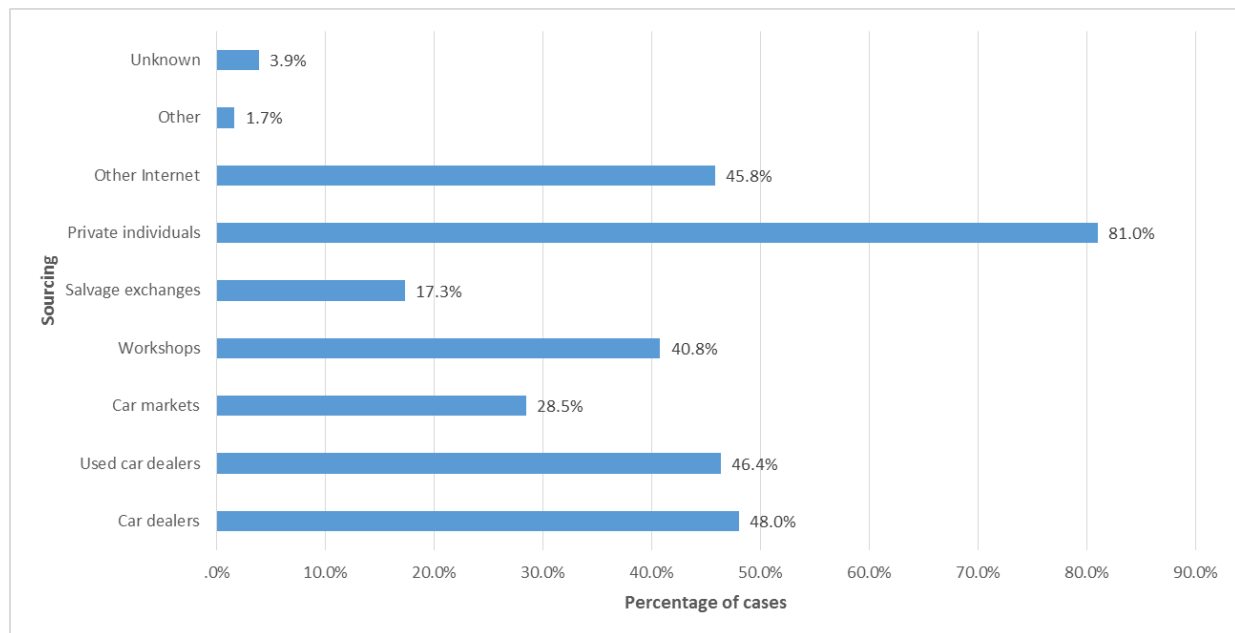


N = 175 (multiple answers possible)

Origin of vehicles

In Question 6, respondents were asked to assess where non-authorised dismantling facilities acquire their vehicles from. Again, multiple answers were possible. On average, 3.1 responses were made per non-authorised dismantling facility, giving rise to the conclusion that most facilities acquire their vehicles from several sources. Accordingly, four out of five non-authorised dismantling facilities (81 %) sourced their vehicles from private individuals. Further frequent sources of acquisition were car dealers (48 %), used car dealers (46.4 %) and 'other Internet' (e.g. classified ads, etc.) (45.8 %). More than one in three facilities sourced their vehicles from workshops (40.8 %). Car markets (29.4 %) also represent a common sourcing option. Salvage exchanges (17.3 %) are, on the other hand, a less widespread source, according to the respondents.

Figure 42: Data on the sourcing of vehicles in percentage

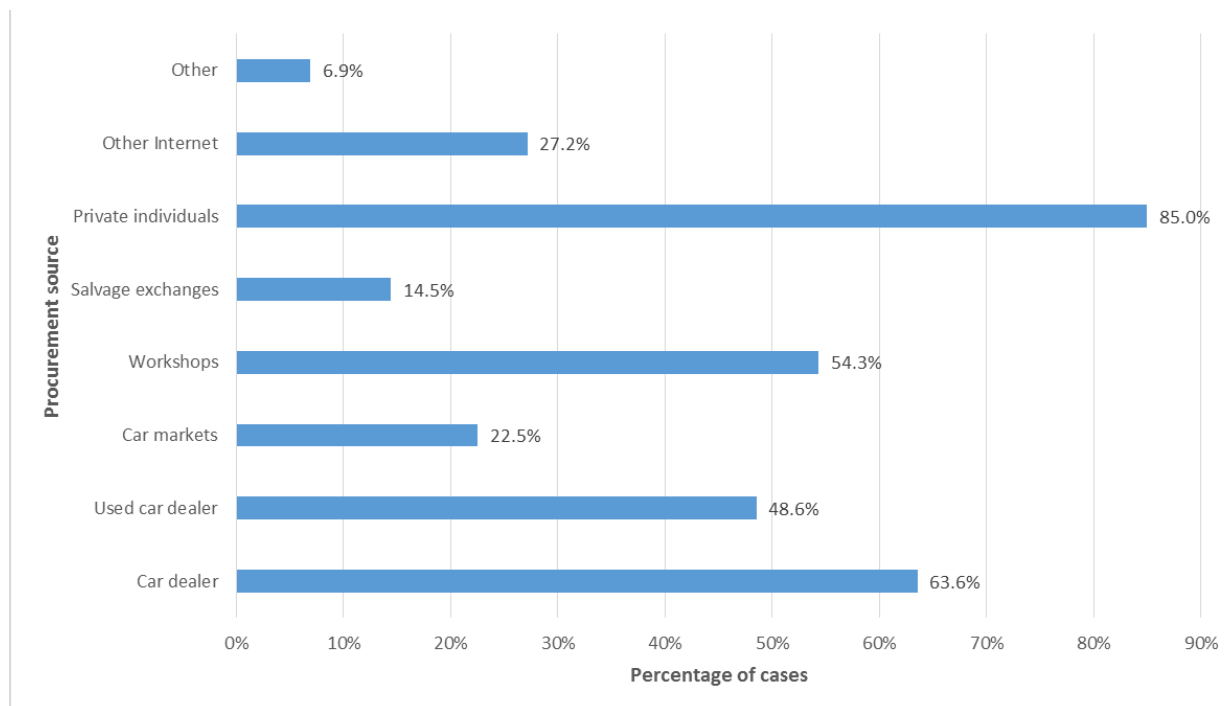


N = 179 (multiple answers possible)

Competition for authorised dismantling facilities

In Question 7, the respondents had to specify where non-authorised dismantling facilities compete with them in vehicle procurement. The average of 3.2 responses per non-authorised dismantling facility suggests that respondents perceive non-authorised dismantling facilities as strong competitors in the procurement of vehicles. In addition, it is apparent that authorised dismantling facilities source vehicles from several sources. Particularly for private individuals, where, in the opinion of respondents, 85 % of non-authorised dismantling facilities had disputes with them concerning vehicles, the competition for vehicles seems to be fierce. This is in line with the assessment from the previous question with respect to the origin of vehicles at non-authorised dismantling facilities. Non-authorised dismantling facilities are also perceived as competitors with regard to vehicle sourcing from car dealers (63.6 %), workshops (54.3 %) and used car dealers (48.6 %), as well as, to a lesser extent, 'other Internet' (27.2 %).

There is also competition for vehicles in the case of car markets (22.5 %) and salvage exchanges (14.5 %), but these do not seem to be a major acquisition source either for authorised dismantling facilities or for non-authorised dismantling facilities. Nearly seven per cent of non-authorised dismantling facilities are also perceived in other situations than as competitors (e.g. in the case of 'other private traders', 'scrap trade', 'directly at the licensing authority by directly contacting the persons who unregister vehicles').

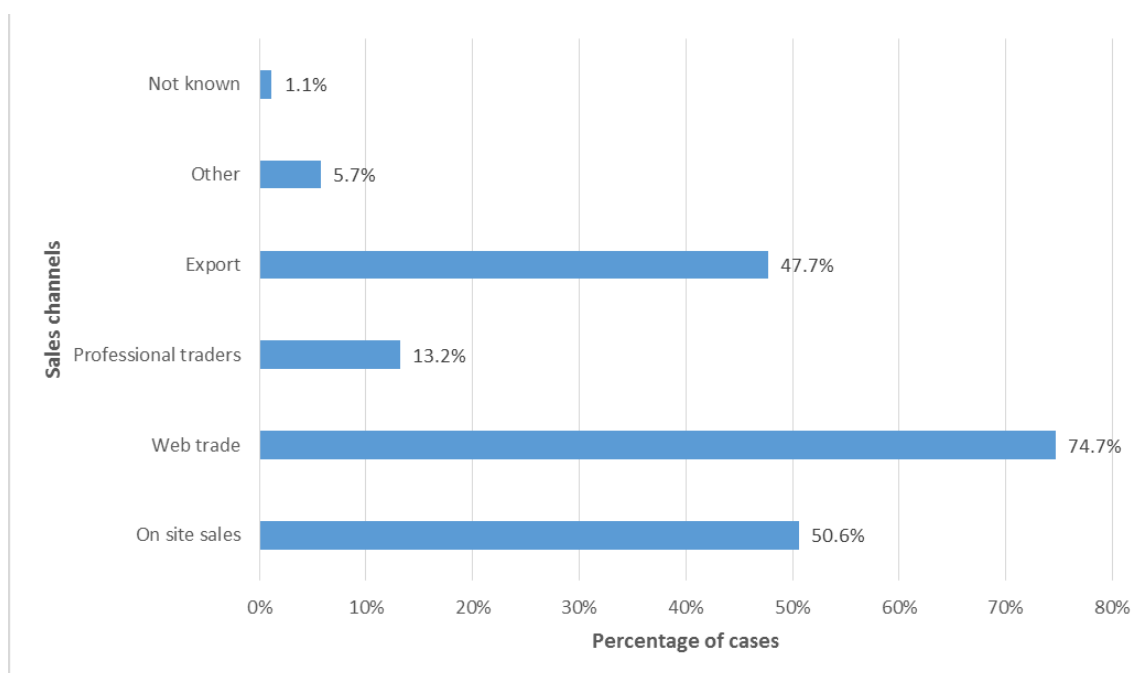
Figure 43: Data on competition in the procurement of vehicles in percentage

N = 173 (multiple answers possible)

Sales channels for spare parts obtained as a result of dismantling

Question 8 asks for a description of channels used by non-authorised dismantling facilities to sell the used parts obtained as a result of dismantling the vehicles. The average number of responses given for a non-authorised dismantling facility was 1.9. The evaluation shows that, in the opinion of authorised dismantling facilities, web trade is a key sales channel for non-authorised enterprises, which would be used by three quarters (74.7 %) of these facilities. Every second non-authorised dismantling facility (50.6 %) also sells spare parts on site or exports them (47.7 %). Professional traders or other sales channels do not play a significant role, according to the respondents.

Figure 44: Data on sales channels for spare parts obtained as a result of non-authorised dismantling in percentage



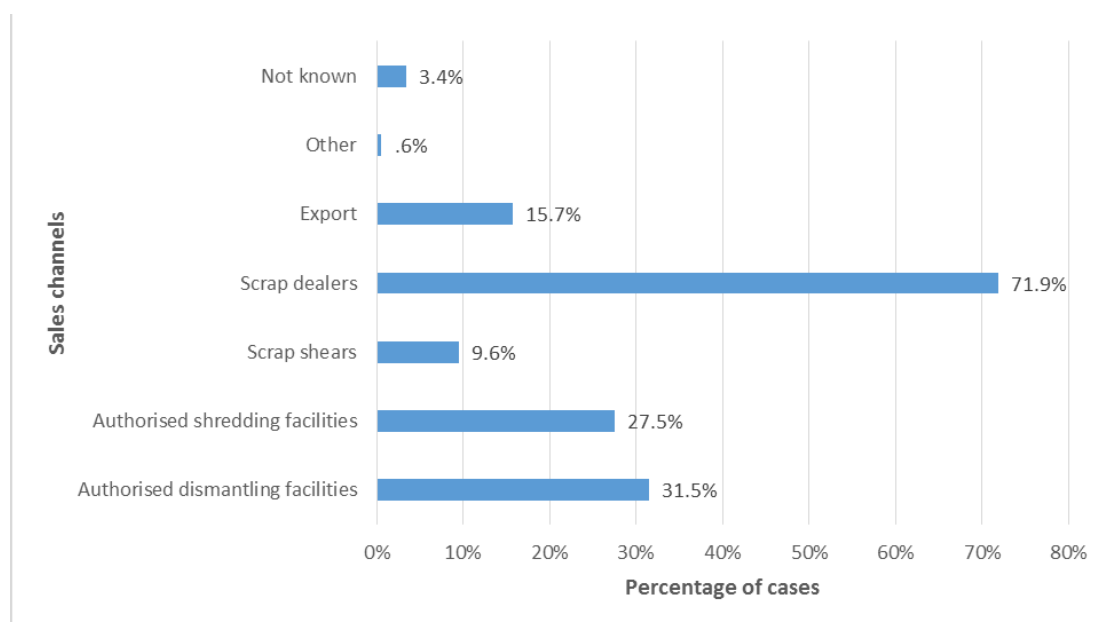
N = 174 (multiple answers possible)

Sales channels of non-authorised dismantling facilities for stripped vehicles

In Question 9, respondents were asked to assess the sales channels for non-authorised dismantling facilities for stripped vehicles and car body parts. The average number of responses given for a characterised non-authorised dismantling facility was 1.6.

It is assumed by the respondents that the main sales channel for stripped vehicles and car body parts is the path via scrap dealers (71.9 %). Nearly three quarters of non-authorised dismantling facilities would get rid of stripped vehicles in this manner, among others. 31.5 % and 27.5 % of the facilities regularly deliver their stripped vehicles to authorised dismantling facilities and shredders. Export sales were a relevant channel only for every sixth non-authorised dismantling facility (15.7 %). Scrap shears are relevant for every tenth facility only (9.6 %), while other sales channels do not play any role in the opinion of respondents.

Figure 45: Data on the sales channels of non-authorised dismantling facilities for stripped vehicles in percentage



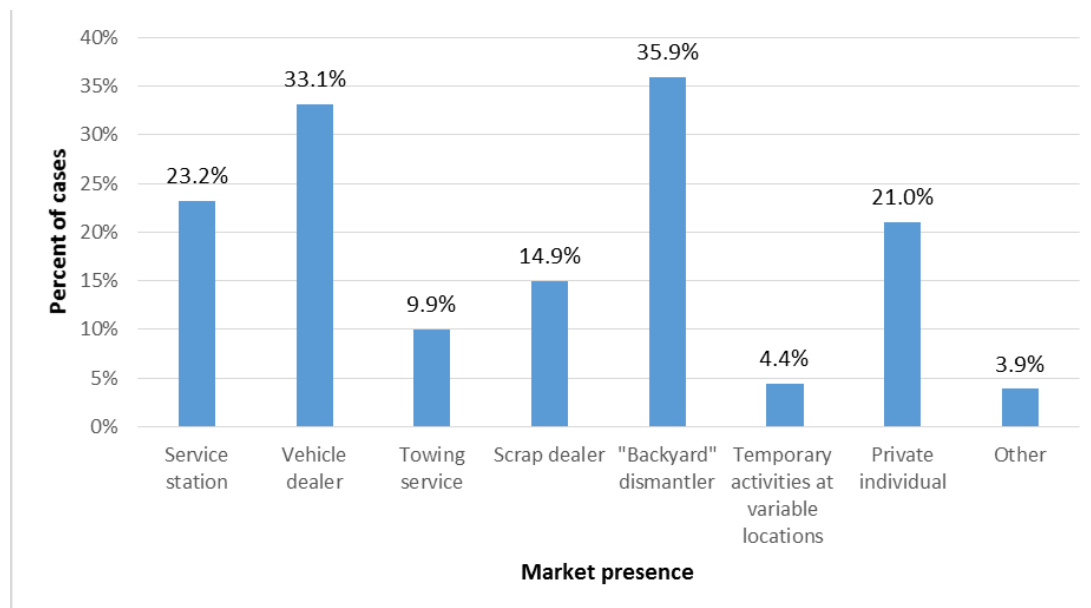
N = 178 (multiple answers possible)

Market presence of non-authorised dismantling facilities

Question 4 asked about the type of the market presence of non-authorised dismantling facilities. Multiple answers were allowed in this question. On average, the respondents gave 1.5 answers for a non-authorised dismantling facility. According to the respondents, it is common for non-authorised dismantling facilities not to be active in the market in a single way only, but combine different areas of business.

Hence, 35.9 % of non-authorised dismantling facilities function, among other things, as backyard dismantlers. Every third (33.1 %) is known to the respondents as a vehicle dealer, and 23.2 % of them operate a service station. About every fifth non-authorised dismantling facility (21 %) is present as a private individual. 14.9 % of the designated facilities were characterised as scrap dealers and almost one in ten as a towing service (9.9 %). ‘Temporary activities at variable locations’ were described as hardly relevant (4.4 %).

Figure 46: Data on the market presence of non-authorised dismantling facilities in percentage



N = 181 (multiple answers possible)

The market presence of dismantlers can be further analysed with regard to the parameters requested in the previous questions in order to obtain additional information on dismantlers. The below section describes and analyses in detail every parameter related to market presence.

A prerequisite for this analysis is the assumption that the respondents characterised the same non-authorised dismantling facility in the various questions, so, for instance, Dismantler 1 in Question 4 (market presence) is the same decomposer as Dismantler 1 in Question 2 (vehicle throughput). Because this was not explicitly pointed out, and because the selected survey method entails that this assumption is subject to a certain degree of uncertainty due to the lack of personal control, this fact must be taken into account for the interpretation.

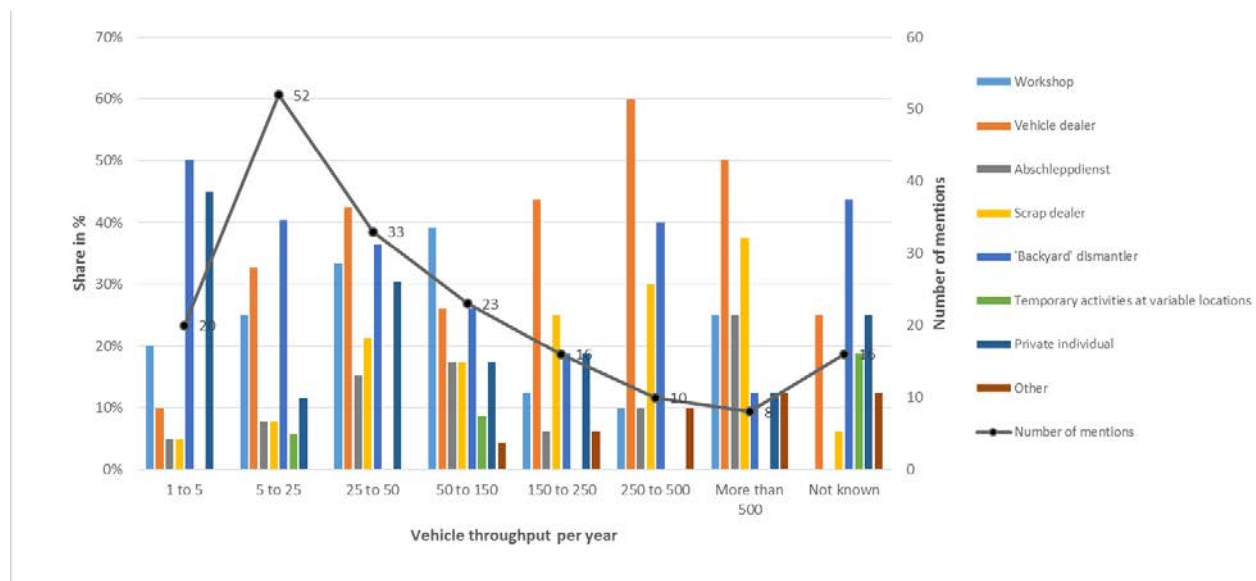
Due to the small sample size, the dependencies that can be determined based on the available figures are statistically reliable only to a limited extent, so that any conclusions are subject to uncertainty and must be interpreted accordingly. As an example, the category 'vehicle throughput of more than 500 vehicles' was mentioned only eight times for the question on vehicle throughput.

Furthermore, it has to be noted that multiple responses were allowed for market presence. Therefore, a non-authorised dismantling facility can be present e.g. both as a private individual and as a service station, without these roles being strictly separated from one another in practice. So, the respondents characterised five of the 42 non-authorised dismantling facilities that were classified as service stations also as private individuals. For the combination of private individuals (38) and backyard dismantlers (65), this was true of 19 facilities. This makes the interpretation of the figures difficult.

The distribution of **vehicle throughput** by market presence (see Figure 47) provides more detailed information on the role of respective market players and on which types of market players drive the non-authorised dismantling of vehicles particularly actively according to the evaluation of respondents. The above assumption shows private individuals are predominantly players with a low vehicle throughput; the higher the vehicle throughput, the rarer it is that dismantlers are private individuals. Accordingly, nine of the 20 non-authorised dismantling facilities decomposing 1 to 5 vehicles per

year (among others, see note above) are private individuals. On the contrary, ‘backyard dismantlers’²⁵⁴ (with a tendency towards the lower throughput range) and vehicle dealers (with a tendency towards the upper throughput range) can be found across all categories of vehicle throughput. The higher the annual throughput of a non-authorised dismantling facility, the more frequently it acts as a scrap dealer in the market, according to the participants in the survey. This suggests that non-authorised dismantling facilities with the above-mentioned market presence are more likely to pursue the non-authorised dismantling of vehicles as a business model than as a side-line activity. On the other hand, the vehicle throughput of towing services dismantling end-of-life vehicles under non-authorised conditions is also lower.

Figure 47: Distribution of vehicle throughput by market presence in percentage



When considering the **method of vehicle acquisition** and the type of market presence, it can be declared based on the above assumption, that, according to the respondents, vehicle dealers source their vehicles using ‘leaflets placed on windscreens’ and ‘ads in online portals’ more often than could have been expected on the basis of the sample. The observed frequencies are 30 and 20 mentions within this sample, whereas expected frequencies of mentions were 18 and 13.6, respectively²⁵⁵. However, the observed frequency of 17 mentions in the category ‘personal contacts’ is below the expected frequency of 24.7 mentions. Also for scrap dealers, the observed frequency of advertising with ‘leaflets placed on windscreens’ exceeds the expected frequency. For backyard dismantlers, answers also indicate that there is an increased correlation to sourcing by means of ‘ads in online portals’.

Looking at the **origin of vehicles** and market presence, again taking into consideration the above assumption, certain statistical peculiarities can be observed for vehicle dealers. In the opinion of au-

²⁵⁴ The term ‘backyard dismantler’ is used here to describe dismantlers who dismantle end-of-life vehicles for commercial purposes on their own premises, including garages, barns, backyards, etc. This means they differ from private individuals in that they dismantle end-of-life vehicles not only for their own purposes, but also acquire end-of-life vehicles in a targeted manner.

²⁵⁵ The expected frequency is calculated from the given marginal distributions of the two variables (= total number of the respective market presence and total number of the type of advertising (column total * line total/N)), assuming that the variables considered are independent of one another. Based on a chi-square test, it can be stated with a probability of error of 5 % or less that the variables within the given sample are related to one another, so they appear not to be independent of one another.

thorised dismantling facilities, these source their vehicles more frequently than could have been expected via car dealers and used car dealers. This is the case with the variable 'towing service', like with 'scrap dealers' for the sourcing option 'workshops'. Moreover, for scrap dealers, there seems to be an increased correlation for sourcing via car markets. In the case of private individuals, the sample distribution suggests that sourcing via car dealers and used car dealers is less pronounced than could have been expected.

A differentiated view of the distribution of the **competition situation** by market presence shows several statistical peculiarities. Thus, the observed frequencies suggest that, as far as vehicle procurement is concerned, respondents perceive vehicle dealers and scrap dealers for car dealers and used car dealers, scrap dealers also for workshops, as well as backyard decomposers for used car dealers and private individuals as a higher competition than what could have been suggested by the expected frequency.

The distribution of **sales channels for spare parts** by market presence suggests there is a correlation between the variables 'service station' and 'on-site sale' or 'dealer'. In this sample, the common occurrence of these variables is in the first case higher and in the second case lower, than the expected frequency. For vehicle dealers, the observed frequency for the variable 'on-site sale' is so far below the expected frequency that a statistical link can be assumed; however, for the variable 'export' it exceeds the expected frequency, which also applies to the market presence 'towing service' and 'scrap dealer'. Regarding the market presence 'backyard dismantler', it can be noticed that sale via the Internet is mentioned more frequently than could have been expected, and a stronger correlation can be assumed here.

When looking at the **sales channels of stripped vehicles** in combination with market occurrence, certain peculiarities can be seen in the observed frequencies for the sales channels 'authorised dismantling facility', 'shredder' and 'scrap dealer', which deviate from expected frequencies for some of the variables. According to the respondents, service stations, towing services and backyard dismantlers deliver their stripped vehicles to authorised dismantling facilities more often than could have been expected. The same applies to service stations, towing services and scrap dealers for the sales channel 'shredder'. There is also a large number of private individuals in the case of sales via scrap dealers.

Suggestions for improvement and other comments

At the end of the questionnaire, respondents had the opportunity to specify whether they currently see any need to improve the treatment of non-authorised dismantling facilities or non-authorised dismantling, and to make proposals and further suggestions regarding the subject. No answer options were given for the questions. 48 of the 70 respondents made use of this opportunity. The majority of the proposals made here suggest stricter controls and a more rigorous implementation of already existing regulations. Other proposals address the treatment of spare parts and arrangements for the decommissioning of vehicles.

Table 49: Suggestions for improvement from respondents

| Suggestions for improvement | Number of respondents | Share of respondents in % |
|--|-----------------------|---------------------------|
| More rigorous collection of Certificates of Destruction by regulatory authorities for decommissioning. | 25 | 52.1 % |
| Stricter enforcement / tighter controls. | 23 | 47.9 % |

| Suggestions for improvement | Number of respondents | Share of respondents in % |
|---|-----------------------|---------------------------|
| Clarify the distinction between second-hand vehicles / end-of-life vehicles | 7 | 14.6 % |
| For the Internet trade of spare parts, allow trade only for commercial entities and ensure distinction from private traders (e.g. eBay classified ads) | 7 | 14.6 % |
| Introduce and check proof of origin for spare parts on the Internet. | 5 | 10.4 % |
| Queries regarding the whereabouts of vehicles by MV registration offices after 18 months of unclear status (possibly re-introduction of tax liability) | 5 | 10.4 % |
| More rigorous review of authorised dismantling facilities (e.g. whether stripped vehicles are accepted) | 5 | 10.4 % |
| Stricter review of scrap dealers and issue regulations for stripped vehicle acceptance. | 4 | 8.3 % |
| Stricter controls for MV workshops. | 4 | 8.3 % |
| Recording obligation for shredders regarding stripped vehicle acceptance | 3 | 6.3 % |
| Review the salvage exchange system. | 3 | 6.3 % |
| Provide more information to last holders on rights and obligations (upon decommissioning or when the driving license is obtained). | 3 | 6.3 % |
| Introduce higher fines for all parties involved in case of breaches. | 3 | 6.3 % |
| Better control of the blue copy at shredders. | 2 | 4.2 % |
| Make decommissioning with a CoD free of charge or cheaper than decommissioning without a CoD | 2 | 4.2 % |
| Introduce a deposit system. | 2 | 4.2 % |
| Allow the sale of vehicles with a general inspection valid for less than, for example, 6 months only for selected dealers or authorised dismantling facilities (introduce rules for transfer) | 2 | 4.2 % |
| Impose restrictions on the export of vehicles that would not receive a road approval according to German regulations. | 2 | 4.2 % |
| Stricter controls for shredders. | 2 | 4.2 % |
| Introduce an obligation to pay by card in all transactions for better traceability. | 2 | 4.2 % |
| Introduce stricter laws. | 1 | 2.1 % |
| For the distinction of second-hand / end-of-life vehicles, reverse the burden of proof. | 1 | 2.1 % |
| Introduce an incentive from the state for last holders who deliver their end-of-life vehicles to an authorised dismantling facility. | 1 | 2.1 % |

| Suggestions for improvement | Number of respondents | Share of respondents in % |
|--|-----------------------|---------------------------|
| Introduce an incentive from the state for authorised dismantling facilities for the environmentally friendly recycling of end-of-life vehicles. | 1 | 2.1 % |
| Introduce a recording obligation for last holders regarding the whereabouts of the vehicle during the decommissioning procedure (otherwise, maintain motor vehicle tax liability). | 1 | 2.1 % |
| Rigorous verification of the operation logs of entities run according to construction law based on samples | 1 | 2.1 % |
| For exports, border controls with a value rating (residual value) | 1 | 2.1 % |
| Manufacturers should make efforts to ensure that end-of-life vehicles are delivered to authorised dismantling facilities | 1 | 2.1 % |
| Annual transmission of VINs to FMTA by dismantling facilities | 1 | 2.1 % |
| Abolition of the Certificate of Destruction as it is currently useless | 1 | 2.1 % |

N = 48

Summary of suggestions for improvement by authorised dismantling facilities

The suggestions mentioned can be summarised according to the following topic blocks (sorted by decreasing number of mentions):

1. More rigorous handling of enforcement and of existing regulations, e.g.:

- ▶ Treatment of Certificates of Destruction by MV registration offices,
- ▶ Monitoring of economic operators.

2. Stricter enforcement and tightening of existing regulations, e.g.:

- ▶ Increased monitoring of economic operators by the authorities,
- ▶ Higher fines in case of a violation of existing regulations.

3. Increased regulation of trade for spare parts on the Internet, e.g. through:

- ▶ Proof of origin for spare parts,
- ▶ Distinction between industry and trade,
- ▶ Restructuring of the salvage exchange system.

4. Stricter distinction between end-of-life and second-hand vehicles

—

5. Modification of the current decommissioning system, e.g.:

- ▶ Queries regarding the whereabouts of vehicles by MV registration offices after a definite period of time,
- ▶ Make decommissioning with a CoD free of charge,
- ▶ Introduce a recording obligation for last holders regarding the whereabouts of the vehicle in case of decommissioning.

6. *Create incentives for last holders and increase the provision of information to last holders, e.g.:*

- ▶ Introduce a deposit system,
- ▶ Incentive for last owners delivering their end-of-life vehicles to authorised dismantling facilities.

Summary of key statements and conclusions

The results of the questionnaire suggest that, in the opinion of the respondents, the dismantling of vehicles at non-authorised dismantling facilities in Germany is really widespread. A large majority of the authorised dismantling facilities surveyed indicated they knew several players in their area who dismantled end-of-life vehicles without the required authorisation. Furthermore, the following key conclusions can be drawn from statements made by the authorised facilities expressing an opinion on non-authorised facilities known to them:

- ▶ Vehicle throughput at most non-authorised dismantling facilities is estimated to be relatively low in each case. However, due to the large number of facilities, the total number of vehicles undergoing non-authorised dismantling adds up to a relevant number.
- ▶ The market presence of non-authorised dismantling facilities is very heterogeneous, often combining several business models. The types of advertising are also diverse. In the opinion of the respondents, however, the Yellow Pages do not play a significant role in this respect. Therefore, an identification of non-authorised dismantling facilities on this basis is unlikely to be very effective – in contrast to what is suggested by a successful procedure for the identification of non-authorised dismantling facilities in France (see also Chapter 6.5.1).
- ▶ The results of the survey indicate that private individuals play a significant role in vehicle procurement. A large proportion of non-authorised dismantling facilities would source vehicles from them. Other procurement channels also played a not insignificant role – perhaps with the exception of salvage exchanges.
- ▶ The assessment of the competition situation shows that non-authorised dismantling facilities are perceived as a competition by authorised dismantling facilities for several sourcing options, above all for private individuals.
- ▶ Authorised dismantling facilities see Internet trade as a main sales channel for spare parts obtained in non-authorised dismantling facilities. In their opinion, this represents an important sales channel for all types of market presence. However, on-site sales and exports are also relevant channels.
- ▶ Scrap dealers are perceived as the main sales channel for stripped vehicles, but almost every third non-authorised dismantling facility sells stripped vehicles via authorised dismantling facilities or shredders. After exports, scrap shears still play a subordinate role, according to the respondents.
- ▶ Suggestions for improvement contain the most mentions for proposals regarding a more rigorous treatment of Certificates of Destruction and sharper controls for all parties (authorised dismantling facilities, workshops, shredders, scrap dealers). Furthermore, the systematic treatment of spare parts (proof of origin, distinction between industry and trade) and a change to the system of decommissioning is also required.

When interpreting the results, the low response rate should be taken into account, as well as the fact that the authorised dismantling facilities were asked to evaluate the activities of other players, not the players themselves. Further, it is fundamentally difficult to acquire information on non-authorised (i.e. generally unlawfully operating) dismantling facilities because, due to the fact that their activity is outside the legal framework, they have little interest in transparency regarding their actions. These two points lead to a great degree of uncertainty in the data collected via this survey, so the information can only provide impressions which need to be verified by other means if possible.

5.3.2.2 Survey of spare parts sales on the Internet

The sales of spare parts for used motor vehicles may provide an indication regarding the extent of vehicle dismantling by non-authorised dismantling facilities. Such sales transactions are presumed to take place via various channels, such as on-site sales on the Internet (see in this respect the results of the survey among authorised dismantling facilities in chapter 5.3.2).

Within the framework of the project, the focus was placed on Internet sales due to its better accessibility and the increasing importance of online trade. One of the largest online platforms is eBay, where e.g. on 11/11/2015 more than 2.5 million used parts were offered²⁵⁶. Of these, 159,983 were replacement engines and engine parts, of which, again, 57,388 were engines and transmissions. 20,829 items were offered in the category of axle carriers and axle parts. It should be noted here that the above-mentioned categories contained not only complete components, but also smaller parts, such as rubber sleeves for axle carriers.

eBay declared they were ready to disclose the total sales figures for engines and transmissions for 2013. However, further information could not be provided. eBay provided the following figures for the 2013 sales of engines and transmissions (eBay 2015):

- ▶ Transmissions sold in 2013: 19,342
- ▶ Engines sold in 2013: 21,343

According to the evaluation of eBay, almost all parts mentioned here are used (eBay 2015).

The project team undertook a further analysis of sales via eBay using an application programming interface (API) (Denkmann 2015), provided by eBay for general use. This made it possible to exchange data with the online marketplace. The queries were prepared in 2015, and the survey was made between mid-October 2015 and mid-May 2016 for the categories 'Used transmissions and parts' and 'Used engines and transmissions'. The survey covered all offers that expired during this period or that were set during this period (see Table 50). It must be noted that approximately 10 % of the offers were set before mid-October 2015, but had a validity time reaching into the survey period.

²⁵⁶ Information from the ebay.de website, as of 11/11/2015.

Table 50: Summary of the survey for the sales of used spare parts via eBay

| Surveyed data area | Transmissions and parts | Engines and transmissions |
|--|-------------------------|---------------------------|
| Total offers (one offer may include more than one item) | 102,377 | 92,416 |
| Successful offers | 4,654 | 4,425 |
| Success rate based on offers | 4.5 % | 4.80 % |
| Total number of items | 110,875 | 94,199 |
| Number of items sold | 4,758 | 4,500 |
| Success rate based on number of items | 4.3 % | 4.80 % |
| Value of all offers (based on selling price or quoted price for 'immediate purchase', otherwise: minimum amounts) | EUR 91,613,006 | EUR 156,092,342 |
| Value of unsuccessful offers (based on selling price or quoted price for 'immediate purchase', otherwise: minimum amounts) | EUR 50,388,515 | EUR 110,823,413 |

Data source: own survey

When evaluating the sales of used spare parts, certain aspects must be considered:

- ▶ The number of the parts offered is not to be considered equal to the number of dismantled vehicles. E.g. one used part may be offered several times (e.g. in case of unsuccessful sale at the first or repeated offer).
- ▶ Used parts are offered both by non-authorised dismantling facilities and by authorised dismantling facilities, without anyone being able to identify this e.g. based on user names. Vehicle parts are also sold by authorised dismantling facilities to resellers, some of which also renovate and offer them via platforms such as eBay (see below).
- ▶ Used parts are also offered for sale in Germany from other European countries (e.g. Czech Republic or Denmark).
- ▶ Used parts are also offered by MV workshops that have replaced components.
- ▶ Engines and transmissions are also offered by component renovators and restorers, without the origin of the components being identifiable.

Therefore, no direct conclusions can be drawn from the number of car parts sold with respect to the extent of dismantling activities at non-authorised facilities.

The evaluation of eBay data shows that 70 % of sellers in the category 'Used engines and transmissions' are classified as 'private', and only 30 % as 'commercial'. The offers made by 'private' sellers accounted for 15 % of the total number of offers. 94 sellers set up more than 100 offers. These are exclusively sellers categorised as 'commercial'.

In the category 'Used transmissions and parts', 65 % of sellers are categorised as 'private', with a share of 11 % within the offers. 79 sellers set up more than 100 offers. These are, again, exclusively sellers categorised as 'commercial'.

5.3.2.3 Receipt of stripped vehicles by shredding facilities

In 2013, 500,322 end-of-life vehicles were delivered to authorised dismantling facilities as end-of-life vehicles (FMENCBNS and FEA 2015). Information from the Federal Statistical Office (2015c) on end-of-life vehicles received by authorised dismantling facilities shows that the average weight of end-of-life vehicles was 981 kg. According to the Federal Statistical Office (2015c), 493,290 t of

stripped vehicles from domestic sources are recorded as shredders' input. Assuming a conversion rate of 0.832 t/piece between total number and weight, in accordance with the data held by the Federal Statistical Office (2015c)²⁵⁷, this results in a total of 592,897 stripped vehicles.

Kohlmeyer (2015a) mentions 623,160 stripped vehicles from domestic sources as input at shredding facilities. According to these figures, 26,000 stripped vehicles originate from the liquidation of end-of-life vehicle stocks.

Stripped vehicles from vehicles dismantled by other than authorised dismantling facilities must undergo separation and disintegration processes prior to recycling in steel production as secondary raw materials in order to achieve the required qualities with regard to composition, fragmentation and minimum Fe content. Disintegration using shears is not enough.

In accordance with the Regulation on the European Waste Catalogue²⁵⁸, the acceptance of stripped vehicles by shredders should be carried out using the code '16 01 06 end-of-life vehicles, containing neither liquids nor other hazardous components'. Where necessary, disintegrated stripped vehicles can also be provided to the shredders as mixed scrap. Considering this background, the quantification methods described below are to be understood as minimum volumes.

The overwhelming majority of stripped vehicles from authorised dismantling facilities is further processed by shredders in Germany. This is mainly carried out on the basis of transport costs. It can be assumed that, for the same reason, this also applies to stripped vehicles not coming from authorised dismantling facilities. Again, deliveries to shredders in other European Member States represent a minor part.

Incoming stripped vehicles are in most cases registered by shredding facilities based on weight. Registration by quantity does not usually take place (TSR Recycling GmbH 2015a and Scholz AG 2015b). Data on the number of items, which is mandatory information required by statistical offices for the collection of waste statistics and therefore provided by all respondents (Federal Statistical Office 2015e), are based on a conversion factor (832 kg per stripped vehicle, according to data in the Federal Statistical Office 2015d).

As far as information on the average weight of a stripped vehicle is concerned, it is not only data from the Federal Statistical Office, but also surveys by individual companies that can be used. As an example, the company TSR Recycling GmbH assessed the average weights (annual average) of stripped vehicles at its own shredding facilities for scrap metal. This resulted in a weight of 951 kg per car body with power train and 712 kg per car body without power train (TSR Recycling GmbH 2015b). Primary surveys regarding the weight of stripped vehicles are currently also conducted by the Federal Environmental Agency within the UFOLPAN project 'End-of-life vehicle monitoring'²⁵⁹. Results from this project are not yet available.

It appears that not all stripped vehicles reach shredding facilities with the waste code '16 01 06 end-of-life vehicles, containing neither liquids nor other hazardous components', so they cannot be clearly identified as such. As a result, at a workshop within this research project on 21 March 2016 in Berlin, shredders from Germany confirmed there was the potential of mixing up vehicles with vehicle

²⁵⁷ Division of weight by the number of data items on stripped vehicles at shredding facilities in Table 9.3

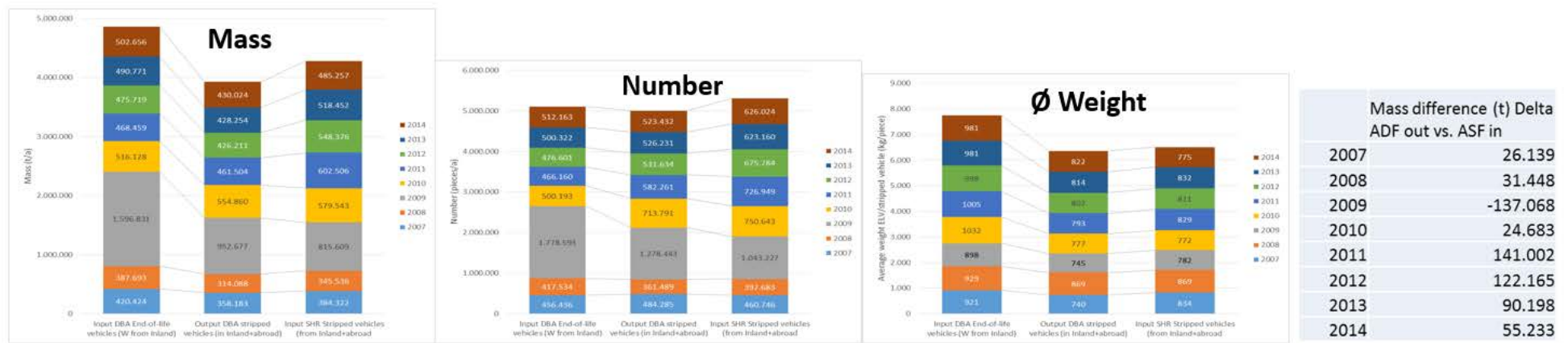
²⁵⁸ 'Waste Catalogue Ordinance of 10 December 2001 (FLG I p. 3379), last amended with Article 1 of the Regulation of 4 March 2016 (FLG I p. 382)' (Waste Catalogue Ordinance – WCO)

²⁵⁹ 'Evaluation and extrapolation of the methodology for the determination of end-of-life vehicle recycling rates by shredding tests under the EC End-of-Life Vehicle Directive 2000/53/EC', research ref. no. 3715 33 305 0 (term from September 2015 to October 2016).

parts in mixed scrap. However, no statistical conclusions could be drawn from these occasional observations regarding the number of such cases. According to a surveyed authorised dismantling facility, also dealing with scrap, it was claimed that car body parts were noticed in mixed scrap 3 or 4 times a month at its plant. This is equivalent to a volume of about 50 vehicles per year (personal discussions with the authorised dismantling facility in April 2015).

Figure 48 shows an overview of the input and output flows of authorised dismantling facilities and authorised shredders as amount and masses.

Figure 48: Comparison of masses and amounts in input and output of authorised dismantling facilities and authorised shredding facilities in Germany



Source: Federal statistical office, waste statistics, subject-matter series 19, years; ADF = Authorised Dismantling Facility; ASF = Authorised Shredding Facility

Based on the given shredder input figures, it can be assumed that stripped vehicles from non-authorised dismantling or from non-documented processing at authorised dismantling facilities are further processed by shredders on the order of 100,000 pieces²⁶⁰. The corresponding number of end-of-life vehicles is taken into account in volume flows for the whereabouts of vehicles in Germany. When it is also considered that stripped vehicles from non-authorised dismantling are also delivered to shredders as part of mixed scrap, and are thus no longer identifiable, a higher number results. Taking into consideration the economic drivers for non-authorised dismantling in other EU Member States (see Chapter 5.2.3), the total volume of non-authorised dismantling in Germany can be estimated at 130,000 vehicles for 2013²⁶¹.

5.3.3 Dismantling at authorised dismantling facilities in Germany

In the case of the form of whereabouts ‘dismantling of the end-of-life vehicle at an authorised dismantling facility within Germany’, the vehicle is decommissioned by the last holder at the MV registration office and is recycled at an authorised dismantling facility. If no Certificate of Destruction is issued for the end-of-life vehicle, which is reported by the last holder to the MV registration office at the time of or after the decommissioning of the vehicle, it is possible for end-of-life vehicles not to be statistically recorded by authorised dismantling facilities. However, such a scenario would only be possible if the authorised dismantling facilities specified recycled end-of-life vehicles neither in their submission to state statistical offices for the collection of waste statistics nor in the operation logs of the company. According to the expert opinion of several end-of-life vehicle recyclers, end-of-life vehicles recycled at authorised dismantling facilities are not statistically recorded (e.g. Hamm 2016, Knode 2015). In addition, experts indicated that authorised dismantling facilities also performed dismantling on partially dismantled or pre-processed vehicles. These came from workshops, for example. An interviewee from an authorised dismantling facility in Germany stated that this was standard practice at his workplace, and that in 2014, about 7 % of the end-of-life vehicles treated there consisted of partially dismantled end-of-life vehicles with unknown origins (personal discussion with a representative of an authorised dismantling facility, April 2015). Experts from various end-of-life vehicle recyclers and specialists claim that Certificates of Destruction are not always issued for partially dismantled end-of-life vehicles (personal discussion with representatives of authorised dismantling facilities and experts between December 2015 and March 2016).

During the project, however, no strong drivers or other evidence could be identified that would indicate a high quantitative relevance of this form of whereabouts for the project. Cases that remain unreported to state statistical offices do not provide any significant advantages for authorised dismantling facilities, and the submission of a report does not lead to considerable additional expenses or disadvantages. Under certain circumstances, a situation could arise in which the volume threshold of the throughput of end-of-life vehicles is exceeded for the approval of dismantling facilities. It is true that the number of facilities with a correspondingly low throughput is high²⁶². However, their overall

²⁶⁰ Method of calculation: According to information from the Federal Statistical Office (2015c), the quantity of stripped vehicles received by shredders in Germany with the waste code 16 01 06 was 90,198 tonnes higher in 2013 than documented in the same source for the output of dismantling facilities. According to the Federal Statistical Office, the quantity of imported and exported stripped vehicles is roughly equal. An average weight of 0.832 t/end-of-life vehicle results in 108,113 end-of-life vehicles altogether.

²⁶¹ This figure is far below the estimates resulting from the questionnaire survey – approx. 480,000 vehicles – (see Subchapter 5.3.2.1). However, taking into consideration the high degree of data uncertainty from this source and the results on other forms of whereabouts, a considerably lower number can be assumed. As can be concluded from the questionnaires, a number of end-of-life vehicles do not appear in a delta view (number of final decom. export-documented dismantling operations).

²⁶² In 2013, 762 facilities were in the size category up to 250 end-of-life vehicles per year (Federal Statistical Office 2015f).

throughput is relatively low (15 %) compared to the overall throughput of the industry (Federal Statistical Office 2015f).

No further data or information was available. In the assessment of the dismantling facilities (e.g. at the workshop and during personal discussions), an unrecorded volume of well below 10 % of accepted end-of-life vehicles was assumed. In an expert judgment, an order of magnitude of 20,000 end-of-life vehicles was considered to be realistic. Note, however, that there is comparatively high data uncertainty in this respect. Nevertheless, due to the low impact on the statistical gap, this rough estimate appears to be acceptable.

5.4 Summary of the updated data basis

Table 51 presents the data basis updated according to the findings of previous chapters in a differentiated form based on the available data sources and shows the data situations for the respective vehicle flows. An assessment of the completion rate and data quality is then carried out. For the sake of completeness, data sources such as theft statistics or whereabouts in non-public areas are also listed in the overview, which do not represent the definitive whereabouts of the vehicles (see Chapter 3.4), but, as in the case of theft statistics, many provide some indications on the suspected number of stolen vehicles in other paths of whereabouts.

Table 51: Overview of the updated data regarding the whereabouts of vehicles with the respective data sources

| Data | | Number of vehicles (2013) | M1 | N1 | Further vehicle classes | To be found in | (Possible) provision through | Underlying data flows | Data quality |
|---|--|--|-----|-----|-------------------------|--|------------------------------|--|--------------|
| Total number of decommissionings | | 8,511,472 (*1) Of which: M1: 8,149,973 N1: 361,499 | Yes | Yes | No | CVRFMTA | FMTA | Reports from the MV registration offices of federal states | Very good |
| Total number of decommissioned vehicles (percentage of the total number of decommissionings) | | 8,146,925 Of which: M1: 7,799,524 (95,7 %) N1: 347,401 (96,1 %) | Yes | Yes | No | Data basis CVRFMTA + taking a share of 95,7 % respectively 96,1 % of the total number of decommissioning operations as a basis | FMTA | Reports from the MV registration offices of federal states | Very good |
| Total number of permanently decommissioned vehicles (percentage of the total number of decommissioned vehicles) | | 2,743,665 Of which: M1: 2,599,841 (33.3 %) N1: 143,824 (41.4 %) | Yes | Yes | No | Data basis CVRFMTA + taking the shares calculated by FMTA as a basis | FMTA | Reports from the MV registration offices of federal states | Very good |
| Number of end-of-life vehicles recycled in authorised dismantling facilities in Germany | Statistically proven number of end-of-life vehicle | 500,322 (*2) | Yes | Yes | No | Survey on waste disposal | Federal Statistical Office | Reports from authorised dismantling facilities | Good |
| | Statistically recorded Certificates of Destruction | 47,973 vehicles with CoDs (overlap with the Federal Statistical Office figures) | Yes | Yes | No | CVRFMTA (internal) | FMTA | Presentation of CoD during/after decom. | Very good |

| Data | | Number of vehicles (2013) | M1 | N1 | Further vehicle classes | To be found in | (Possible) provision through | Underlying data flows | Data quality |
|---|---|-------------------------------|-----|-----|-------------------------|-------------------------------|--|---|--------------|
| | Estimate for non-documented ELV dismantling | 20,000 | Yes | Yes | No | No statistical documentation | Possibly authorised dismantling facilities, specialists | n/a | Bad |
| | Total including the estimate | 520,000 | Yes | Yes | No | n/a | n/a | n/a | n/a |
| End-of-life vehicles registered in Germany for recycling abroad | | 0 (*3) | Yes | Yes | No | Cross-border waste statistics | FEA | Notification procedure, reports from the authorities of federal states | Very good |
| Number of non-authorised dismantling activities in Germany or number of end-of-life vehicles treated by not authorised dismantling facilities | | Estimate: 130,000 | Yes | Yes | No | No statistical documentation | Possibly police, waste authorities, administrative authorities responsible for enforcement | n/a | Bad |
| Second-hand vehicle transferred to EU MSs for re-registration | ›VL (*4) | M1: 138,614 N1: 6,735 (*5) | Yes | Yes | Up to 5 t | Internal trade statistics | Federal Statistical Office | Written export declarations (IDEV), import statistics of EU MSs (mirroring) | Good |
| | Re-registration in EU MSs | 1,215,945 | Yes | Yes | Yes | REGINA statistics | FMTA | Data from MV registration offices of EU MSs | Good |

| Data | | Number of vehicles (2013) | | | M1 | N1 | Further vehicle classes | To be found in | (Possible) provision through | Underlying data flows | Data quality |
|--|--|---|---|--|-----|-----|-------------------------|--|--|---|--------------|
| | Statistically proven, total | 1,232,987 (partial overlaps) (*6) | | | Yes | Yes | Yes | Internal trade statistics + REGINA | Federal Statistical Office and FMTA | Data from the regulatory authorities of EU MSs and written export declarations (IDEV) | Good |
| | Estimate | 137,000 | | | Yes | Yes | No | Estimation for the completion of REGINA | FMTA or calculation based on a factor | Calculation | Medium |
| | Total including the estimate | 1,370,000 | | | Yes | Yes | Yes | n/a | n/a | n/a | n/a |
| Whereabouts in EU MSs without re-registration | End-of-life vehicles recycled in EU MSs with CoDs (e.g. after an accident) | 10,092 (*7) | | | Yes | n/a | n/a | CVRFMTA internal (if a CoD is available) | FMTA | Presentation of CoD during decom. | Very good |
| | Estimate (e.g. non-authorised dismantling) | 130,000 | | | Yes | Yes | No | No statistical documentation | Possibly supervisory authorities in EU MSs | Estimation of difference | Bad |
| | Total including the estimate | 140,000 | | | Yes | Yes | No | No statistical documentation | n/a | n/a | n/a |
| Second-hand vehicles exported from Germany to non-EU countries | Total exports recorded by German customs authorities | 374,030 | Number of vehicles with a statistical goods value above | 158,102 (*8) M1: 131,342 N1: 26,760 | Yes | Yes | Up to 5 t | Customs data (internal) | German Customs | Written export declarations | Very good |

| Data | | Number of vehicles (2013) | | | M1 | N1 | Further vehicle classes | To be found in | (Possible) provision through | Underlying data flows | Data quality |
|------|--|--|---|--|-----|-----|-------------------------|--------------------------|--------------------------------------|-----------------------------|--------------|
| | | | EUR 3,000 € | | | | | | | | |
| | | | Number of vehicles with a statistical goods value above EUR 3,000 € | <u>215,928</u> (*8) M1: 209,923 N1: 6,005 | | | | | | | |
| | Total exports recorded by the Federal Statistical Office | 385,708 (*9) | Number of vehicles with a statistical goods value above EUR 3,000 € | n/a | Yes | Yes | Up to 5 t | Foreign trade statistics | Federal Statistical Office (customs) | Written export declarations | Very good |
| | | | Number of vehicles with a statistical goods value above EUR 3,000 € | n/a | | | | | | | |
| | Total of statistically proven exports in German statistics | <u>385.708</u> M1: 344,551 N1: 41,157 (*10) | | | Yes | Yes | Up to 5 t | Foreign trade statistics | Federal Statistical Office (customs) | Written export declarations | Very good |

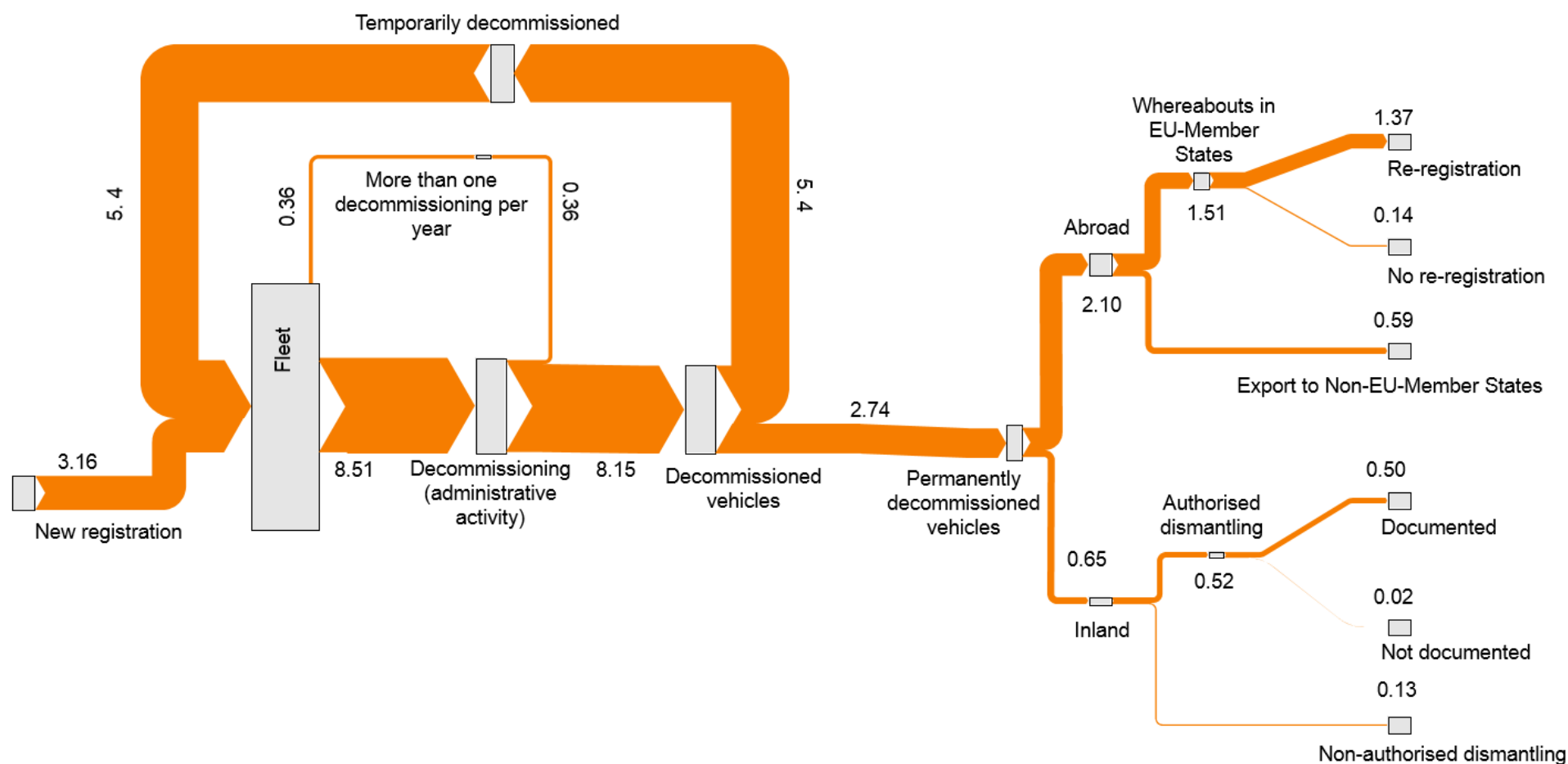
| Data | | Number of vehicles (2013) | M1 | N1 | Further vehicle classes | To be found in | (Possible) provision through | Underlying data flows | Data quality |
|--|---|--|-----|-----|-------------------------|--|-------------------------------------|--|--------------|
| | Second-hand vehicles from Germany that are registered in other EU MSs under the single-stage export procedure for exporting to non-EU countries | Available , but without being recorded in German foreign trade statistics: approx. 116,000 M1 vehicles throughout Belgium (*11) | Yes | No | No | No systematic statistical documentation | Customs authority of Belgium | Customs declarations at exit points in Belgium | Good |
| | | Estimate (for all exit points from the customs territory): 93,000 vehicles | Yes | Yes | Up to 5 t | No systematic statistical documentation | Customs authorities of other EU MSs | Customs declarations at exit points in EU MSs | Medium |
| | Total estimate | 250,000 (*12) | Yes | Yes | Up to 5 t | n/a | n/a | n/a | n/a |
| | Total number of second-hand vehicle exports to non-EU countries including the estimate | Approx. 590,000 | Yes | Yes | Up to 5 t | n/a | n/a | n/a | n/a |
| Number of vehicles remaining in non-public areas (no end-use) | | (n/a) | - | - | - | No statistical documentation | n/a | None | Bad |
| Theft ('Theft' does not constitute end-use in the context of the project. The data on theft are only shown here for information purposes.) | | M1: (18,805) (*13) Nx: (1,885) | Yes | Yes | Possible | Theft statistics for cars with comprehensive insurance | GIA | Theft reports | Very good |
| | | M1: (19,395) Nx: (1,708) | Yes | Yes | Possible | Police/Federal Criminal Police Office: INPOL property search (*14) | Federal Criminal Police Office | Theft reports | Very good |

| Data | Number of vehicles (2013) | M1 | N1 | Further vehicle classes | To be found in | (Possible) provision through | Underlying data flows | Data quality |
|------|---------------------------|-----|-----|-------------------------|--|------------------------------|-------------------------------|---|
| | (n/a) | Yes | Yes | Yes | Statistics of the FMTA for search annotations regarding stolen vehicles acc. § 30 Para. 9 of the VOR (*15) | FMTA | Search annotations in CVRFMTA | Bad, because the number of stolen vehicles is not retrievable |

(*1) FMTA 2014; (*2) Federal Statistical Office 2015d; (*3) FEA 2013; (*4) For transfers within the EU, the value limit (vl) is relevant for the declaration of turnover tax and applies to companies subject to turnover tax that imported or exported goods with a value of at least EUR 500,000 (value limit relevant for 2013) to or from Germany in the previous year (see Chapter 4.8.3). Based on data from June 2016; (*5) Since the weight limits of the commodity codes for foreign trade statistics differ from the EU vehicle class system, there is a possibility that other N vehicles with a weight exceeding 3.5 t are recorded here. However, it is assumed that the majority of the recorded vehicles belong to vehicle class N1 (see also Chapter 5.2.1 und footnote 241); (*6) FMENCBNS and FEA 2015; (*7) FMTA 2015d; (*8) Evaluation of data supplied by German customs authorities regarding the export of second-hand vehicles from Germany to non-EU countries in 2013; (*9) FMENCBNS and FEA 2015; Federal Statistical Office 2015c. The distribution of the number of vehicles with a statistical goods value above EUR 3,000 and below EUR 3,000 is not known; (*10) See note at *5; (*11) Personal communication with Belgian customs authorities, General Administration of Customs and Excise department, 23/10/2015; (*12) The total is obtained from the number of N1 vehicles previously not taken into account (41,157), the single-stage exportation via Belgium (116,000) and an estimate for all additional exit points from the customs territory (93,000); (*13) GIA 2014; (*14) Federal Criminal Police Office 2013. The INPOL property search by the Federal Criminal Police Office indicates the number of vehicles stolen during the a year, which are still registered by INPOL for search at the end of the year. Although police criminal statistics (PCS) also contain information on vehicle theft, the Federal Criminal Police Office notes: 'PCS case numbers do not allow a final conclusion on the actual number of stolen cars as one case may involve the theft of more than one vehicle, and, as a result, there are uncertainties due to the documentation of criminal offenses and so-called use thefts' (Overview of the situation of crimes related to MVs 2011: 6ff.). This leads to the conclusion that INPOL property search, containing a number of 19,395 M1 vehicles stolen for the long-term, represents the most reliable statistics in this respect; (*15) CVRFMTA contained 2,483,197 registered search annotations as of 03/2013. However, this also includes the reported loss or theft of vehicle documents or licence plates (source: FMTA 2013a, p. 2f.).

Figure 11 (see Chapter 2) shows the data basis at the beginning of the project 'Whereabouts of end-of-life vehicles'. Figure 49 summarises the data basis, updated with the findings of the project, on the whereabouts of decommissioned vehicles and on the statistical gap.

Figure 49: Flows of M1 and N1 class vehicles in 2013 specified in million units – update



Data basis: Own calculations and research; FMTA; German customs authority; Federal Statistical Office; FEA; Belgian customs authority. 'Permanently decommissioned' only refers to decommissioning in Germany. Such vehicles may be recommissioned abroad.

The following Table 52 summarises the effects on the statistical gap.

Table 52: Effects of the updated data on the statistical gap (M1 and N1 vehicles)

| No. | Statistical area | Initial value | New value | Effect on the statistical gap |
|-----|---|----------------------------|-----------------------|-------------------------------|
| A | Total number of permanently decommissioned vehicles | 3.26 million vehicles (M1) | 2.74 million vehicles | 0.52 million vehicles |
| B | Exports out of the EU | 0.34 million vehicles | 0.59 million vehicles | 0.25 million vehicles |
| C | Second-hand vehicles transferred to other EU MSs for re-registration | 1.23 million vehicles | 1.37 million vehicles | 0.14 million vehicles |
| D | Vehicles transferred to or remaining in other EU MSs without the renewal of approval (partly non-authorized dismantling, recycling after local accident with CoD) | n/a | 0.14 million vehicles | 0.14 million vehicles |
| E | Non-authorized dismantling in Germany | n/a | 0.13 million vehicles | 0.13 million vehicles |
| F | Non-documented dismantling in authorised dismantling facilities in Germany | n/a | 0.02 million vehicles | 0.02 million vehicles |
| G | Authorised dismantling in Germany | 0.50 million vehicles | 0.50 million vehicles | 0.00 million vehicles |
| H | Unknown whereabouts [A-(B+C+D+E+F+G)] | 1.18 million vehicles | 0.00 million vehicles | n/a |

Note: The initial values of the annual FEA report did not always include N1 vehicles. A comparison of the flows is illustrated in Figure 49 and Figure 10.

The summarised representation shows that the statistical gap could be closed to the maximum extent possible. 0.29 million statistically unrecorded vehicles remain under non-authorized or non-documented dismantling. Consequently, the largest data uncertainties lie in the illegal whereabouts, specifically non-authorized dismantling both within and outside of Germany.

6 Recommendations and action proposals

This chapter contains, based on the findings of previous chapters, recommendations and action proposals aimed at improving the data situation in the future. It was taken into consideration that the implementation expenses for meeting the action objectives should preferably be kept as low as possible.

Measures are discussed on two levels:

- ▶ enhancing information flows and
- ▶ creating impetus where necessary in order to ensure the better documentation of vehicle life-cycles.

The players/addressees, the implementation scope and the binding character were presented for each proposal. The recommendations are assessed with regard to the following aspects:

- ▶ expected effect on the statistical gap,
- ▶ expected effect on the distribution of the vehicle flows,
- ▶ expected expenses,
- ▶ legal implementation,
- ▶ practical implementation,
- ▶ acceptance.

6.1 Share of permanently decommissioned vehicles

Reasons underlying the statistical gap: Until and including 2013, the share of permanently decommissioned vehicles in vehicle class M1 was determined using a factor of 40 % based on the total number of decommissioned vehicles. For the reference year 2013, FMTA modified the factor for M1 vehicles to 33.3 % and for N1 vehicles to 41.4 % (see Chapter 5.1).

Recommendation 1a: Determination by FMTA

An assessment of the share of permanently decommissioned vehicles by FMTA can take place regularly. As the determination of the share of permanently decommissioned vehicles is essential for the determination of the statistical gap, such a calculation is highly recommended (e.g. every three to four years, in accordance with the review period of the analysis carried out by FMTA, see Chapter 5.1). This should also include a review of whether a factor '4 %' is still valid for the share of multiple decom. operations per year. According to current calculations, the costs are somewhere around EUR 5,000 for each determination of the factors.

Recommendation 1b (an alternative to 1a): Simplified calculation by FEA: Alternatively, simplified calculation based on publicly available data²⁶³ is also possible for vehicle classes M1 and N1:

Formula 1:

Permanently decommissioned vehicles (year x)
 = New registrations (year x) + second-hand vehicle imports (year x)
 – Increase in vehicle population (year x)

with

Formula 2:

Increase in vehicle population (year x) = population (01/01 year x+1) – population (01/01 year x)

This alternative method of calculation was classified by FMTA as a possible option (FMTA 2016a). However, a distinction must be made, among other things, between ‘decommissioning operations’ (administrative procedure) and decommissioned vehicles (see the calculations in Chapter 5.1 in this respect). For the year 2013, both methods of determination resulted in a difference of approx. 4 % (see the following calculation).

Example for the reference year 2013:

- a) Detailed method: Modification of the factor for permanently decommissioned vehicles by FMTA based on the example of vehicles from the vehicle class M1: 33.3 %
 Number of permanently decommissioned M1 vehicles (2013) = number of decommissioned M1 vehicles (2013) * 33.3 %
 = 7.8 million M1 vehicles²⁶⁴ * 0.333 = 2.6 million M1 vehicles
- b) Simplified method according to Formulas 1 and 2:
 Permanent decommissioning operations (2013) = new registrations (2013)
 + second-hand vehicle imports (2013) – (population (01/01/2014) – population (01/01/2013))
 = 2.95 million M1 vehicles²⁶⁵ + 0.18 million M1 vehicles²⁶⁶ – (43.85 million M1 vehicles²⁶⁷ – 43.43 million M1 vehicles²⁶⁸) = 2.71 million M1 vehicles

According to FMTA (2016), approx. 4 % of M1 vehicles were decommissioned several times in 2013. If this value is also taken into account as a correction factor for the simplified calculation according to Formulas 1 and 2, the results correspond to each other relatively well.

Accordingly, both methods (Recommendation 1a and Recommendation 1b) could, in principle, be applied from an expert viewpoint. The determination of the ‘4 % factor’ for vehicles decommissioned more than once per year would not be possible via Recommendation 1b.

Recommendation 1a results in costs due to the contribution by FMTA (every 3-4 years), while in the case of Recommendation 1b, there is a (lower) expense due to FEA because of (simple) calculation. The cost difference is not considered to be so great as to enable a differentiation of recommendations from an expert viewpoint.

²⁶³ Data sources: New registrations and vehicle population = publications by FMTA (see FMTA n.d. d; FMTA n.d. e); second-hand vehicle imports = according to foreign trade statistics from the Federal Statistical Office (see Federal Statistical Office n.d.).

²⁶⁴ For the calculation of the number of permanently decommissioned vehicles, see Chapter 5.1.

²⁶⁵ See FMTA n.d. f.

²⁶⁶ Federal Statistical Office 2015c

²⁶⁷ See FMTA n.d. g.

²⁶⁸ See FMTA n.d. h.

Both recommendations should be initiated by FEA rapidly and can be implemented simply and quickly. Acceptance by the main players, i.e. FMTA and FEA, is guaranteed.

The effect of the modification of the share of permanently decommissioned vehicles among all decommissioning operations, as well as the calculation of the number of decommissioned vehicles, by ruling out more than one decommissioning operation for the same vehicle in the same year (see Chapter 5.1) on the reduction of the statistical gap, was very large for the first year of the study (reference year 2013). Thus, the gap for M1 vehicles could be reduced by 0.7 million M1 vehicles after the modification of the factor of permanently decommissioned vehicles from 40 % to 33.3 %. Because N1 vehicles were previously not considered for the assessment of the statistical gap, after calculating the factor for the permanent decommissioning of N1 vehicles (41.4 %) approx. 0.14 million N1 vehicles had to be added. The total impact on the statistical gap resulting from the modification of the share of permanent decommissioning (M1 and N1 vehicles) is therefore 0.52 million vehicles. Using the new factors as a starting point, it is expected that future impacts on the statistical gap will be lower.

This important figure can be identified based on the determination of permanently decommissioned vehicles using the calculation methods described in Recommendations 1a and 1b. The overall expenses of the combined assessment are considerably lower compared to the reintroduction of 'temporary and permanent decommissioning' as administrative processes.

Table 53: Proposals for updating the share of permanently decommissioned vehicles

| Proposal | Players / addressees | Implementation horizon | Obligation |
|------------------------------------|-------------------------|---------------------------------|------------|
| R1a: Determination by FMTA | FMTA (Order via FEA) | Short-term (Every 3-4 years) | order |
| R1b: Simplified calculation by FEA | FEA | Short-term Annually | Yes |

Table 54: Evaluation of proposals for updating the share of permanently decommissioned vehicles

| Proposal | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player acceptance |
|------------------------------------|--|--|--|----------------------|--------------------------|------------------------|
| R1a: Determination by FMTA | Very high in the 1st year: 0.52 million vehicles; in case of regular calculation: presumably lower in the subsequent years | Not relevant | Low Costs of FEA to FMTA: Every 3-4 years <EUR 5,000 | Not necessary | Simple | FEA, FMTA: available |
| R1b: Simplified calculation by FEA | | | Lower expenses at the FEA | Not necessary | Simple | |

6.2 Exports to non-EU countries

Reason 1 underlying the statistical gap: Missing data flows for single-stage customs declaration abroad.

Second-hand vehicle exports from Germany to non-EU countries (vehicles registered for export at foreign exit points from the customs territory under a single-stage procedure, at the border EU/non-EU) are not recorded in German foreign trade statistics (Example: Export declaration at the port of Antwerp, see Chapter 5.2.1). Likewise, second-hand vehicles approved in another state for the last time and exported via Germany by means of the single-stage procedure can reappear in German foreign trade statistics (see Chapter 5.2.1.1).

Recommendation 2a (medium term): Establishing a flow of information between customs authorities

By 2020 at the latest, the EU Commission plans to improve information exchange between Member States by establishing an additional flow of information from the customs authorities in other EU countries to German Customs and vice versa, providing information on vehicle exports from Germany registered at a foreign exit point by means of the single-stage procedure (European Commission 2014b, p. 31, European Commission 2015c, p. 11f., 19f.; European Commission 2015b, p. 11). It is recommended to observe this development and take its effects into consideration accordingly (no use of the correction factor (see Recommendation 2b) from the moment when the currently missing information flow is established).

Recommendation 2b (short-term): Application of a correction factor

Until the implementation of adjusted regulations, it is recommended to apply a correction of +0.25 million vehicles for exports to non-EU countries. This value was specified for the reference year 2013 based on statistical data from the Belgian Customs, supplemented by an extrapolation (see Chapter 5.2.1.2). If the values providing a basis for the factor change significantly in the coming years, the factor should be adjusted. Besides the possibility of recalculating the corresponding data for the respective year, efforts can be reduced by means of a proportional adjustment to statistically documented export figures. The resulting data uncertainty appears to be acceptable since the number of affected vehicles is likely to be in the 5-digit range.

This measure can be implemented by FEA rapidly, without any expenditure of time. If the export figures recorded by German Customs change significantly, a new value must be determined.

The effect on the statistical gap is great, with very little effort by the FEA and easy implementation. Therefore, acceptance by FEA can be taken for granted.

It can also be assumed that the application of a correction factor will be accepted by the EU Commission in connection with the report on end-of-life vehicle disposal, as this would represent an improved data situation compared to the status quo. However, the estimated value of the factor refers to a certain degree of data uncertainty. Nevertheless, information on exports from Germany, such as those held by the Belgian Customs, is not available regarding the data gap of exports by road (e.g. Poland and Lithuania, see Chapter 5.2.1.2) via exit points. For better data security, a survey could be required for all exit points from the customs territory. Considering the developments described in Recommendation 2a, however, this does not seem to be necessary from an expert viewpoint.

Table 55: Proposals for the improvement of data situation regarding the exports of second-hand vehicles to non-EU countries

| Proposal | Players / addressees | Implementation horizon | Obligation |
|---|--|------------------------|------------------------------------|
| R2a: Establishing the flow of information between customs authorities | Establishment of information flow: EU, MS. Implementation of information flow: Customs of other MSs, German Customs, (Federal Statistical Office) | Medium term | In case of a legal regulation: yes |
| R2b: Correction factor | FEA | Short-term | no |

Table 56: Evaluation of proposals for the improvement of data situation regarding the exports of second-hand vehicles to non-EU countries

| Proposal | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player acceptance |
|---|-------------------------------|--|---|----------------------------------|--------------------------|---|
| R2a: Establishing the flow of information between customs authorities | High (approx. 0.25 million) | N/a | Relatively high: Data collection and coordinated transfer between MSs | Possible and planned at EU level | Yes | Available |
| R2b: Correction factor | High (approx. 0.25 million) | N/a | None in the short term, medium for new calculations | Not necessary | Immediately | FEA: available EU COM: Improvement of the status quo |

Reason 2 underlying the statistical gap: False or missing export declarations

Furthermore, there is the possibility that second-hand vehicle exports are not recorded due to false declarations or non-declarations at customs (see Chapter 3.3.1.5). For exports by sea, this is particularly the case when the vehicles are in containers. Vehicles can also be exported²⁶⁹ in parts (including halved vehicles).

Recommendation 3: Tighter enforcement and comprehensive (customs) control

Tighter control at ports and on the roads and special search profiles used by customs authorities to identify suspicious exports may lead to a reduction in the number of unidentified exports.

²⁶⁹ To clarify whether such vehicles are dismantled end-of-life vehicles, see the analysis of the legal situation for a distinction between second-hand and end-of-life vehicles in Chapter 4.2, as well as the recommendations regarding the distinction between second-hand and end-of-life vehicles in Chapter 6.7.2.

The effect of tighter controls on the statistical gap is considered to be low for ports as compared to the total number of exports. Expert interviews with control and economic operators at the port of Hamburg (between August and October 2015) revealed a relatively low estimated number of vehicles with a false or missing declaration. As far as road controls are concerned, a greater effect is expected with respect to unregistered exports. Export routes are more varied and export operations are more frequent there (individual exports up to semitrailers in contrast to ships), and the documentation of exports is therefore not as comprehensive as for sea transport.

As a result, tighter road controls²⁷⁰ are assumed to lead to a reduction in the number of vehicles exported with a false or missing declaration. The expenses of controls are considered to be high both at ports and on the roads (inspection or unloading of containers at the port, vehicle inspections on the road) as controls are very staff- and time-intensive.

The legal basis for controls is available. The implementation of tighter controls necessitates a more intensive use of human resources (acceptance problem – question of priority regarding the use of scarce human resources in implementation). The lack of acceptance may be problematic for exporters, shipping companies and terminal operators in that more comprehensive controls can lead to disruptions in logistics.

Recommendation 4: Establishing a flow of information between customs authorities and FMTA

The German system of vehicle registration and decommissioning is characterised by the fact that knowledge about the whereabouts of decommissioned vehicles normally discontinues after decommissioning has taken place. Vehicle-related end-uses are stored in the CVRFMTA in the case of REGINA reports and in the case of decommissioning with the issuance of a Certificate of Destruction, including data according to § 15 VRO, if this is also indicated in the system (see Chapter 4.8). However, other data are theoretically also available, which could be used to achieve a qualitative improvement in information flows. For instance, customs authorities register the VINs of exported vehicles. There is, however, currently no link from FMTA to the CVRFMTA. Through the establishment of other information flows to FMTA (notification on issued Certificates of Destruction by authorised dismantling facilities, notification on VINs from internal trade statistics if the value limit has been exceeded), the concrete whereabouts of a large part of decommissioned vehicles can be tracked. Moreover, the establishment of such information flows would enable customs authorities to identify and withhold vehicles for which a Certificate of Destruction has already been issued in the case of exports under suspicious circumstances. Currently, customs authorities are not able to verify this.

This recommendation has no direct effect on the statistical gap. However, it has a high environmental relevance in cases where it is possible to establish information flows in order to prevent end-of-life vehicles from being exported. Furthermore, it makes a focused investigation possible when the whereabouts of decommissioned vehicles are to be checked (defined vehicles for which there is no information in accordance with delta from decom. and exports/transfers, as well as CoDs). When setting up such an information flow, possible privacy concerns and requirements must be particularly checked and taken into consideration²⁷¹. FMTDI (FMTA) is the player responsible for the area of decommissioning, while FMF is responsible for customs.

²⁷⁰ The volume of exports by road is estimated to be higher than exports by sea (see text). Therefore, a higher number of unnoticed missing declarations can also be expected.

²⁷¹ VIN represents personal information, which is therefore subject to data protection in a special way. For data protection, see also Chapter 4.9 in this report.

Table 57: Proposals for the avoidance of false and missing export declarations by the customs authorities

| Proposal | Players / addressees | Implementation horizon | Obligation |
|---|---|------------------------|------------|
| R3: Tighter enforcement and comprehensive (customs) control | Federal states Customs authorities in Germany, partly FOGT | Short-term | Yes |
| R4: Information flow between customs authorities and the FMTA | FMF, customs authorities in Germany FMTDI, FMTA | Short-term | Yes |

Table 58: Evaluation of proposals for the avoidance of false and missing export declarations by the customs authorities

| Proposal | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player acceptance |
|---|--|---|--|--|--------------------------|---|
| R3: Tighter enforcement and comprehensive (customs) control | Effective against incorrect/missing declarations Potential: lower in ports, higher for export by land | Relevance if end-of-life vehicle is not identified due to false declaration | High to very high expenses for additional controls and personnel requirement | Legal basis available | Possible | States: Considered questionable due to available personnel capacities. Hauliers, senders, recipients of shipments: not provided due to probable time delays |
| R4: Information flow between customs authorities and the FMTA | Limited direct effect, possible impact: improved knowledge of vehicles with unclear whereabouts | Controlling effect on vehicles with a CoD that are to be exported nonetheless | Low to medium | To be further investigated. Particularly, data protection requirements | Possible | FMTA, customs: limited due to additional expenses |

6.3 Transferring second-hand vehicles to other EU Member States for re-registration

Reason 1 underlying the statistical gap: Currently, the completeness of data transmission does not reach 100% via REGINA regarding re-registration in other EU Member States by means of the information exchange according to Directive 1999/37/EC (REGINA data, see Chapter 3.2 and 5.2.2).

Recommendation 5a (medium term): Improvement of the information flow via REGINA

The completeness and reliability of data regarding re-registration in other EU Member States by means of information exchange according to Directive 1999/37/EC or using the REGINA system should be improved. FMTA assumes this is likely to occur over the years as a result of internal optimisation efforts (FMTA 2015b), without the need for additional legal action at European level.

The optimisation of the information flow should be supported and accelerated through discussions with the competent authorities of the Member States. ‘Association of Vehicle and Driver Registration Authorities’ (EReg) is considered to be a suitable platform for this purpose. The environmental function could initiate appropriate discussions in coordination with the transport function.

The effect on the statistical gap is estimated to be large, in accordance with the calculations in Chapter 5.2.2.

Recommendation 5b (short-term): Use of a correction factor

Until an improved flow of information is achieved, a correction factor should be applied in reports to the EU Commission regarding the whereabouts of (end-of-life) vehicles. The correction factor must be set up dynamically based on current changes in the reports of Member States and should initially take into account which country reports are classified as ‘incomplete’. The following procedure can be used to determine the value of the correction factor:

- ▶ **5b-1):** For all target countries whose REGINA reports are classified as incomplete and which are relevant for transfers from Germany (in 2013: Italy, Spain, Austria), the VINs from the registrations of used vehicles in a year or in two years are compared with decommissioning figures in Germany, as documented by FMTA. This leads us to the number of re-registered vehicles from Germany in the target countries. This information is matched with REGINA data (number of vehicles from VIN comparison minus REGINA reports), and a correction factor is derived. This correction factor can subsequently be applied for several years, provided there is no substantial change in transfer or reporting behaviours.
- ▶ **5b-2):** Alternatively, a simplified correction factor can be derived from the comparison of data from foreign trade statistics and the REGINA reports, which would, however, lead to significant data uncertainty. The factor in 2013 would be 9 for those Member States for which no other data sources are available, if the average difference between REGINA and trade data were used as a basis²⁷². If REGINA data provided a basis, the correction factor would be 1.13²⁷³. If data from the trade statistics were used as a basis, the correction factor would be 9.86²⁷⁴.

As far the suitability of the factor in the following years is concerned, whether there is any significant change in the relationship between REGINA and trade statistics data should be examined. If

²⁷² 11 % of the vehicles appearing in the re-registration statistics of REGINA are listed in foreign trade statistics, see Chapter 5.2.2.

²⁷³ Consolidated number of vehicles of 1.37 million divided by number of vehicles according to REGINA of 1.216 million

²⁷⁴ Consolidated number of vehicles of 1.37 million divided by number of vehicles according to the trade statistics of 0.139 million

that is the case, the factor should be recalculated if REGINA reports are further regarded as incomplete. A direct data query from Austria regarding re-registrations should be updated in the course of such a procedure.

For 5b-1): Contribution to the elimination of the statistical gap probably leads to comparatively high costs if FMTA performs the calculations according to 5b-1) for the three above-mentioned Member States (Italy, Austria, Spain). A review of the feasibility of the proposal showed that this was technically absolutely possible (FMTA 2016b), but the availability of VIN must be checked with the corresponding Member States (possible data protection concerns).

For 5b-2): The current correction factor for the relevant review period can be determined by FMTA or FEA at short notice. The effect on the statistical gap is somewhere around 0.1 million vehicles per year (2013: 0.14 million vehicles, see Chapter 5.2.2). This does not lead to an effect on the control of vehicle flows.

The acceptance of a calculated factor by the EU Commission will be significantly higher than that of an estimated one. Acceptance by the Member States concerned depends on their willingness to cooperate. Exactly in the light of the method of determining the number of vehicles subject to non-authorised dismantling (delta from final decom. and other evidenced forms of whereabouts), FMTA recommends a calculation, provided that the necessary data are provided by other Member States.

Table 59: Proposals for the improvement of data situation regarding the transfer of second-hand vehicles to EU Member States

| Proposal | Players / addressees | Implementation horizon | Obligation |
|---|---|------------------------|------------|
| R5a: Improvement of the information flow via REGINA | Discussions with FMTA, EReg, foreign vehicle authorities. Initiation: FMENCBNS (FEA) | Medium term | Partly |
| R5b-1: Correction based on VIN | Foreign vehicle authorities, FMTA | Short to medium term | Yes |
| R5b-2: Correction factor | FEA | Short-term | No |

Table 60: Evaluation of proposals for the improvement of data situation regarding the transfer of second-hand vehicles to EU Member States

| Proposal | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player acceptance |
|---|-------------------------------|--|-----------------------|------------------------|--------------------------|--|
| R5a: Improvement of the information flow via REGINA | High (approx. 0.1 million) | None | High for affected MSs | Sufficient legal basis | Yes, possibly lengthy | MSs: Probably, due to implementation of existing regulations |

| Proposal | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player acceptance |
|--------------------------------|-------------------------------|--|------------------------------------|---|---|---|
| R5b-1: Correction based on VIN | High (approx. 0.1 million) | None | High for affected MSs and the FMTA | Clarification of data protection issues necessary | Technically possible: Data protection where necessary; Possible with cooperation of the MSs | Affected MSs: to be clarified; FMTA: to be clarified; EU COM: available |
| R5b-2: Correction factor | High (approx. 0.1 million) | None | Low | Not necessary | Immediately | FEA: available; EU COM: Improvement of the status quo |

Reason 2: No re-registration after transfer:

In addition, transferring vehicles to other Member States without re-registering them as a second-hand vehicle and without registering them as an end-of-life vehicle leads to a statistical gap. These issues are discussed in detail in Chapters 6.4 ('Non-authorised dismantling in other EU Member States') and 6.7.2 ('Distinction of second-hand vehicles and end-of-life vehicles').

6.4 Non-authorised dismantling in other EU Member States

Reasons underlying the statistical gap: Permanently decommissioned vehicles are transferred from Germany and not registered again in the destination country, instead, they are dismantled as end-of-life vehicles in non-authorised dismantling facilities. This means that no records are created in the REGINA re-registration statistics or in cross-border waste statistics if there is no notification according to the Waste Shipments Regulation. Statistical recording in internal trade statistics as a second-hand vehicle occurs only in cases where the exporter exceeds the reporting threshold (see Chapter 4.8.3).

Efforts to minimise dismantling at non-authorised dismantling facilities in other EU Member States can be categorised into two groups:

- ▶ Prevention of shipment and
- ▶ Implementation in other EU Member States.

Because dismantling at non-authorised dismantling facilities in other Member States is not statistically recorded, the minimisation of such non-authorised activities also leads, indirectly, to an improved data situation as the vehicles are assigned to other, usually better documented forms of whereabouts.

6.4.1 Prevention of shipment without notification

Recommendation 6: Definition of a distinction between end-of-life vehicles and second-hand vehicles

The question of making a distinction between end-of-life vehicles and second-hand vehicles is of great importance in cases where the vehicle is exported for dismantling at non-authorised dismantling facilities and the vehicle is of a waste character. It is recommended to establish a legally binding basis for making a distinction. This key point is discussed in Chapter 6.7.2.

Recommendation 7: Stricter enforcement

The implementation of existing legal regulations for the prevention of shipments without notification is an essential aspect here. It is recommended to intensify enforcement (see corresponding explanations in Chapter 6.2).

Recommendation 8: Elimination of obstacles to decommissioning

Furthermore, the elimination of obstacles to decommissioning in Germany could minimise drivers for assigning vehicles to non-documented forms of whereabouts. These key points and the recommendations are discussed in Chapter 6.7.1.

In cases where vehicles are sold abroad via salvage exchanges or online trading, the recommendations in Chapter 6.7.3 (Online trade) are also relevant.

6.4.2 Implementation in other EU Member States

Recommendation 9: Prevention of non-authorised dismantling in other EU Member States

The dismantling of vehicles at non-authorised dismantling facilities in other Member States should be made more difficult by means of stricter enforcement. This could reduce the number of end-of-life vehicles assigned to this illegal form of whereabouts. The details of this recommendation are identical with those discussed and further clarified in Chapter 6.5. Therefore, here reference is only made to explanations in that chapter. Such activities can be initialised via Recommendation 10.

Expenses are estimated to be between medium and high. Note, however, that the implementation of regulations against non-authorised dismantling is mandatory for the enforcement authorities of every Member State. However, the implementation of, for example, focused actions results in significant additional expenses and a reallocation of human resources (see also Chapter 6.5).

Recommendation 10: IMPEL exchange regarding non-authorised dismantling of end-of-life vehicles

It is recommended to establish regular exchanges between EU Member States regarding the enforcement of regulations against the dismantling of end-of-life vehicles at non-authorised dismantling facilities. The structure and experience of the IMPEL network ('European Union Network for the Implementation and Enforcement of Environmental Law')²⁷⁵ may prove helpful in this respect. For example, the part 'Waste and TFS' has already discussed cross-border shipments of waste and enforcement issues within individual Member States, such as in the context of waste disposal²⁷⁶.

FEA acts as a national coordinator in IMPEL and should initiate the activities. The federal states also play an important role and should be involved in this initiation process. The activity can be started at

²⁷⁵ <http://www.impel.eu/>.

²⁷⁶ Cf. <http://www.impel.eu/topics/waste-and-tfs/>.

short notice. An effect on the statistical gap may be generated indirectly by the resulting prevention of non-authorised dismantling. This would also lead to a controlling effect.

The effect of measures to prevent shipments (see Chapter 6.4.1) and to intensify enforcement in EU Member States on the statistical gap cannot be quantified on a general basis, but is highly dependent on the type and scope of the enforcement activities performed in the Member States. However, the overall potential of vehicles shipped to other EU Member States and not re-registered there, which is to a large extent controllable by means of appropriate enforcement measures, is over 0.1 million vehicles (estimation for 2013: 0.14 million vehicles).

Table 61: Proposals for the improvement of data situation regarding the shipment of second-hand and end-of-life vehicles to EU Member States

| Proposal | Players / addressees | Implementation horizon | Obligation |
|--|---|----------------------------|-----------------------------|
| E9: Prevention of non-authorised dismantling in other EU Member States | Enforcement authorities in the Member States; initialisation according to Recommendation 10 | Medium term | High |
| R10: IMPEL exchange regarding non-authorised dismantling of end-of-life vehicles | IMPEL network at EU level, initiator FEA, contribution by federal states | Possible in the short term | No, exchange of experiences |

Table 62: Evaluation of proposals for the improvement of the data situation regarding the shipment of second-hand and end-of-life vehicles to EU Member States

| Proposal | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player acceptance |
|--|----------------------------------|--|--------------------|----------------------|--------------------------|------------------------|
| E9: Prevention of non-authorised dismantling in other EU Member States | Potentially great (>0.1 million) | Yes | Medium to high | See Chapter 6.5 | See Chapter 6.5 | See Chapter 6.5 |

| Proposal | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player acceptance |
|--|--|--|--|--|--------------------------|--|
| R10: IMPEL exchange regarding non-authorised dismantling of end-of-life vehicles | No immediate impact; effect only on the basis of actions taken subsequently by the MSs | No immediate impact; effect only on the basis of actions taken subsequently by the MSs | The IMPEL experience exchange is not very complicated. The implementation of the discussed measures in the MSs may be costly | No change in legislation required; voluntary | Yes | IMPEL: no clear direction – low due to additional expenses, high due to comparable approaches to the problem in many MSs |

6.5 Dismantling in facilities other than authorised dismantling facilities in Germany

Reasons underlying the statistical gap: In Germany, permanently decommissioned vehicles are dismantled in non-authorised dismantling facilities as end-of-life vehicles, disregarding the requirements of the ELV Ordinance. Therefore, no statistical recording takes place in principle, as long as no partly dismantled end-of-life vehicles or stripped vehicles are delivered to authorised dismantling facilities.

6.5.1 Implementation of regulations against non-authorised dismantling

Problem description: Situations regarding non-authorised dismantling are quite complex in respect of the constellation of players (e.g. private individuals on industrial or non-industrial premises, workshops with very different characteristics, traders, exporters, scrap yards (see Chapters 2, 3 and 4)) and in respect of controls and penalties (e.g. competences of authorities, identification of non-authorised dismantling, legally compliant punishment of activities (see among others Chapter 4)).

Personnel costs associated with the enforcement and requirements for the professional competence of the enforcement staff are high. For governmental activities against dismantling in other than authorised dismantling facilities in France, 2,000 man-days were used for 1,265 inspections during the period from 2012 to 2014. A ruling was issued for 46 % of the facilities reviewed, and 6 % of the facilities were closed (Ministère de l'Ecologie, du Développement Durable et de l'Energie France 2015). However, the actions performed revealed a high proportion of suspicious cases (e.g. *ibid.*; Alsace 2013; DREAL 2014).

The reduction of the extent of the treatment of end-of-life vehicles at non-authorised dismantling facilities, i.e. the minimisation of improper disposal, leads to a shift towards legal, documented whereabouts tracks. This process must be given priority over efforts to estimate this volume flow in statistic terms. Experts recommend the intensification of enforcement against non-authorised dismantling facilities.

Recommendation 11a: Establishment of a supra-regional work group

The complex situation requires that the enforcement authorities concerned should be supported and that the relevant know-how is made available to them. Therefore, it is recommended to establish a

work group across all federal states with the involvement of regional enforcement authorities. Parties with supra-regional knowledge (technical and professional know-how on MVs and dismantling, such as MV experts and certifiers of dismantling facilities or monitoring authorities with appropriate qualifications) should be involved if necessary. Information on experience from other actions (e.g. from France or from regional activities in Germany) is useful from the perspective of experts. Such a work group should be organised and coordinated across all federal states. The work group could support competent authorities (e.g. by providing guidelines or enforcement aids) and function as a platform for a supra-regional exchange of experiences).

The work group could also create knowledge or make technical know-how available on the subject ‘Determination of the number and volume of stripped vehicles processed by shredders’. The background for this is the higher volume of stripped vehicles processed by shredders compared to the output of dismantling facilities and the probability that these (or at least part of them) come from non-authorised dismantling facilities (see also Chapter 5.3.2).

Recommendation 11b: Pool for technical expertise

The necessary professional/technical know-how is represented by MV experts and certifiers of dismantling facilities, but is partly unavailable to administrative units (see Czekalla 2016). To increase the efficiency of the activities, it is recommended that, to the extent possible, regional administrative authorities intensify their efforts to access the know-how of external experts. In this respect, a solution must be found for the coverage of costs. Experts suggest reviewing whether a one-off financing scheme could be realised for external know-how in the case of actions with a limited duration (e.g. one year) by means of concerted action based on voluntary contribution from economic operators and the public sector. Here a potential conflict is to be taken into consideration when such a knowledge pool is financed from private sources and the authorities use this know-how for their enforcement activities. Furthermore, an appropriate method should be found to determine the contributors to the knowledge pool (including questions regarding competition law). FEA is proposed as an initiator in this respect, as the federal level is initially involved through research activities, reports to the EU Commission, and efforts to eliminate the statistical gap. Subsequent further processing after initialisation can be assigned to federal states or a federal organisation responsible for the enforcement of the ELV Ordinance.

Recommendation 11c: Support for non-authorised dismantling facilities in transition to an authorised dismantling facility

Non-authorised dismantling facilities should be provided assistance in the transition to an authorised dismantling facility, as far as legally possible and permissible. This can be done, for instance, in the form of administrative assistance or through chambers of crafts with respect to the possibilities of fulfilling the legal requirements. A corresponding procedure is already used in practice e.g. by GAA Hildesheim (Möller 2015).

Recommendation 11d: Enforcement aid for carrying out seizures in unauthorised facilities

Discussions within the framework of an expert workshop also showed that the right of seizure could be helpful for environmental authorities in actions against non-authorised dismantling (Czekalla 2016). It is true that this right of seizure is granted by § 70 CSCA in conjunction with § 69 Para. 1 Item 8 CSCA, as well as § 11 Para. 1 of the ELV Ordinance. However, the implementation thereof in the daily work of enforcement authorities has been described as difficult (Czekalla 2016). Additional enforcement aid was considered useful during the discussion at the workshop on 21/03/2016 in Berlin (initiator: WGFSW).

Evaluation of Recommendations 11a-d

Measures 11a to 11d can be initiated in the short term and implemented in the medium-term. For example, implementation in France is estimated to take three years.

The potential for closing the statistical gap is estimated at over 100,000 vehicles (2013: 0.13 million vehicles, see Chapter 5.4). No corresponding data are available for an estimation of the actual effect on the statistical gap. The estimation of the specific effort per vehicle, which is newly recorded in the statistics, is therefore hardly possible.

Measures 11a to 11d in particular are proposals for the coordination of an exchange and for the provision of support for the better enforcement of existing regulations. Good legal feasibility is therefore assumed. Practical feasibility depends, in particular, on personnel capacities that can be made available by the supervisory authorities and the availability of professional/technical know-how. Acceptance on the part of authorised economic operators in the field of end-of-life vehicle disposal is used as a starting point. As far as finances are concerned, on the one hand, clear approval was granted at the workshop on 21/03/2016 in Berlin, on the other hand, some concerns were raised regarding the private financing of public tasks and the necessity of time for consideration. There are open questions as to whether a viable path can be found for this approach. For federal states and enforcement authorities, acceptance is basically assumed if sufficient personnel capacities are available or can be allocated.

Recommendation 12: Monitoring used spare parts sales for the identification of non-authorised dismantling facilities

The demounting of spare parts within the framework of non-authorised dismantling could be made less attractive by requiring a proof of origin for used spare parts (as reported, for example, at the workshop on March 21/03/2016 in Berlin). However, the expenses of such monitoring procedures (e.g. checking the availability of proofs of origin) is comparatively high as used parts may be offered not only by authorised dismantling facilities, but also e.g. by workshops (used parts replaced by new parts), part renovators (e.g. engine, transmission, alternator, starter renovators) and individuals (e.g. parts after the replacement of parts in their own vehicles). It is therefore difficult to make a distinction between permitted part removal and non-permitted one.

Lower specific expenses result from a procedure in which facilities are identified through the review of spare parts sales, which are then checked in the context of non-authorised dismantling (see Recommendations 11a to 11d).

The latter procedure is recommended from an expert viewpoint.

Table 63: Proposals for the implementation of regulations against non-authorised dismantling

| Proposal | Players / addressees | Implementation horizon | Obligation |
|---|---|------------------------|------------|
| R11a: Supra-regional work groups | Federal states, federal government (e.g. FEA), regional authorities, economic operators | Short to medium term | No |
| R11b: Pool for technical expertise | Economic operators according to the ELV Ordinance | Medium term | No |
| R11c: Support in the transition from non-authorised dismantling facilities to authorised dismantling facilities | Regional authorities | Short to medium term | No |
| R11d: Enforcement aid for carrying out seizures in unauthorised facilities | Regional authorities | Medium term | Yes |
| R12: Monitoring second-hand spare part sales | Regional authorities | Medium term | Yes |

Table 64: Evaluation of proposals for the implementation of regulations against non-authorised dismantling

| Proposal | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player acceptance |
|---|-------------------------------|--|--------------------|-----------------------------------|--------------------------|---|
| R11a: Supra-regional work groups | Great >0.1 million | High | High | No change in legislation required | Yes | Regional authorities: limited due to high expenses |
| R11b: Pool for technical expertise | | | High | | To be investigated | Economic operators: questionable due to partially external financing of public tasks |
| R11c: Support in the transition from non-authorised dismantling facilities to authorised dismantling facilities | | | Medium | | Yes | Regional authorities: limited due to expenses; other supporting institutions: unknown |
| R11d: Enforcement aid for carrying out seizures in unauthorised facilities | | | Medium | To be investigated | To be investigated | Regional authorities: available |
| R12: Monitoring second-hand spare part sales | | | Medium | Available | Available | Regional authorities: limited due to expenses |

6.5.2 Collecting more detailed information through random checks of the input volumes of shredding facilities in Germany

Problem description: Stripped vehicles from authorised and non-authorised dismantling must be processed by shredders prior to recycling in the steel industry. Insight into the volume of stripped vehicles processed by shredders can be used as an indicator for the determination of the number of cars

dismantled in Germany (taking into account stripped vehicles shipped to and from Germany). Normally, the shredders are aware of the input weights of stripped vehicles delivered to them. However, the whereabouts of end-of-life vehicles in Germany is monitored on the basis of the number of units. Therefore, data on the number of stripped vehicles (e.g. for the survey by state statistical offices) are usually determined through conversion.

No transparent data basis is currently available for the determination of the specific weights of stripped vehicles (kg/piece). As a result, the conversion of weight to a number of units creates considerable uncertainties in the context of the monitoring activity. These uncertainties must be reduced in order to achieve the highest possible statistical accuracy. Finally, the volume originating from sources other than authorised facilities can be determined from the total number of units after deducting stripped vehicles delivered from authorised dismantling facilities. For example, the number of stripped vehicles delivered to shredding facilities from sources other than authorised dismantling facilities is a useful indicator as to whether improved enforcement against non-authorised dismantling facilities or other measures lead to the desired effect.

Recommendation 13: Counting/weighing campaigns at stripped vehicle shredding facilities

It is recommended to conduct counting/weighing campaigns at regular intervals for stripped vehicles at shredding facilities where incoming stripped vehicles are counted and weighed (player: economic operators according to the ELV Ordinance, possibly input from supervisory authorities). The obligation to conduct such campaigns should be implemented at European level as part of the extended producer responsibility specified in the end-of-life vehicle directive. If that is not feasible, regulation at national level is also an option.

The amendment of the Directive within the framework of the upcoming revision of the end-of-life vehicle directive by the Federal Republic of Germany, initiated by FMENCBNS and FEA, should be introduced to the EU Commission.

In the context of eliminating the statistical gap, information on the input stream ‘stripped vehicles’ at shredding facilities is an important factor for being able to estimate the volume of vehicles in non-authorised dismantling. No significant controlling effect is expected from this measure for end-of-life vehicles, but it can be used to monitor the success of enforcement measures (see Chapter 6.5.1).

The acceptance of this measure among economic operators in the field of end-of-life vehicle disposal is considered to be low due to the additional expenses that arise. Therefore, integration into producer responsibility according to the end-of-life vehicle directive or the ELV Ordinance is seen as a feasible option.

Table 65: Proposals for the supervision of shredding facilities

| Proposal | Players / addressees | Implementation horizon | Obligation |
|---|---|------------------------|------------|
| R13: Counting/weighing campaigns at stripped vehicle shredding facilities | Authorised shredders; economic operators according to the ELV Ordinance; possibly supervisory authorities | medium term | Yes |

Table 66: Evaluation of proposals for the supervision of shredding facilities

| Proposal | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player acceptance |
|---|-------------------------------|--|--------------------|--|--------------------------|--|
| R13: Counting/weighing campaigns at stripped vehicle shredding facilities | Medium | Indirect effect | Medium | Implementation in end-of-life vehicle GL | Yes | Economic operators according to the ELV Ordinance: clarification of cost bearing necessary |

6.6 Dismantling at authorised dismantling facilities in Germany

Reason for the statistical gap: Reasons for the lack of records on end-of-life vehicles at authorised dismantling facilities can include incomplete records of partially dismantled end-of-life vehicles from grey sources, transmission of incomplete data to the state statistical offices for Certificates of Destruction, incomplete data records from authorised dismantling facilities, or deliberate omission of dismantled end-of-life vehicles when inquired by the state statistical offices (see Chapter 3.1.2).

Recommendation 14: More intensive examination of authorised dismantling facilities

Unrecorded dismantling at authorised dismantling facilities can possibly be identified by means of on-site inspections (e.g. by checking operation logs within the framework of enforcement, verifying inputs and outputs, and comparison with the operation logs within the framework of the certification) (matching volume data in input and output streams for coherence). In this context, a rough plausibility check may also be performed by comparing the number of end-of-life vehicles with specific output streams²⁷⁷. It must be taken into consideration here that this has usually already been done or should be done within the framework of certification. See below for the question of possible gaps in certification.

The analysis of the situation of authorised dismantling facilities (see Chapters 3.1.2 and 5.3.3) revealed only a few drivers for authorised dismantling facilities not to document end-of-life vehicles (e.g. receipt of end-of-life vehicles from grey sources). Therefore, approximately 20,000 statistically unrecorded end-of-life vehicles are assumed.

The effect on the control of vehicle flows is considered to be low with respect to the total amount of the statistical gap. The effect to effort ratio is therefore low. Acceptance among the facilities con-

²⁷⁷ See also explanations in the research project 'Evaluation and extrapolation of the methodology for the determination of end-of-life vehicle recycling rates by shredding tests under the EC End-of-Life Vehicle Directive 2000/53/EC' as part of the environmental research plan of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, research ref. no. 3715 33 305 0, publication planned for 2016

cerned and enforcement authorities is classified as low (effort vs. benefit, the action against non-authorised dismantling is evaluated as more urgent). In purely legal and practical terms, there is direct feasibility.

Table 67: Proposals for enforcement against statistically unrecorded dismantling at authorised dismantling facilities

| Proposal | Players / addressees | Implementation horizon | Obligation |
|--|---------------------------------------|------------------------|----------------------|
| R14: More intensive examination of authorised dismantling facilities | Supervisory authorities of the states | Short to medium term | Yes, legal execution |

Table 68: Evaluation of proposals for enforcement against statistically unrecorded dismantling at authorised dismantling facilities

| Proposal | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player acceptance |
|--|-------------------------------|--|--|-------------------------------|--|---|
| R14: More intensive examination of authorised dismantling facilities | Low | No | Low (if standardised plausibility checks are utilised) to medium | Legal basis already available | Available with regard to vehicle-related input/output checks, limited with regard to the availability of plausibility checks | Dismantling facilities and enforcement authorities: low |

6.7 Generic aspects:

This chapter discusses generic aspects, which are assigned to more than one of the described paths of whereabouts.

6.7.1 Certificate of Destruction

Problem description: On the one hand, a Certificate of Destruction generates an information flow that can potentially contribute to the elimination of the statistical gap. On the other hand, a controlling effect towards authorised dismantling facilities is also often expected, as described by various players at several workshops²⁷⁸.

For various reasons, however, Certificates of Destruction do not currently contribute to the tracking of the whereabouts of decommissioned vehicles to the extent hoped for. Only about 10 % of end-of-

²⁷⁸ E.g. German Association of the Automotive Industry, FASRMWM, representatives of authorised dismantling facilities at the workshop 'Certificate of Destruction' on 29/02/2016 in Berlin.

life vehicles recycled in 2013 at authorised dismantling facilities according to the waste statistics have Certificates for Destruction in CVRFMTA (see Chapter 3.1.2). The following obstacles were identified in discussions with various players, e.g. authorised dismantling facilities, MV registration offices, experts certifying dismantling facilities, and in a discussion at a workshop²⁷⁹:

1. In many cases, the whereabouts of vehicles is only clarified after decommissioning. Therefore, no Certificate of Destruction is available at the time of the decommissioning. Last holders are not usually motivated to subsequently produce a Certificate of Destruction.
2. Even Certificates of Destruction available at the time of decommissioning are in many cases not provided by last holders (MV registration office Kaiserslautern 2016; MV registration office Bad Dürkheim 2016; experts between January and March 2016). This could partly be explained by the increased fees for decommissioning with a Certificate of Destruction as compared to decommissioning without a Certificate of Destruction (see Chapter 3.1.2 and Table 29 in Chapter 4.1.1.3).
3. Discussions with experts revealed that MV registration offices did not consistently request the submission of, and did not or collect from last holders, a Certificate of Destruction during decommissioning (MV registration office Kaiserslautern 2016; MV registration office Bad Dürkheim 2016; MV registration office Westerwaldkreis 2016; experts between January and March 2016). In addition, MV registration offices do not have an opportunity to check the existence of a Certificate of Destruction.
4. Contrary to the provisions of § 4 of the ELV Ordinance, authorised dismantling facilities do not always issue a Certificate of Destruction for received end-of-life vehicles if the last holder does not explicitly request this (personal discussions with experts between January and March 2016, personal discussions with authorised dismantling facilities between December and February 2016).
5. Pursuant to the ELV Ordinance, end-of-life vehicles for which a Certificate of Destruction has been issued must be recycled on a mandatory basis. § 14 Para 6 VRO provides MV registration offices the possibility of re-approving for road traffic even such vehicles for which a Certificate of Destruction has been furnished during the decommissioning process. These inconsistencies between the ELV Ordinance and VRO can potentially lead to the erroneous documentation of end-of-life vehicles.
6. It is currently not possible to indicate a Certificate of Destruction for the online decommissioning of vehicles newly registered or re-registered since 01/01/2015. If such a certificate is available, and the last holder wants to indicate it, he must interrupt the process and have the vehicle decommissioned by a MV registration office. Therefore, this results in increased expenses for the last holder and is thus an incentive for him not to indicate an existing Certificate of Destruction.

These obstacles lead to an under-exploitation of the information potential of Certificates of Destruction.

The following recommendations are made in order to minimise such obstacles and thus to exploit the full potential of Certificates of Destruction for ensuring the traceability of the whereabouts of end-of-life vehicles:

Recommendation 15a: Establishment of an information flow between authorised dismantling facilities and CVRFMTA,

When preparing a report for the Commission, FEA and FMENCBNS currently take into consideration the number of recycled end-of-life vehicles from waste statistics. It is not known which vehicles are actually recycled. There is no direct information flow between authorised dismantling facilities and

²⁷⁹ Workshop 'Certificate of Destruction' on 29/02/2016 in Berlin.

CVRFMTA or MV registration offices regarding the number of end-of-life vehicle received. It is recommended to establish such an information flow. In this manner, it would be possible to keep track of the whereabouts of every recycled end-of-life vehicle. Using this data basis, strict compliance could be ensured with the prohibition of the re-registration of end-of-life vehicles for which a Certificate of Destruction has already been issued (see Recommendation 16 below). In addition, the export of (end-of-life) vehicles for which a Certificate of Destruction has already been issued could be prevented (potential environmental benefit). As a result, it would be possible to forego the use of the Certificate of Destruction within the framework of decommissioning by the MV registration office, and there would be less workload on MV registration offices. In order to meet the strict safety requirements regarding access to CVRFMTA and the direct entry of data into CVRFMTA, whether an intermediary head end can be established to which authorised dismantling facilities can transmit their data on issued Certificates of Destruction should be checked. This head end can then forward the information to FMTA/CVRFMTA in a bundled form.

Authorised dismantling facilities claimed, for instance at the workshop on 29/02/2016 in Berlin, that this would be feasible for them from a technical point of view. If the establishment of such an information flow proves to be feasible, it could make unnecessary the submission of Certificates of Destruction to MV registration offices for decommissioning and, as a result, also the following recommendations. However, the Certificate of Destruction should further be delivered to the holder of the motor vehicle as it serves, for example in the case of total loss, as a recycling certificate for insurance purposes and also as a security for the last holder with respect to any later claims.

In the Netherlands, positive experiences have been gained with such a system. The owner must take the vehicle to an authorised dismantling facility for dismantling, which in turn reports the vehicle electronically as dismantled to the general Vehicle Register. Subsequently, the owner receives a confirmation of dismantling, with which insurance is provided against any potential damage later caused by the vehicle (for example when the dismantling facility does not properly recycle the end-of-life vehicle, but resells it illegally instead).

Recommendation 15b: Harmonisation of fees charged for decommissioning with and without a Certificate of Destruction (on the spot at the registration office)

If the establishment of the information flow proposed in Recommendation 15a between authorised dismantling facilities and CVRFMTA is not feasible, or if it should also be possible to submit a Certificate of Destruction to the MV registration office, the fees charged for decommissioning with a Certificate of Destruction should be harmonised with the fees charged for decommissioning without a Certificate of Destruction. Until now, the difference in the fees charged has been justified by the additional effort created for MV registration offices in the context of furnishing and processing a Certificate of Destruction (see Chapter 4.1.1). Considering that, pursuant to § 15 Para. 2 VRO, the whereabouts of the vehicle must also be reported in the case of decommissioning without a Certificate of Destruction, which, pursuant to § 31 Para. Item 27 VRO and § 30 Para. 1 Item 27 VRO, must be stored by MV registration offices in the local and central registration records, doing without increased charges seems to be reasonable due to the efforts of experts that are present in both cases. Currently, FMTDI is examining whether this reduction of fees can be implemented (status as of 06/2016) (Kilthau 2016).

Recommendation 15c: Consistent collection of a Certificate of Destruction or information on whereabouts by MV registration offices

It is proposed to consistently implement the collection of a Certificate of Destruction and the query for the whereabouts in cases where no Certificate of Destruction is presented (non-waste declaration or declaration on whereabouts abroad), as well as the storage of the results of the query in accordance with the existing legal basis in VRO. To that end, registration offices should be explicitly encouraged

by the competent authorities to do so (implementation of existing legislation). Compliance should be checked if necessary.

It is also proposed that the wording of § 15 Para. 1 VRO should be adjusted in such a way that last holders are also obliged to present Certificates of Destruction from other EU Member States if the vehicles to be decommissioned remain in the relevant EU country for recovery. According to § 15 Para. 2 VRO, it is currently sufficient to make an informal declaration that a vehicle has been disposed of abroad, without MV registration offices having a chance to check this (see Chapter 4.1.1.1). The obligation of national MV registration offices to accept Certificates of Destruction from other Member States is stated in § 5 Para. 5 of the end-of-life vehicle directive. Implementation must be initiated by FMTDI.

A low controlling effect is expected due to the fact that the required explicit declaration on the whereabouts of vehicles may have a deterrent effect on some of the last holders, preventing them from making a false declaration or no declaration at all. Efforts for the implementation of this measure are considered to be low for one vehicle, but high in total for all decommissioning operations (approx. 8 million altogether, of which approx. 3 million are final). Acceptance among MV registration offices is considered to be low as a whole as it would result in additional efforts for MV registration offices. However, an improvement in the search for the whereabouts of vehicles and the corresponding documentation serve the more effective enforcement of existing regulations. Therefore, it is recommended.

Recommendation 15d: Failure to observe the obligation regarding the presentation of a Certificate of Destruction for decommissioning constitutes an administrative offence

Furthermore, FMTDI is planning a draft standard²⁸⁰ for qualifying the non-observation of the obligation regarding the presentation of a Certificate of Destruction for decommissioning as an administrative offence, which is therefore subject to a fine (Kilthau 2016). In addition, failure to indicate or present a Certificate of Destruction issued in another EU Member State or in another Contracting State of the Treaty on the European Economic Area should also be qualified as an administrative offence subject to a fine. This plan is to be welcomed, as discussions with experts and the workshop on 29/02/2016 revealed a deterrent effect on last holders, preventing them from not specifying existing Certificates of Destruction. A prerequisite for this is the consistent collection of Certificates of Destruction by MV registration offices and reference to the fact of administrative offence if a Certificate of Destruction is concealed.

Recommendation 15e: Online decommissioning with a Certificate of Destruction

To minimise obstacles to the indication of a Certificate of Destruction by the last holder, it is recommended that the possibility of indicating the existence of a Certificate of Destruction should also be given in the case of online decommissioning. Based on information from FMTDI, this possibility is currently being pursued and internally examined. According to the plans of FMTDI, extra charges for decommissioning with a Certificate of Destruction would be abolished for online decommissioning, since MV registration offices would then have no additional workload (Kilthau 2016). However, the online decommissioning with a Certificate of Destruction would only become quantitatively relevant in a few years for vehicles for which the new system is used during the declaration procedure. A higher share of CoDs will then be expected in CVRFMTA.

²⁸⁰ Draft of a third regulation amending the Vehicle Registration Ordinance and other road traffic regulations

Recommendation 16: Prohibition of re-registration for vehicles with an issued Certificate of Destruction

It is proposed to introduce an unlimited prohibition for the re-registration of vehicles if Part I and Part II of the presented certificate of approval are marked with the inscription ‘Certificate of Destruction presented’, and Part II of the certificate of approval is additionally validated by cutting down the lower left corner. The re-registration of such vehicles would thus no longer be at the discretion of MV registration offices. Although this condition applies to very few vehicles only (according to two surveyed MV registration offices, this situation occurs once a year at most; MV registration office Westerkreis 2016; MV registration office Bad Dürkheim 2016), the implementation of this recommendation would be compliant with the provisions of the ELV Ordinance, according to which the issuance of a Certificate of Destruction also assures the recycling of the vehicle. In addition, this is the only way to eliminate statistical double counts if an end-of-life vehicle has meanwhile been recorded as recycled in the waste statistics. FMTDI is currently investigating the possibility of such a prohibition of re-registration (Kilthau 2016).

Note: Treatment of ‘blue copies’ issued by authorised dismantling facilities for shredding facilities

The ‘blue copy’ of the CoD, which is transmitted by the authorised dismantling facility to the authorised shredder, does not represent an information flow clarifying the whereabouts of vehicles. In the current practice, the ‘blue copy’ has no controlling effect on vehicle flows. Shredders report their volumes via state statistical offices independently of the ‘blue copies’. If a shredder wants to accept stripped vehicles from grey sources, they could, for example, enter the relevant volume in the books as mixed scrap, and a comparison of the quantities of stripped vehicles according to the statistical data entry form and the book volumes (e.g. within the framework of an audit) would not reveal any non-plausible items either. The whereabouts of stripped vehicles are documented independently of ‘blue copies’ in the output of authorised dismantling facilities.

Nevertheless, ‘blue copies’ still offer the potential of being able to keep track of the whereabouts of specific vehicles based on VINs. This possibility is, however, currently not being exploited. With respect to the relationships described, ‘blue copies’ are of little relevance in the context of the objectives of this project. Therefore, experts recommend that shredder activities should be taken into account in measures for enforcement against non-authorised dismantling (see Chapter 6.5.2).

Table 69: Proposals regarding the Certificate of Destruction

| Proposal | Players / addressees | Implementation horizon | Obligation |
|---|---|------------------------|------------|
| R15a: Information flow between dismantling facilities and the CVR/FMTA | FMTA; dismantling facilities; possibly head end at FMTA, JAELV or FEA | Medium term | Yes |
| R15b: Harmonisation of decommissioning fees | FMTDI; federal states | Short to medium term | Yes |
| R15c: Consistent collection of CoDs and information on whereabouts through registration offices | FMTDI; registration office | Short-term | Yes |

| Proposal | Players / addressees | Implementation horizon | Obligation |
|--|----------------------|------------------------|------------|
| R15d: Failure to observe the obligation regarding the presentation of a Certificate of Destruction for decommissioning constitutes an administrative offence | FMTDI | Short-term | Yes |
| R15e: Online decommissioning with CoDs | FMTDI | Short to medium term | Yes |
| R16: Ban on re-registration | FMTDI | Short-term | Yes |

Table 70: Evaluation of proposals regarding the Certificate of Destruction

| Proposal | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player / acceptance |
|---|-------------------------------|--|--------------------|---|---|--|
| R15a: Information flow between dismantling facilities and the CVRFMTA | Low | Low/medium | Low to medium | Possible as long as data protection is ensured | Possible | Dismantling facilities: not available; MV registration offices: high; 'head offices' (e.g. FMTA, JA-ELV, FEA): personnel and financial additional expenses |
| R15b: Harmonisation of decommissioning fees | Low to medium | Low to medium | Low | Possible (responsibility of the federal states) | Possible | High for last holders, available at MV registration offices |
| R15c: Consistent collection of CoDs and information on whereabouts through registration offices | Low | Low | Medium | Applicable laws already available | Yes, as applicable laws already available | Low for MV registration offices |

| Proposal | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player / acceptance |
|--|-------------------------------|--|--------------------|----------------------|--------------------------|----------------------------------|
| R15d: Failure to observe the obligation regarding the presentation of a Certificate of Destruction for decommissioning constitutes an administrative offence | Low | Low | Medium | Possible | Possible | n/a |
| R15e: Online decommissioning with CoDs | Low | Low | n/a | Possible | Possible | High for MV registration offices |
| R16: Ban on re-registration | Very low | None/medium | None | Possible | Possible | High for the FMTDI |

6.7.2 Distinction of second-hand vehicles and end-of-life vehicles

Reasons underlying the statistical gap and relevance of the issue of distinction: The distinction between second-hand and end-of-life vehicles is relevant both for the transfer of vehicles to EU Member States, exports to non-EU countries, and for dismantling in Germany:

- ▶ In the context of exporting vehicles to non-EU countries by sea, different statistics would be relevant (foreign trade statistics or cross-border waste shipment statistics). However, (end-of-life) vehicles would be statistically recorded in both cases (export of a second-hand vehicle or shipment of an end-of-life vehicle). The control of vehicle flows based on the distinction is then possible if these are exported as end-of-life vehicles or are partly subject to a prohibition of shipment, due to being classified as end-of-life vehicles, depending on the country of destination.
In the case of export by land, the completeness of statistical records on the vehicles is lower in foreign trade statistics and cross-border waste shipment statistics compared to the data situation for exports by sea (high number of exit points from the customs territory, multitude of transport units down to the individual vehicle, compared to port activities at only a few control points). In the context of delivery as waste, further statistical records are to be expected through notifications, as well as improved controllability, for example because end-of-life vehicles are subject to a prohibition of shipment, depending on the country of destination.
- ▶ When the delivery destination is another EU Member State, statistic records are incomplete (at least if re-registration does not take place). Here again, delivery as waste would result in additional statistical records in cross-border waste shipment statistics based on notifications.
- ▶ In the case of facilities within the country that are not authorised dismantling facilities, the distinction between second-hand and end-of-life vehicles results in better possibilities to limit their activities (prohibition of waste processing at non-authorised dismantling facilities).
- ▶ In the case of vehicle trade, identification as an end-of-life vehicle leads to the possibility to impose special requirements on the buyer.

In contrast with the basic approaches to a distinction between end-of-life and second-hand vehicles, their operationalisation may be different, depending on the application context. While in the case of

checking deliveries at the border or on the road, a very quick decision must be made on the basis of directly visible or recognisable indications, the distinction can be made on the basis of intensive investigations by experts in court negotiations. In both cases, however, there is a systematic link, since the detention of vehicle transports on the road should already be direction-based and ‘court-proof’ as an incorrect decision leads to high expenses for all parties involved.

Recommendation 17: (long-term) Standardisation of legally binding EU-wide criteria and procedures for a distinction between second-hand and end-of-life vehicles

In order to distinguish between second-hand and end-of-life vehicles, legally binding EU-wide standard distinction criteria, as well as testing and evaluation procedures should be provided, since this is the only way to create a uniform and legally compliant framework and make it unattractive to shift exports, for example, from one port to another. In line with the procedure described in the WEEE Directive, it is proposed to include corresponding distinction provisions in the end-of-life vehicle directive and to make it legally binding in the Member States by means national implementation. This includes, among other things, the establishment of distinction criteria, as listed in the context of electrical and electronic equipment in the Annex to the WEEE Directive²⁸¹. The development of a common procedure is seen in a medium-term perspective and as a measure involving high expenses (legislative procedures at EU level, discussions with all Member States and stakeholders). The effect on the statistical gap and on the control of vehicle flows is considered to be low, in accordance with the analyses in Chapter 5. The European Commission should guide the procedure as a key player.

The development of a national approach to making a distinction, as used e.g. in Austria, is seen as a positive option for faster implementation due to the high impact on the statistical gap and the control of vehicle flows. In a medium-term perspective, however, a uniform EU-wide procedure appears to be more reasonable, not least in order to prevent displacement effects in some Member States.

Recommendation 17a: Technical criteria according to the safety criteria set out in Directive 2014/45/EU

The decision as to which **technical criteria** are to be applied is a key aspect for the distinction. Experts consider a uniform EU-wide approach to the distinction of vehicles as reasonable for the purposes of vehicle exports. One option is to orientate the technical criteria set out in the Correspondents’ Guidelines No. 9 and the corresponding requirements of the EC Directive on end-of-life vehicles towards the safety criteria in Directive 2014/45/EU on periodic roadworthiness tests for motor vehicles and repealing Directive 2009/40/EC²⁸². This defines minimum requirements for the technical testing of motor vehicles in the Member States and differentiates deficiencies into three categories (Directive 2014/45/EU, § 7):

- a) **minor deficiencies** having no significant effect on the safety of the vehicle or impact on the environment, and other minor non-compliances;
- b) **major deficiencies** that may prejudice the safety of the vehicle or have an impact on the environment or put other road users at risk, or other more significant non-compliances;
- c) **dangerous deficiencies** constituting a direct and immediate risk to road safety or having an impact on the environment which justify that a Member State or its competent authorities may prohibit the use of the vehicle on public roads.

²⁸¹ See the previous recommendation with respect to the shift of the burden of proof.

²⁸² Directive 2014/45/EU of the European Parliament and of the Council of 3 April 2014 on periodic roadworthiness tests for motor vehicles and their trailers and repealing Directive 2009/40/EC.

The deficiencies classified as ‘dangerous’ (e.g. non-functioning brakes or steering system) could form a basis, as minimum requirements, for technical criteria regarding the distinction.

Overall, it must be taken into account that such technical criteria cannot be used as sole decision criteria, but can only make a contribution in the context of other relevant questions.

Note: Cost assessment

A cost assessment for the restoration of an operable or licensable vehicle can provide indications for the distinction between waste/non-waste. However, it must be borne in mind that all relevant circumstances must be considered for the decision on whether or not the concept of waste can be used. The question of cost assessment for the decision on waste/non-waste is a highly complex issue, with no final recommendation in this expert opinion regarding the elimination of the statistical gap.

Recommendation 17b: Operationalisation of approaches regarding the distinction of second-hand and end-of-life vehicles

Discussions within the framework of the investigations showed that the operationalisation of the rules for distinction could to a great extent facilitate enforcement²⁸³.

At the workshop on the distinction between end-of-life and second-hand vehicles on 21/03/2016 in Berlin, it was emphasised, among other things, that ‘visually’ oriented criteria facilitate a simplified identification of critical vehicles, allowing a rapid preliminary decision on the presence of waste properties without a deeper analysis by experts. Such a simplified catalogue of criteria is used, for instance, in Niederbayern (see Aiblinger-Madersbacher 2015). Under appropriate circumstances, this approach can be further developed on an EU-wide basis. The Swiss system for the assessment of vehicles involved in an accident (‘Punkteschema’) (see Luther 2016) also represents a highly practice-oriented approach (see Chapter 4.11.4 in this report), but it differs to a higher degree from the approach of CG9. In Austria, for example, test routines were defined (see Chapter 4.4.2) (see Löw 2016) and an online tool was developed in collaboration with experts to assess waste properties²⁸⁴. In Germany, for instance, a decision tree-based method was developed for the identification of end-of-life vehicles²⁸⁵.

From an expert viewpoint, CG9, as a starting point, offers the advantage that this represents the common will of the Member States and, therefore, an already existing common basis.

Determination should be made within the framework of a revised EC end-of-life vehicle directive, or other legislation based on it, e.g. a Commission decision. For details on the operationalisations, which may vary e.g. based application contexts (for instance shipment or activities of workshops in Germany), national differentiation may be useful, e.g. in terms of enforcement aids.

Until EU-wide, uniform distinction criteria are specified for standardisation, a practice-oriented enforcement aid should be provided at national level. Initialisation at national level should be carried out at short notice by the federal states due to the high relevance for the elimination of the statistical gap and for the control of vehicle flows. This task could be handled, e.g., within a federal/state working group on waste, which could set up an ad hoc working group with the participation of customs authorities, the Federal Criminal Police Office and some State Criminal Police Offices.

²⁸³ E.g. at the workshop on the distinction between end-of-life and second-hand vehicles on 21/03/2016 in Berlin.

²⁸⁴ See www.Autopreis Spiegel.at; in an export procedure, such an assessment is accepted by the authorities as proof of the non-waste character of a vehicle.

²⁸⁵ In the first step, traffic safety and operational safety are determined (largely based on the criteria of Directive 2014/45/EU), and various properties such as age (old-timer, young-timer), wear, repair costs, selling price and replacement value) are taken into account in further steps (see Hoppe 2016).

The development of the criteria themselves is considered to be quite resource-intensive as, although no legislation is necessary, the development of generally valid criteria is very difficult due to the complexity of the product ‘motor vehicle’.

Recommendation 17c: Design rules for the shift of the burden of proof in the shipment of vehicles through more detailed provisions

The possibility of reversing the burden of proof introduced into the EU Waste Framework Directive by § 1 Para. 3 Item 2 of Regulation (EU) 660/2014 (see Chapter 4.4.1) provides an important tool for the control authorities to identify end-of-life vehicles. According to § 50 Paras. 4a-4d Waste Framework Directive, Member States can require the exporter to provide proof of the location of origin and destination of the vehicle concerned, as well as evidence that the vehicle is not of a waste character, including, where appropriate, evidence of their operability. However, it is not specified what evidence can be required and in what form the required evidence must be provided in order to be accepted. Nevertheless, control authorities need a practicable procedure in order to be able to efficiently assess the existence of waste properties.

For example, operability as a possible criterion for the existence of waste properties can be definitively and reliably assessed only by a MV expert or MV mechanic. Therefore, the introduction of the shift of burden of proof means that evidence may have to be provided at the request of the competent authority in the form of an expert opinion. One possibility would be to require that vehicles undergo a general inspection prior to being exported. Nevertheless, it must be taken into account that ‘operable’ is not equivalent to ‘licensable’. A vehicle in Germany is no longer licensable if e.g. the left-hand exterior mirror is missing. This, however, does not establish waste properties for a vehicle. In order not to establish German or European standards on the quality of vehicles and in order to prevent the re-use of second-hand vehicles with deficiencies, the assessment scheme of Directive 2014/45/EU on the technical testing of motor vehicles, as described in Recommendation 17a, could play an important role. In this way, it could be ensured that no vehicles carrying considerable safety risks due to their condition are exported.

Regulation (EU) 660/2014 (Recital 6) leaves it open whether evidence is required on the basis of general regulations or on a case-by-case basis²⁸⁶. There are valid arguments for both.

- ▶ The former would reduce the control efforts of the authorities to identify critical vehicles. On the other hand, efforts on the part of the shipper would increase if corresponding evidence had to be provided for each and every vehicle. There would be changes in the procedures, e.g. at the port. On the one hand, there would be fewer delays due to withheld vehicles; on the other hand, the control of evidence would result in additional efforts.
- ▶ As a possible argument for the latter, it would be disproportionate to introduce a general recording obligation because of the rather low share of vehicles that can be classified as critical, especially since appraisals are charged.

It would be possible to take the middle course by means of predefined parameters such as vehicle age and value, possibly also taking into account target countries within the framework of the internal control regulations of the authorities. In this way, it would not be necessary to examine and adjust legal requirements in such depth of detail. The recording obligation could be triggered by the in-

²⁸⁶ Note: In Germany, no such general regulation is available (see draft legislation on www.bmub.bund.de/N39165/; the explanation says ‘Such certification should be requested by the authorities on a case-by-case basis if suspicion arises (cf. recital 6 Sentence 4 of Regulation (EU) No. 660/2014)’. (FMENCBNS 2016)

tended export of vehicles that have reached a certain age or are of a very low value. In any case, evidence should be required for vehicles exported in containers or as double vehicles (vehicles exported e.g. on or in lorries), since the verification of such vehicles is significantly more difficult.

According to players in the export business, the application of stricter export criteria could lead to a shift from RoRo transportation ('Roll-on-Roll-off'; export of second-hand vehicles with purpose-built ships) to export in containers, in combination with a false declaration (personal discussions with export agents at the port of Hamburg in August-October 2015). The question, of whether or not there are actual economic incentives to do so, cannot be answered here. However, this challenge should be addressed by the control authorities.

It must be regarded with criticism that the wording of the provisions of Regulation (EU) No. 660/2014 is very open in terms of the recording obligation²⁸⁷. So the collection of evidence is described as an option, rather than an obligation, for control authorities. Also, judging whether there are waste properties is at the discretion of the control authorities if no corresponding evidence is submitted. This creates room for different practices, which is evaluated with criticism, as, in accordance with Recital 6, it is precisely these different rules in the Member States that are used to justify the introduction of the recording obligation. Just like for setting up uniform distinction criteria, it should be ensured that the same procedures are established throughout the EU, because otherwise displacement effects could occur.

The expert opinions on the effect on the statistical gap, the control of vehicle flows, environmental relevance, efforts, costs, legal and practical feasibility and acceptance are summarised in the following

Table 72. Among other things, the assessment is determined by the fact that distinction criteria have been discussed for many years now, and yet discussion results have so far been able to influence practical procedures and the legal situation only to a limited extent.

Table 71: Proposals for distinction of exports

| Proposal | Players / addressees | Implementation horizon | Obligation |
|--|--|------------------------|------------|
| R17: Legally binding criteria and procedures in connection with the distinction EU-wide | EU COM | medium term | Yes |
| R17a: Technical criteria according to the safety criteria set out in Directive 2014/45/EU | EU COM for application at EU level, federal states, WGFSW for national application | medium term | Yes |
| R17b: Operationalisation of approaches regarding the distinction of second-hand and end-of-life vehicles | EU COM, federal states, WGFSW, customs, police authorities | medium term | Yes |

²⁸⁷ Note: The German 'enforcement aid for waste shipment' is currently (as of June 2016) being revised; this will include statements on Art. 50 (new) and the documentation (FMENCBNS 2016).

| Proposal | Players / addressees | Implementation horizon | Obligation |
|---|--|------------------------|------------|
| R17c: Apply the shifting of the burden of proof | Federal states, WGFSW, customs, police authorities | Short-term | Yes |

Table 72: Evaluation of proposals for distinction of exports

| Proposal | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player acceptance |
|--|-------------------------------|--|---------------------------------|--|--------------------------|--|
| R17: Legally binding criteria and procedures in connection with the distinction EU-wide | High | High | Medium to high | Complex | Available, but complex | EU COM: unclear; exporting players: available to low |
| R17a: Technical criteria according to the safety criteria set out in Directive 2014/45/EU | | | Medium | Complex | Available, but complex | EU COM: unclear; national authorities: unclear; exporting players: available to low |
| R17b: Operationalisation of approaches regarding the distinction of second-hand and end-of-life vehicles | | | Medium | Available if distinction criteria are made to be legally binding | Available | EU COM: unclear; enforcement authorities: available; exporting players: available to low |
| R17c: Apply the shifting of the burden of proof | | | Countries: low; exporters: high | Available | Available | Countries: available; exporters: low |

6.7.3 Online trade

Reasons underlying the statistical gap: Online trade, including salvage exchanges, is a platform, among other things, for vehicles that are normally classified as waste (e.g. burned-out vehicles). For example, repair costs for some of them are so high that, as a rule, they are no longer expected to be used according to their original purpose. If the buyer of the end-of-life vehicle is located in another EU country, the transfer is performed without re-registration, and therefore without an entry in the

REGINA system, and also without being reported as waste export²⁸⁸. If there is a domestic buyer, it cannot be ruled out that dismantling is carried out outside authorised dismantling facilities.

Recommendation 18a: Sales of end-of-life vehicles via salvage exchanges only to qualified buyers

Special conditions of purchase should be laid down for vehicles involved in an accident that are end-of-life vehicles. It should be ensured in that way that end-of-life vehicles in salvage exchanges can only be purchased by qualified buyers (authorised dismantling facilities or, where appropriate, other players, such as those who are allowed to transport hazardous waste or act as a broker for it). This can be done, e.g. with the help of areas in corresponding Internet portals, with limited access, only available for buyers with documented qualification.

In the case of damage within third-party liability or comprehensive insurance, it is recommended that the insurance amount for end-of-life vehicles traded via salvage exchanges is paid if it is evidenced, based on a Certificate of Destruction, that the legal requirements according to the ELV Ordinance regarding the whereabouts of such vehicles are met. An amendment of the ELV Ordinance with respect to the basic requirement that end-of-life vehicles may only be delivered to qualified facilities would not be necessary, since end-of-life vehicles may anyway only be delivered to authorised acceptance or return points, as well as authorised dismantling facilities, in accordance with the provisions of § 4 Para. 1 ELV Ordinance. The insurers are explicitly mentioned in the ELV Ordinance as economic operators contributing to the achievement of the objectives of the regulation (§ 2 Para. 1 Item 22 ELV Ordinance). The obligation of insurers may require additional provisions in other legal domains (e.g. insurance policy).

Practical implementation is linked to the rapid and clear classification of vehicles involved in an accident as waste or non-waste, see Subchapter 6.7.2.

Since the owner of the vehicle is entitled to have the vehicle repaired, even in the case of total economic loss, there should be an alternative possibility for the holder to evidence the repair, re-registration or passed general inspection.

The number of vehicles qualifying for total economic losses from an insurance perspective is about 0.5 million per year (GIA 2016). The high quantitative relevance necessitates a rapid implementation of these measures²⁸⁹. This could be best achieved by means of voluntary agreements. If there is a lack of willingness, a corresponding change should be achieved on a legal basis. This is considered to be a medium-term task affecting several legal domains (insurance, reports to CVRFMTA, online exchanges, ELV Ordinance).

Recommendation 18b: Sales of end-of-life vehicles via online trading platforms only to qualified buyers

Similarly to the recommendation on salvage exchanges for vehicles involved in an accident, vehicles regarded as end-of-life vehicles should also only be offered to qualified buyers (in most cases authorised dismantling facilities) on general online platforms. This would be ensured by the operators of the online platforms, for example by means of regulations in their GTCs and through compliance audits. However, the enforcement of this requirement cannot be linked to the payment of an insurance amount. Therefore, practical implementation, including audits, is regarded as difficult.

Here again, rapid and clear classification criteria are required, see in this respect Subchapter 6.7.2.

²⁸⁸ The corresponding statistics do not indicate such shipments, see also Chapter 5.3.

²⁸⁹ Not all corresponding vehicles are traded via salvage exchanges. However, their share is high according to GIA (2016).

The effect on the statistical gap is estimated to be high²⁹⁰. Although total losses are also purchased by authorised dismantling facilities, in the opinion of economic operators²⁹¹, a relevant share is used outside documented forms of whereabouts (e.g. spare parts storage). If implementation is effective enough, the controlling effect on vehicle flows would be estimated as high.

Initiation should take place via FEA/FMENCBS.

Table 73: Proposals for online trade and salvage exchanges

| Proposal | Players / addressees | Implementation horizon | Obligation |
|--|----------------------------|------------------------|------------|
| R18a: Offer end-of-life vehicles only to qualified players via salvage exchanges | Salvage exchange operators | Medium term | Yes |
| R18b: Offer end-of-life vehicles only to dismantling facilities via online trading platforms | Online trading platforms | Medium term | Yes |

²⁹⁰ According to GIA, the number of vehicles sold through salvage exchanges and regarded as a total loss from an insurance perspective is well over 100,000 (Linke 2016).

²⁹¹ This is the case, e.g. at the workshop on the distinction between end-of-life and second-hand vehicles on 21/03/2016 in Berlin.

Table 74: Evaluation of proposals for online trade and salvage exchanges

| Proposal | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player acceptance |
|--|-------------------------------|--|--------------------|----------------------|--------------------------|---|
| R18a: Offer end-of-life vehicles only to qualified players via salvage exchanges | High | High | Medium | To be investigated | Expensive | Insurance: not available Salvage exchange operators: not available |
| R18b: Offer end-of-life vehicles only to dismantling facilities via online trading platforms | | | Medium | To be investigated | Expensive | Online trading platforms: not available |

6.7.4 Other aspects:

Recommendation 19: Adjustment of the expert system when inspecting end-of-life vehicle recycling facilities

Within the framework of the authorisation of facilities for the recycling of end-of-life vehicles according to the ELV Ordinance, input and output flows should be checked, and thus the possibility of identifying non-documented dismantling in authorised dismantling facilities should be given (see Chapter 5.3.3). Players from the disposal and public sectors claimed²⁹² that, in some cases, authorisation did not meet this requirement. A possible reason could be the direct economic dependence of experts on being commissioned by the dismantling company. Therefore, examining other ways of commissioning for authorisation, which can put an end to this situation and anonymise the commissioning, such as commissioning a central body to coordinate the authorisation process, which then in turn forwards the order to a specific expert based on a key, is recommended. The duration of the control of a facility by an expert should also be limited to maintain a high audit quality²⁹³. The second ordinance on the further development of waste management supervision (Entsorgungsfachbetriebsverordnung, EfbV)²⁹⁴ requires that experts should change every five years²⁹⁵. This procedure is also recommended with respect to this project.

²⁹² Among other things, within the framework of the workshop ‘Certificate of Destruction’ on 29/02/2016 in Berlin and the workshop on the ‘Distinction between second-hand and end-of-life vehicles’ on 21/03/2016 in Berlin.

²⁹³ There are similar issues in the context of ElectroG / Ordinance on Specialised Waste Management Facilities, which have been addressed in expert opinions. See e.g. FEA texts 05/2012, p. 36 f.

²⁹⁴ Second ordinance on the further development of waste management supervision (Entsorgungsfachbetriebsverordnung, EfbV). Printed matter 477/16 of 24/08/2016.

²⁹⁵ For § 22 of the Ordinance on Specialised Waste Management Facilities: ‘Paragraph 5 contains a further instrument to increase the quality of supervision and to control the work of experts. After five years of continuous supervisory activity in a particular enterprise, the expert has to change. The purpose of this provision is to prevent “organisational blindness” and to rule out any closer links between the expert and the operation to be supervised.’

Recommendation 20: Review of the JAELV list

It is also recommended in this context that the list of JAELV facilities should be checked for the completeness and correctness of information (e.g. by means of a letter to all listed dismantling facilities and a survey among unlisted companies through actions in the federal states (see Chapter 6.5.1)), because entries have proved to be unreliable in various contexts²⁹⁶.

Table 75: Proposals on other aspects

| Proposal | Players / addressees | Implementation horizon | Obligation |
|---|----------------------|------------------------|------------|
| R19: Adjustment of the expert system when inspecting end-of-life vehicle recycling facilities | ELV Ordinance | Medium term | Yes |
| R20: Review of the JAELV list | Federal states | Short-term | Yes |

Table 76: Evaluation of proposals on other aspects

| Proposal | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player acceptance |
|---|-------------------------------|--|--------------------|--------------------------------|--------------------------|-------------------------------------|
| R19: Adjustment of the expert system when inspecting end-of-life vehicle recycling facilities | Low | Low | Low to medium | Amendment of the ELV Ordinance | Available | FMENCBNS : no available information |
| R20: Review of the JAELV list | Low | Low | Medium | Available | Available | Federal states: available |

6.8 Summary of recommendations

The following table provides a general summary of the recommendations.

²⁹⁶ In this case, for example, it is achieved by means of questionnaires within this project (see Chapter 5.3.2.1) and a survey among federal states by experts in 2015.

Table 77: Overview of the recommendations for closing the statistical gap

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|---|---|---|--|--|---|---|--------------------------|---|
| Proportion of the permanently decommissioned vehicles | No differentiated data on temporary and permanent decommissioning, previously: estimation | R1a: Determination by FMTA | Very high in the 1st year: 0.52 million vehicles; in case of regular calculation: presumably lower in the subsequent years | Not relevant | Low | Not necessary | Simple | FEA, FMTA: available |
| | | R1b (an alternative to 1a): Simplified calculation by FEA | | | Lower expenses at the FEA | Not necessary | Simple | |
| Exports to non-EU countries | | R2a: Establishing the flow of information between customs authorities | High (approx. 0.25 million) | N/a | Relatively high: Data collection and coordinated transfer to 28 MSs | Possible and apparently planned at the EU level | Yes | Available |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|--|------------------------|-------------------------------|--|---|----------------------|--------------------------|---|
| | Second-hand vehicle exports from Germany to non-EU countries (vehicles registered for export at foreign exit points from the customs territory under a single-stage procedure) are not recorded in German foreign trade statistics | R2b: Correction factor | High (approx. 0.25 million) | N/a | None in the short term, low in the case of new calculations | Not necessary | Immediately | FEA: available EU COM: Improvement of the status quo |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|---|---|--|---|--|--|--------------------------|---|
| | Second-hand vehicle exports are not recorded due to false declaration or non-declaration at customs | R3: Tighter enforcement and (customs) control | Effective against incorrect/missing declarations Potential: lower in ports, higher for export by land | Relevance if end-of-life vehicle is not identified due to false declaration | High to very high expenses for additional controls and personnel requirement | Legal basis already available | Possible | Countries: currently questionable due to additional personnel requirement. Hauliers, consignors and consignees of transports: not available due to time delay |
| | | R4: Information flow between customs authorities and the FMTA | Limited direct effect, possible impact: improved knowledge of vehicles with unclear whereabouts | Controlling effect on vehicles with a CoD that are to be exported nonetheless | Low to medium | Possible as long as data protection is ensured | Possible | FMTA, customs: limited due to additional expenses |
| | | R5a: Improvement of the information flow via REGINA | High | None | High for affected MSs | Sufficient legal basis | Yes, possibly lengthy | MSs: Probably |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|---|--|--|-------------------------------|--|------------------------------------|---|---|---|
| Transferring second-hand vehicles to other EU member states for re-registration | No 100% complete data transmission via REGINA for the re-registration in other EU member states | R5b-1: Correction based on VIN | High | None | High for affected MSs and the FMTA | Clarification of data protection issues necessary | Technically possible. Data protection where necessary. Possible with cooperation of the MSs | Affected MSs: to be clarified; FMTA: to be clarified; EU COM: available |
| | | R5b-2: Correction factor | High | None | Low | Available | Possible | EU COM: improvement to status quo |
| | Transferring vehicles to other member states without re-registering them as a second-hand vehicle and without registering them as an end-of-life vehicle | These items are primarily addressed under R11 through R14 and under R17. | | | | | | |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|---|--|--|--|--|--|--------------------------|--|
| Non-authorised dismantling in other EU member states | Permanently decommissioned vehicles are transferred from Germany and not registered again in the destination country, instead, they are dismantled as end-of-life vehicles in non-authorised dismantling facilities. This means that no records are created in the REGINA re-registration statistics or in cross-border waste statistics. | Recommendations 6 (on the distinction between end-of-life vehicles and second-hand vehicles), 7 (on tighter enforcement) and 8 (on eliminating obstacles related to decommissioning) are addressed further under R11 through R17 | | | | | | |
| | | R10: IMPEL exchange regarding non-authorised dismantling of end-of-life vehicles | No immediate impact; effect only on the basis of actions taken subsequently by the MSs | No immediate impact; effect only on the basis of actions taken subsequently by the MSs | The IMPEL experience exchange is not very complicated. The implementation of the discussed measures in the MSs may be costly | No change in legislation required; voluntary | Yes | IMPEL: no clear direction – low due to additional expenses, high due to comparable approaches to the problem in many MSs |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|---|---|---|-------------------------------|--|--------------------|--|--------------------------|--|
| Dismantling in facilities other than authorised dismantling facilities in Germany | In Germany, permanently decommissioned vehicles are dismantled in non-authorised dismantling facilities | R11a: Supra-regional work groups | High | High | High | No change in legislation required | Yes | Regional authorities: limited due to high expenses |
| | | R11b: Pool for technical expertise | | | High | Could be problematic (co-financing of sovereign tasks) | To be investigated | Economic operators: questionable due to partially external co-financing of sovereign tasks |
| | | R11c: Supporting the transition of non-authorised dismantling activities to authorised dismantling facilities | | | Medium | Available | Yes | Regional authorities: limited due to expenses |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|-------------------------------|--|-------------------------------|--|--------------------|--|--------------------------|---|
| | | R11d: Enforcement aid for carrying out seizures in unauthorised facilities | | | Medium | To be investigated | To be investigated | Regional authorities: available |
| | | R12: Monitoring second-hand spare part sales | | | Medium | Available | Available | Regional authorities: limited due to expenses |
| | | R13: Counting/weighing campaigns at stripped vehicle shredding facilities | | Indirect effect | Medium | Implementation in end-of-life vehicle GL | Yes | Economic operators of the ELV Ordinance: Cost-bearing should be clarified |

| | | | | | | | | |
|---|--|---|-----|------------|--|--|--|--|
| Dismantling at authorised dismantling facilities in Germany | Incomplete records of partially dismantled end-of-life vehicles from legally grey sources, transmission of incomplete data to the state statistical offices for Certificates of Destruction, incomplete data records from authorised dismantling facilities, deliberate omission of dismantled end-of-life vehicles when inquired by the state statistical offices | R14: More intensive examination of authorised dismantling facilities | Low | No | Low (if standardised plausibility checks are utilised) to medium | Legal basis already available | Available with regard to vehicle-related input/output checks, limited with regard to the availability of plausibility checks | Dismantling facilities and enforcement authorities: low |
| Certificate of Destruction | Only about 10% of recycled end-of-life vehicles have Certificates for Destruction at | R15a: Information flow between dismantling facilities and the CVRFMTA | Low | Low/medium | Medium | If necessary, legal bases are to be adjusted and data pro- | Possible | Dismantling facilities: not available; MV registration offices: high; 'head offices' |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|---|---|-------------------------------|--|--------------------|---|---|---|
| | the CVRFMTA (note: other end-of-life vehicles are reported to the state statistical offices without specifying the VIN) | | | | | tection requirements are to be examined | | (e.g. FMTA, JA-ELV, FEA): personnel and financial additional expenses |
| | | R15b: Harmonisation of decommissioning fees | Low to medium | Low to medium | Low | Generally possible (within the scope or with the participation of the federal states) | Possible | High for last holders, available at MV registration offices |
| | | R15c: Consistent collection of CoDs and information on whereabouts through registration offices | Low | Low | Medium | Applicable laws already available | Yes, as applicable laws already available | Low for MV registration offices |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|-------------------------------|--|-------------------------------|--|--------------------|----------------------|--------------------------|---|
| | | R15d: Failure to observe obligation regarding the presentation of a CoD for decom. constitutes an administrative offence | Low | Low | Medium | Possible | Possible | n/a |
| | | R15e: Online de-commissioning with CoDs | Low | Low | n/a | Possible | Possible | High for MV registration offices |
| | | R16: Ban on re-registration | Low | None/medium | None | Possible | Possible | High for the FMTDI |
| Distinction of second-hand vehicles and end-of-life vehicles | | R17: Legally binding criteria and procedures in connection with the distinction EU-wide | High | High | Medium to high | Complex | Available, but complex | EU COM: unclear; exporting players: available to low |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|--|--|-------------------------------|--|---------------------------------|--|--------------------------|--|
| | Depending on the classification, different statistics or monitoring procedures would be relevant | R17a: Technical criteria according to the safety criteria set out in Directive 2014/45/EU | | | Medium | Complex | Available, but complex | EU COM: unclear; national authorities: unclear; exporting players: available to low |
| | | R17b: Operationalisation of approaches regarding the distinction of second-hand and end-of-life vehicles | | | Medium | Available if distinction criteria are made to be legally binding | Available | EU COM: unclear; enforcement authorities: available; exporting players: available to low |
| | | R17c: Apply the shifting of the burden of proof | | | Countries: low; exporters: high | Available | Available | Countries: available; exporters: low |
| Online trade | Often no information on vehicle whereabouts | R18a: End-of-life vehicles only sold to qualified buyers via salvage exchanges | High | High | Medium | To be investigated | Expensive | Insurance: not available, Salvage exchange operators: not available |

| Area encompassing the affected statistical gap | Impact on the statistical gap | Recommendation | Effect of the statistical gap | Vehicle flow control / environmental relevance | Costs and expenses | Legal implementation | Practical implementation | Main player/acceptance or aspects with a potential impact on acceptance |
|--|---|---|-------------------------------|--|--------------------|--------------------------------|--------------------------|---|
| | | R18b: End-of-life vehicles only sold to dismantling facilities via online trading platforms | | | Medium | To be investigated | Expensive | Online trading platforms: not available |
| Further platforms: Expert system | Missing identification of non-documented dismantling in authorised dismantling facilities | R19: Adjustment of the expert system when inspecting end-of-life vehicle recycling facilities | Low | Low | Low to medium | Amendment of the ELV Ordinance | Available | FMENCBNS: no available information |
| Further platforms: JAEV list | Uncertainty regarding the completeness and correctness of the data | R20: Review of the JAEV list | Low | Low | Medium | Available | Available | Federal states: available |

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