

# ANNUAL REPORT

FOUNDATION  
AUTO RECYCLING  
SWITZERLAND

2017



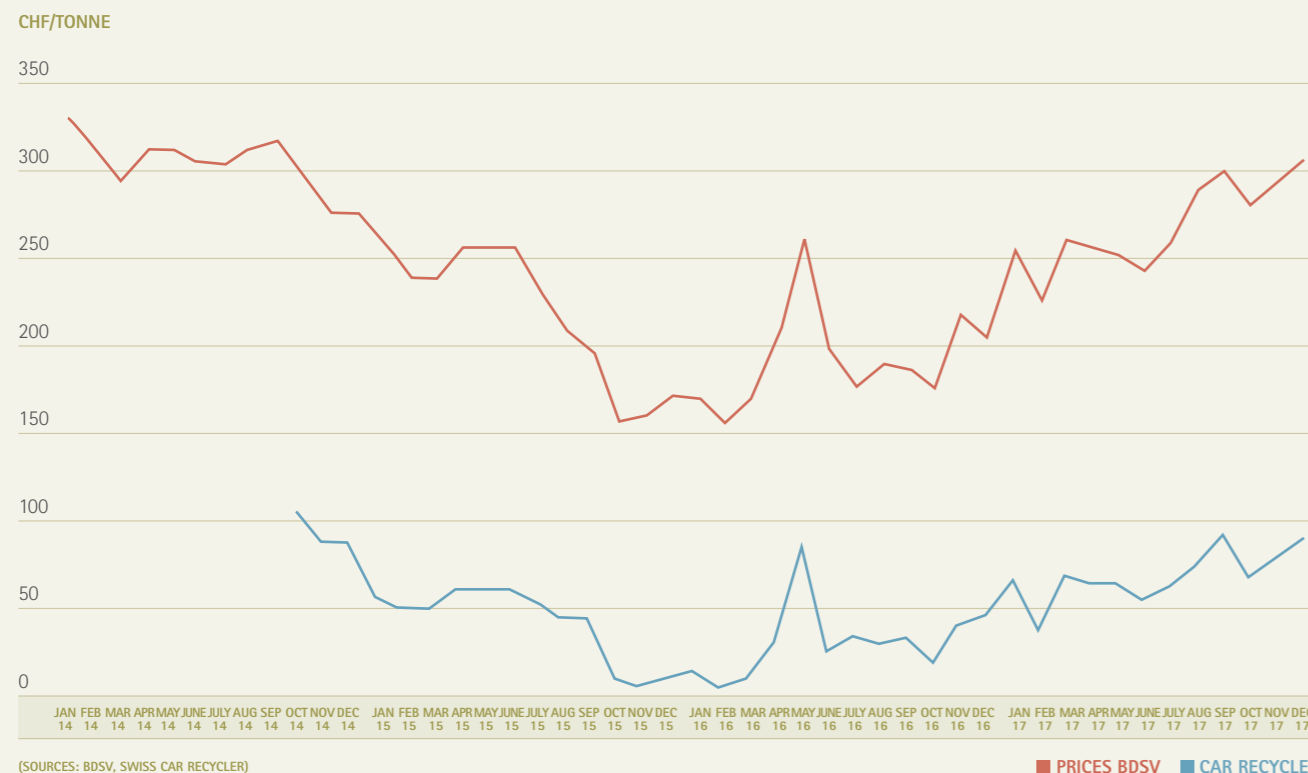
# 1 RETROSPECTIVE AND OUTLOOK

Rising scrap metal prices have made vehicle recycling viable again. However, the industry is having to compete with growing exports of previously used vehicles. Those vehicles are not then available for recycling.

The number of recycled end of life vehicles remains unchanged against the previous year and is still modest at some 77,000 shredded vehicles. In our last annual report we attributed this circumstance to low scrap metal prices. In the year under review, prices have picked up again and reached 300 francs per tonne at the end of the year. However, the number of end of life vehicles handed in for recycling did not increase. Exports of previously

used vehicles are an important reason for this. For the most part, these are older vehicles with a very high mileage and low value. Foreign trade statistics show that 75 per cent of them are worth less than 3000 francs. Demand for such vehicles in Switzerland is low. That is why they are sold on to countries in the South and East and are then sooner or later missing for domestic disposal purposes. That is a pity because the raw materials are also being

SHREDDER SCRAP PRICES 2014 – 2017



(SOURCES: BDSV, SWISS CAR RECYCLER)

■ PRICES BDSV ■ CAR RECYCLER



lost. But it cannot be prevented. Previously used vehicles are a freely tradable good; they are not governed by the law on waste disposal. However, vehicles which should not really count any longer as «previously used» are also being exported. The customs authorities have a good and simple instrument in the shape of the damage points scale to make a rapid distinction between previously used and end of life vehicles.

## DISPOSAL AND SHREDDER PLANTS

Next year, the implementing aid for the disposal of end of life vehicles is to be adjusted to new trends such as alternative types of power. Stricter export controls are to be discussed in this context. Nowadays, end of life vehicles are for example often fitted with an air conditioner. Measures must be taken to ensure that the refrigerant which damages the environment is extracted for proper disposal. The tanks of gas-powered vehicles are another issue. In Switzerland, there is practically no possibility of draining the gas tanks fully. If a tank containing residual gas reaches the shredder, a violent explosion may occur. Shredder plants are increasingly able to recover metals. That is their main task but it creates a situation in which there is a tendency for fewer and fewer residual metals to be present in the light shredder fraction (or automobile shredder residue). After incinerating this fraction, the slag processors are therefore able to recover fewer valuable materials and their income is reduced accordingly. Recycling of the light shredder fraction in municipal waste incineration plants (MWIP) continues to function smoothly and has proved effective. There have not so far been any bottlenecks of the kind which were sometimes experienced previously at the start of the year. Little is being heard now about the projects for pyrolysis plants, including plants to handle the light shredder fraction, which had been discussed in the past.

Implementation made no headway in 2017. As has frequently been stated, the Foundation takes the view that pyrolysis of the shredder light fraction is barely feasible for technical and economic reasons.

## INTERNATIONAL DEVELOPMENTS

The impact of the Chinese ban on imports of plastic waste materials from Europe may soon create problems. Europe was the main beneficiary of this favourable disposal arrangement. If tonnages are now distributed between the incineration plants, the Swiss waste incineration plants will also be affected. Their capacity utilisation rate is already high and prices are likely to trend upwards. Germany has been encouraging the circular economy politically for many years. The discussion is now under way in Switzerland too, fortunately with greater pragmatism. The fact that materials cannot be recycled eternally is well known. There are several reasons for this. Firstly, new developments are leading to greater efficiency. Secondly, processing uses energy and generates waste materials and thirdly harmful materials have to be removed from the environment. Metals are a big exception because they can generally be constantly recycled with no significant losses.

## OUTLOOK

Electro-mobility will be a focus of attention in the coming year with particular emphasis on lithium power batteries. Storage, transport and recycling are distinctly more difficult and complex and therefore more expensive than is the case with traditional lead batteries. This and lower material prices suggest that no economical recycling will be possible at least for the foreseeable future. The financial side must therefore be resolved.



AROUND **800,000 TONNES,** of all the **WASTE** incinerated in Switzerland, **ONE-FIFTH** takes the form of **SLAG** or filter ash. These contain valuable precious metals, rare earths and industrial metals.

# 2 ACTIVITIES OF THE FOUNDATION

The Foundation is monitoring the recycling chain for end of life vehicles and is assisting projects designed to close further gaps in the material cycle while respecting proportionality.

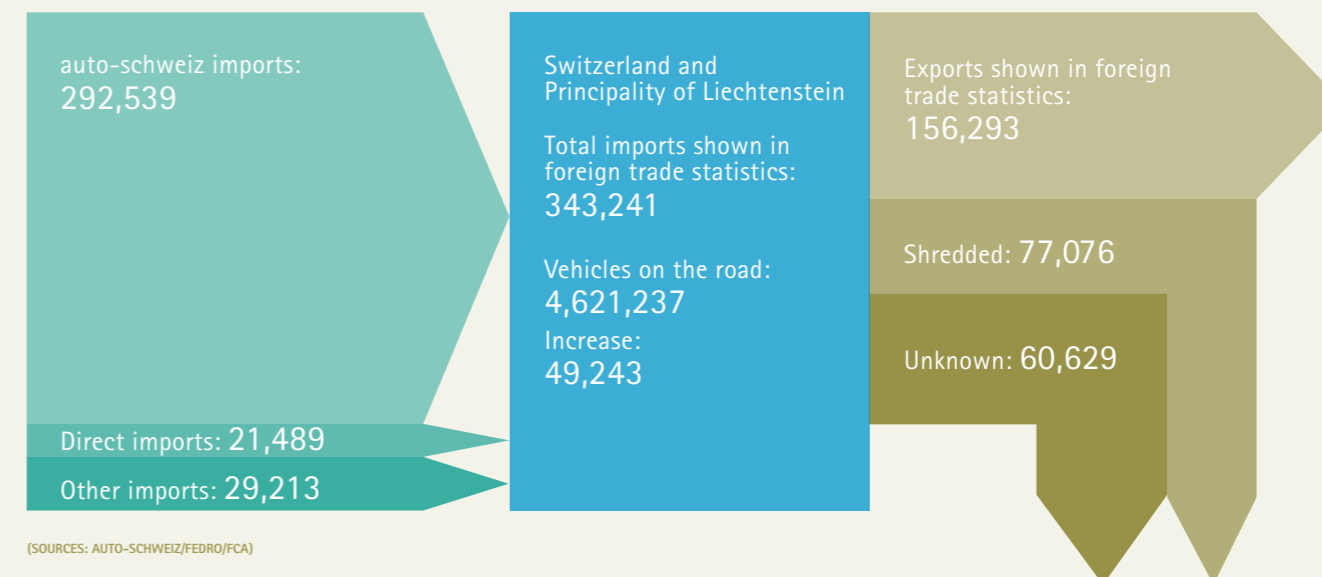
## A) VEHICLE AND RECYCLING OF ASR

New vehicle registrations fell only slightly in 2017 and remain at a high level. The number of passenger cars on the road increased by a below average figure. Calculations show that just under 300,000 vehicles had to be taken off the road as a result. For the most part, these are previously used vehicles, half of which are exported and then continue to be driven abroad. Exports have risen again steeply. The biggest rise is to the Balkan States. Previously used Swiss vehicles are in great demand because they are often in good technical condition. Minor defects can be remedied much more cheaply

abroad. As stated at the start of this report, little can be done to prevent exports of previously used vehicles and in most cases there is no need at all to do so.

The shredder plants processed 77,076 end of life vehicles which had previously been drained of fluids and had their harmful substances removed by vehicle recyclers or on a local site. Some 50,000 tonnes of shredder scrap and further high-grade metals were obtained in this way for recycling. The remaining light shredder fraction, totalling 60,634 tonnes, including 17,000 tonnes from end of life vehicles, was eliminated in waste incineration plants. Incineration prices rose

## PASSENGER CAR STATISTICS SWITZERLAND 2017



(SOURCES: AUTO-SCHWEIZ/FEDRO/FCA)

to an average of 161 francs per tonne (Switzerland: 159 francs per tonne). The contribution of the MWIP in Perlen is a positive factor. Substantial quantities of light shredder fraction are now being processed in this new modern facility. The adjoining paper mill is able to make optimum use of the waste heat which is generated. Other plants also report a very good overall energy balance sheet. The Foundation continues to credit a disposal contribution of 22 francs per shredded vehicle to the shredder plants. As proof, they must return the cancelled logbooks for the vehicles that are being definitively recycled. The Foundation is in regular contact with representatives of the automobile industry. In the year under review, it was visited by Toyota Europe. Care for the environment and sparing use of resources has been a central topic for that company for many

years and it is therefore paying close attention to vehicle recycling. The Foundation visited one shredder plant and one vehicle recycler with the Toyota representatives.

#### B) «MWIP RESIDUE PROCESSING» PROJECTS

The processing of waste incineration residues is an important factor. After all, one-fifth of the waste incinerated in Switzerland, equivalent to 800,000 tonnes, occurs in the form of slag or filter ash. As has often been described in the past, these materials contain valuable precious metals, rare earths and industrial metals. Several initiatives are under way at present to recover such materials. The Foundation is supporting that development as residual metals, which are present in the light shredder fraction, can be recovered in this way.

#### ASR RECYCLING (IN METRIC TONNES)

INCINERATION PLANT	2013	2014	2015	2016	2017
Hinwil	14,016	13,645	13,322	12,283	12,788
Winterthur	4,053	6,113	7,110	6,936	6,596
Thun	2,360	3,886	3,492	3,512	5,007
Zürich Hagenholz	2,987	3,957	2,378	3,774	4,821
Zürich Fernwärme	3,164	2,733	3,820	3,982	3,917
Weinfelden	2,173	718	1,916	3,053	2,579
Perlen			24	579	2,354
Niederurnen	3,271	2,850	2,510	1,844	2,070
Monthey	514	1,354	637	664	851
Buchs SG	435	425	356	704	424
others					119
St. Gallen				255	49
Gamsen					23
Zuchwil	899	555	199	72	16
Colombier			575	405	
Mannheim D	17,852	16,158	11,902	14,161	13,513
Magdeburg D			649	2,841	1,577
Bremen D	2,308	4,163	4,377	3,481	1,235
Espenhain D (SRW)	1,910	3,126	4,730		
Ingolstadt D	2,044	1,681	330		
Helmstedt D	3,364	6,080			
Weissenhorn D	2,651	2,033			
Olching D	2,281				
Iserlohn D	1,737				
Salaise F (Tredi)	683		1,276	2,673	2,696
<b>Total</b>	<b>68,702</b>	<b>69,476</b>	<b>59,603</b>	<b>61,219</b>	<b>60,634</b>

(SOURCE: FOUNDATION AUTO RECYCLING SWITZERLAND)

#### Centre for Sustainable Waste and Resource Utilisation ZAR:

Since the early days in 2005, the Zurich Oberland Waste Recycling Plant (KEZO) has made some progress. Dry discharge from the three incineration furnaces has been implemented. That was a prerequisite for the subsequent slag processing facility. This modern and innovative processing plant has been developed and optimised in phases and has now been in continuous operation since 2017. Further MWIPs (Horgen, Monthey, Zuchwil and Zurich) have converted their incineration furnaces to dry discharge and have since been supplying the processing facility which is now being operated by ZAV Recycling AG. Total throughput amounts to 100,000 tonnes per year. Just under 10 per cent of iron, 4.5 per cent of non-ferrous metals, stainless steel and glass are being recovered. Some optimisations are still awaited, but the ZAR project as it now stands can be described as a success. Now that the metal recovery problem has been largely resolved, ZAR is turning its attention to the mineral component which makes up 85 per cent of the slag. Everything which is no longer buried in a landfill site protects the environment.

Respecting its commitment, the Foundation continues to require evidence of the recycling rate for the light shredder fraction. So far, a major trial was planned as the basis for meaningful statements. Apparently, the gap between the metal contents of the light shredder fraction and that of residential waste is narrowing as time passes. The extent to which a large-scale trial makes any sense under those conditions will be shown by an interim report in the spring of 2018.

#### IGENASS Wet Discharge Interest Grouping:

The aim of IGENASS is to review the processing of wet discharged MWIP slag as compared to dry discharged slag. Meanwhile, the hybrid discharge from Hitachi Zosen Inova has also been included in the assessment. In this process, coarse slag is discharged in the wet state and fine slag in the dry state. The UMTEC Institute has performed numerous trials, for instance of the grain-size distribution and the behaviour of slag components in eluate experiments etc.

UMTEC is well-known for making cost-benefit analyses of the recycling of various waste materials. The term «benefit» is taken to mean the ecological benefit or environmental pollution that is avoided as compared to incineration in an average MWIP. After recycling of paper/cardboard and electronic appliances, slag processing already shows the third best eco-efficiency rate. On its own waste disposal site at Häuli in Lufingen, the Eberhard Group operates a processing facility for 100,000 tonnes of wet slag. In the spring it opened an additional plant to refine the metals which are sorted out and so permit their direct sale to smelting works. Trials with the direct use of the light shredder fraction proved satisfactory, but the yield of metals was too low to permit economical operation. The Foundation's experience shows that prior thermal treatment makes sense in order to eliminate organic impurities. This enables the metals to be separated more efficiently.

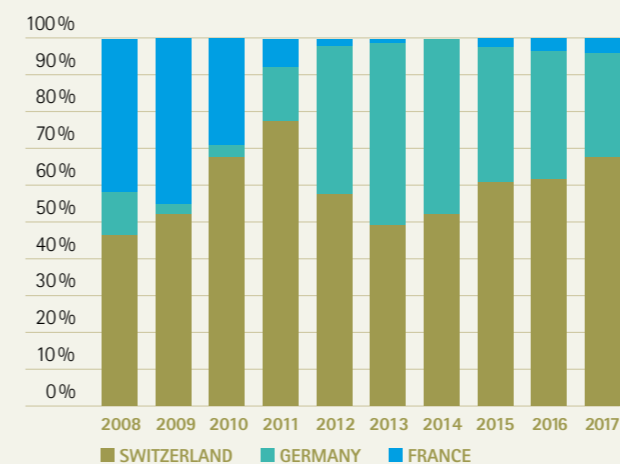
#### C) «AUTOMOBILE ELECTRONICS» PROJECT

The electronic recycling from end of life vehicles (EVA) project is being led by the Federal Office of the Environment (FOEN) and focuses on the optimised recovery of rare technical metals from electrical and electronic appliances in end of life vehicles. The aim of the project is to obtain indications as to which combination of the advance removal of such components and treatment of the light shredder fraction permits better recovery. The proportionate cost of advance removal which should logically be done by the vehicle recycler must be given careful consideration.

EMPA performed a shredder trial with 131 recorded end of life vehicles and analysed the initial fractions of nineteen different elements. The recovery rate of rare technical metals is low as they are distributed between all the initial fractions in the shredders from which subsequent recovery will hardly be possible.

To obtain initial information on advance removal, in a further trial of 19 end of life vehicles, six electronic devices were removed to recycle the circuit boards and six appliances with electric motors to recover rare earths. On average, the removal

#### ASR RECOVERY BY COUNTRY



(SOURCE: AUTO RECYCLING SWITZERLAND FOUNDATION)



time for the twelve components exceeded three hours. The time involved therefore already generates costs of 250 francs per vehicle, without even allowing for recycling costs as such. The low content of rare technical metals will only permit modest returns. As the trial volume is not representative, further in-depth studies will be necessary. Special attention must be paid here to the aspect of economy.

Recycling Magazine, 23.08.2017  
**«Stahlschrott: Keine Preise, kein Recycling»**  
**(Scrap steel: no prices, no recycling)**  
 The article also discussed last year's annual report by the Foundation. The title refers to low scrap metal prices because of which only small material quantities reached the vehicle recycling and shredder plants.

Auto & Wirtschaft, 09.12.2017  
**«Die Branche steht unter Druck»**  
**(The industry is under pressure)**  
 In his column, Jürg Wick summarises the annual report and comments: «Time for everyone who works in the automobile industry to learn a lesson». He relates that statement to the collapse of metal prices and the currency situation with which our recycling branch has had to contend.

oekotipp, 13.11.2017  
**«Rohstoffland Schweiz – Beispiel Altfahrzeuge»**  
**(Switzerland – A raw material country. Example, end of life vehicles)**  
 The Foundation published an article about vehicle recycling and urban mining in the Gewerbeunion's journal on renewable energy, ecology in the construction industry, recycling and environmental technology.

Blick, 14.11.2017  
**«Das passiert mit Ihrem alten Stinker»**  
**(This is what happens to your old banger)**  
 The diesel problem has led to price reductions for new vehicle purchases. «Blick» asked what happens to the old vehicles. The Foundation reported on vehicle exports and domestic recycling.

#### D) PUBLICATIONS

The annual report published by the Auto Recycling Switzerland Foundation meets with considerable interest in the automobile and waste industries. The Foundation endeavours to highlight the ecological benefits of vehicle recycling.

klimafreundlich SCHWEIZ 2017  
 (Climate-Friendly Switzerland 2017) Annual, 13.07.2017  
**«Ressourcenschonung dank Autorecycling»**  
**(Vehicle recycling saves resources)**  
 The Foundation published an article about vehicle recycling in Switzerland and its contribution to saving the environment and resources.

EUWID Recycling and Disposal, 01.08.2017  
**«Rund die Hälfte der stillgelegten Autos in der Schweiz verwertet»**  
**(Around one-half of all end of life vehicles in Switzerland are recycled)**  
 European Industry Services discussed the publication of the Foundation's annual report.

# 3 LAWS AND REGULATIONS

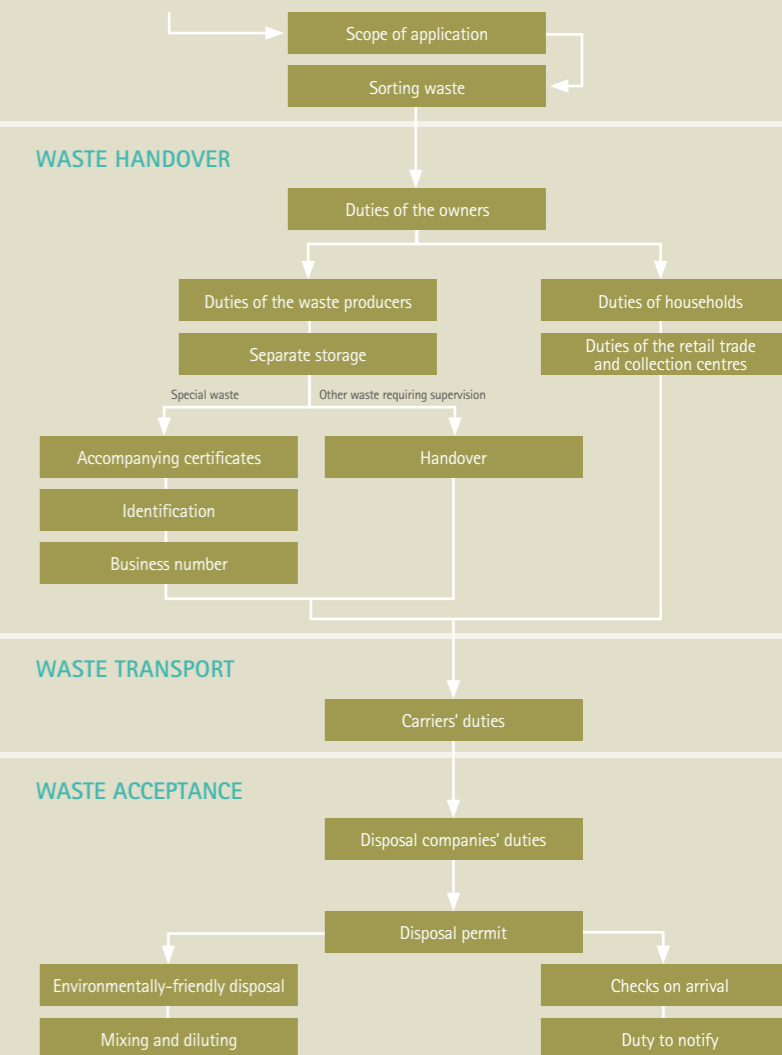
No particular legal provisions were adopted in the year under review in areas which relate to vehicle recycling.

#### A) IMPLEMENTING AID FOR THE DISPOSAL OF END OF LIFE VEHICLES

The existing implementing aid for the disposal of end of life vehicles dates back to 2006. Meanwhile, vehicle technology and equipment have advanced. Under the leadership of the Zurich Cantonal Office for Waste Materials, Water, Energy and Air, stakeholders in the industry and environmental authorities discussed existing gaps and room for interpretation. Topics included extraction of the refrigerant from air conditioners, dealing with gas-powered vehicles, treatment of hybrid and electric vehicles, handling operating fluids, business requirements for training and administration and legal status. In addition, stricter export provisions are to be discussed. The Foundation advocates the adoption of minimum standards which should be consistently and uniformly verified by all the implementing authorities. The FOEN's VeVA database includes as many as 248 businesses which have been granted the waste code 16 01 04ak, in other words are authorised to accept and handle end of life vehicles. These are of course not just vehicle recyclers but also towing companies, garages and scrap merchants.



#### WASTE DISPOSAL PROCEDURE IN SWITZERLAND



(SOURCE: FOEN WEBSITE)



In 2017, the shredder plants recovered some

**50,000** TONNES  
**OF SHREDDER SCRAP**  
and other  
high-grade **METALS**  
**77,076**  
for recycling from  
**END OF LIFE VEHICLES.**

# 4 CONFERENCES AND WORKSHOPS

Professional conferences give information on the state of legislation and science, while also showing what is feasible and make sense in practice.

#### SWISS RECYCLING CONGRESS, 24 JANUARY 2017, BIEL

The traditional event of the Federation of Selective Waste Collection Organisations, Swiss Recycling, and the Communal Infrastructures Organisation, always gives an overview of topical issues in the waste economy. The latest information supplied by the FOEN was of great interest.

#### INTERNATIONAL AUTOMOBILE RECYCLING CONGRESS 22 – 24 MARCH 2017, BERLIN

With General Manager Daniel Christen on the Steering Committee, the SARS supports this event which is the only one of its kind to deal exclusively with vehicle recycling. Most of the audience and speakers still come from Europe because this is where environment protection has made the most progress and the handling of raw materials was recognised as a central issue from an early date. Daniela Brunner of the Zurich Office for Water, Energy and Air, together with Daniel Christen, jointly presented routes for the export of previously used vehicles from Switzerland and the possibilities of inspection and criteria of the environment and customs authorities.

#### ENVIRONMENT ARENA SWITZERLAND 06 APRIL 2017, SPREITENBACH

The Foundation has been represented at the Environment Arena Switzerland since 2014 with a vehicle recycling exhibition. Each year, the Environment Arena invites exhibitors and sponsors to a networking event at which organisations and companies are able to introduce themselves in a short presentation. This time, Daniel Christen had an opportunity to report on the activities of the Foundation and the vehicle recycling process.

#### SWISS ENVIRONMENTAL TECHNOLOGY ASSOCIATION (SVUT) 21 JUNE 2017, ZÜRICH

The SVUT organised a tour of the Swiss Steel AG steelworks at Emmenbrücke. This 175 year-old business processes exclusively scrap to produce high quality stainless and free-cutting steels in an 80 tonne electric arc furnace; many of these materials are used again in the automobile industry so closing this exemplary material cycle.

#### WASTEVISION, 28 SEPTEMBER 2017, RAPPERSWIL

This waste industry conference is organised each year by the Umtec Institute at Rapperswil University. In line with the motto «From practitioners for practitioners», presentations were given on innovative processes and machinery for waste recycling. One exemplary model is the optimisation of appliances that were thought to have already been fully developed, such as eddy current separators whose efficiency can be further improved through innovative details.

#### VDI KNOWLEDGE FORUM, 12 – 14 SEPTEMBER 2017, HAMBURG

This professional congress discussed the latest trends in the recycling of plastics and composite materials. The focus on this occasion was not in fact on vehicle materials but in the final analysis the particular source of secondary raw materials makes little difference. It became clear that separation of the different material types when they are collected already makes a central contribution to effective recycling. Even if sorting technologies undergo further development, from the economic angle it is clear that each additional step creates further costs and requires more energy. Referring to vehicles, the recycling of carbon fibre reinforced plastics (CFPs) was discussed. CFP recycling is technically feasible today. In many cases, however, downcycling occurs because the quality of the carbon fibres diminishes.

#### VBSA CONGRESS, 05 DECEMBER 2017, OLTEN

Although many European environmental politicians dream in the best-case scenario of waste avoidance, generally of zero waste, there is an even greater need for waste incineration plants than ever before. Population growth and economic advances demonstrably result in greater quantities of waste. On the other hand, this increase can be compensated by greater sharing, use instead of buying and better collection systems. The MWIP is also an extremely important material sink because most substances cannot be recycled eternally. The recycling of secondary raw materials from slag and fly ash therefore becomes still more important.

# 5 MOTOR VEHICLE STATISTICS

## STATISTICS FOR PASSENGER CARS IN SWITZERLAND

YEAR	NEW REGISTRATIONS <sup>1)</sup>	IMPORTS <sup>2)</sup>	TOTAL ON THE ROAD	TAKEN OFF ROAD <sup>3)</sup>	EXPORTS <sup>2)</sup>	VEHICLES CANCELLED IN SWITZERLAND <sup>4)</sup>	VEHICLES SHREDDED IN SWITZERLAND <sup>5)</sup>	DIFFERENCE CANCELLED SHREDDED
2000	315,398	332,880	3,545,247	254,908	73,404	181,504		
2001	317,126	330,541	3,629,713	246,075	83,319	162,756		
2002	295,109	302,763	3,700,951	231,525	90,034	141,491	166,198 <sup>6)</sup>	-24,707
2003	271,541	288,192	3,753,890	235,253	94,682	140,571	153,412 <sup>6)</sup>	-12,841
2004	269,211	281,588	3,811,351	224,127	108,235	115,892	147,096 <sup>6)</sup>	-31,204
2005	259,426	287,371	3,864,994	233,728	90,354	143,374	129,704 <sup>6)</sup>	13,670
2006	269,421	284,182	3,899,917	249,259	106,857	142,402	104,600	37,802
2007	284,674	305,102	4,002,584	202,435	131,695	70,740	88,261	-17,521
2008	288,525	310,841	4,031,205	282,220	108,205	174,015	82,195	91,820
2009	266,018	276,833	4,051,832	256,206	82,967	173,239	58,279	114,960
2010	294,239	333,808	4,119,684	265,956	91,965	173,991	78,657	95,334
2011	318,958	367,961	4,209,672	277,973	96,430	181,543	90,338	91,205
2012	328,139	374,379	4,300,036	284,015	127,806	156,209	99,448	56,761
2013	307,885	342,762	4,366,895	275,903	125,325	150,578	107,282	43,296
2014	301,942	337,653	4,430,375	274,173	120,977	153,196	105,034	48,162
2015	323,783	373,721	4,503,865	300,231	118,145	182,086	71,607	110,479
2016	317,318	349,433	4,571,994	281,304	131,319	149,985	76,112	73,873
<b>2017</b>	<b>314,028</b>	<b>343,241</b>	<b>4,621,237</b>	<b>293,998</b>	<b>156,293</b>	<b>137,705</b>	<b>77,076</b>	<b>60,629</b>

(FEDRO/AUTO-SCHWEIZ) (FCA) (FEDRO/AUTO-SCHWEIZ) (FCA)

FEDRO: Federal Roads Office (status as of 30 September)

FCA: Federal Customs Administration (foreign trade statistics)

1) New registrations in Switzerland, including direct and parallel imports

2) All imports and exports shown in the foreign trade statistics

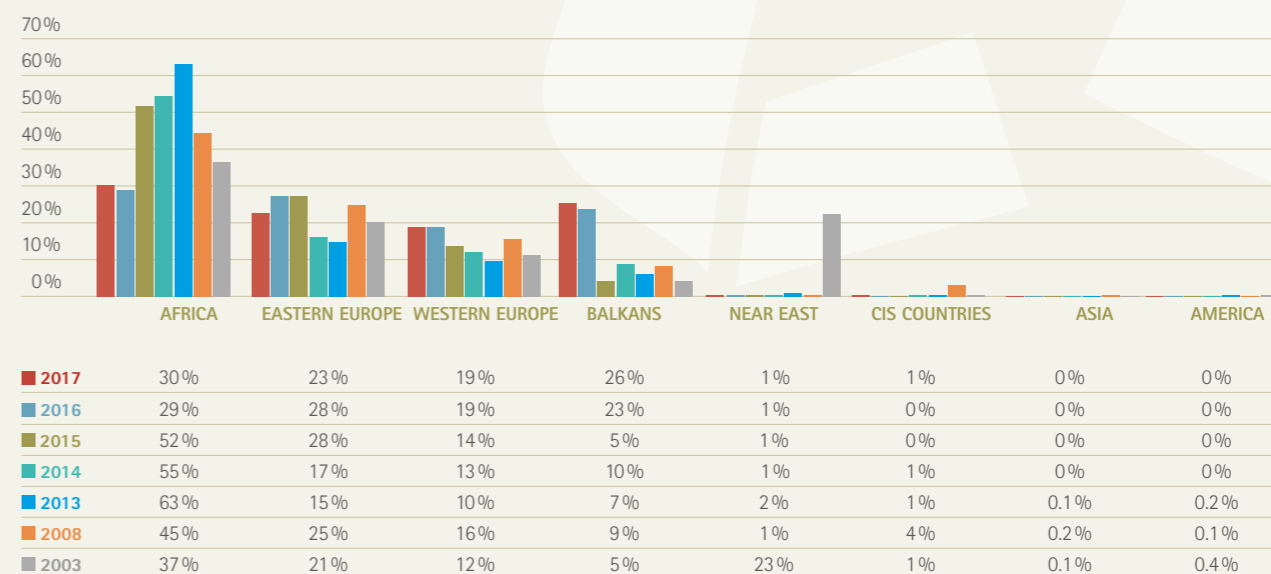
3) Calculated: imports less increase in number of vehicles on road

4) Calculated: cancelled vehicles less exports

5) Vehicles proven to have been shredded (at present vehicle log books; up to 2005 weighing certificates)

6) Calculated from weighing certificates (850 kg/vehicle); from 2006 cancelled vehicle log books

## EXPORTS OF PASSENGER CARS BY REGION



(SOURCE: FEDERAL CUSTOMS ADMINISTRATION, FOREIGN TRADE STATISTICS)

## EXTRACT FROM FOREIGN TRADE STATISTICS; EXPORTS OF PASSENGER CARS 2017

2017	VEHICLES	CHANGE (%)	WEIGHT (kg)	PRICE (CHF/Vehicle)
<b>Total 135 countries</b>	<b>156,259</b>	<b>19.0</b>	<b>1,441</b>	<b>3,233</b>
Poland	25,699	-8.1	1,522	2,166
Lybia	17,622	45.2	1,383	521
Bulgaria	16,110	14.5	1,526	963
Germany	13,563	8.9	1,578	8,394
Serbia	11,051	80.6	1,340	1,537
France	8,960	32.9	1,439	7,829
Togo	8,762	2.9	1,217	1,032
Niger	8,335	60.3	1,271	930
Bosnia-Herzegovina	3,639	92.6	1,393	2,200
Macedonia	3,098	11.6	1,427	2,245
Nigeria	2,735	38.6	1,474	1,480
Albania	2,673	88.1	1,390	1,457
Ivory Coast	2,667	21.9	1,172	1,217
Czech Republic	2,651	-1.3	1,500	3,981
Kosovo	2,575	44.8	1,523	4,017
Lithuania	2,311	18.0	1,593	1,037
Hungary	2,310	2.8	1,376	1,558
United Kingdom	1,697	44.8	1,501	9,155
Austria	1,691	25.2	1,622	6,267
Benin	1,646	-34.0	1,329	1,314
Slovakia	1,435	16.4	1,523	1,695
Ukraine	1,270	384.7	1,470	4,760
Italia	1,172	20.9	1,387	15,848
Cameroon	1,112	-27.5	1,299	1,171
Guinea	1,031	-19.1	1,343	1,185

(SOURCE: FCA)

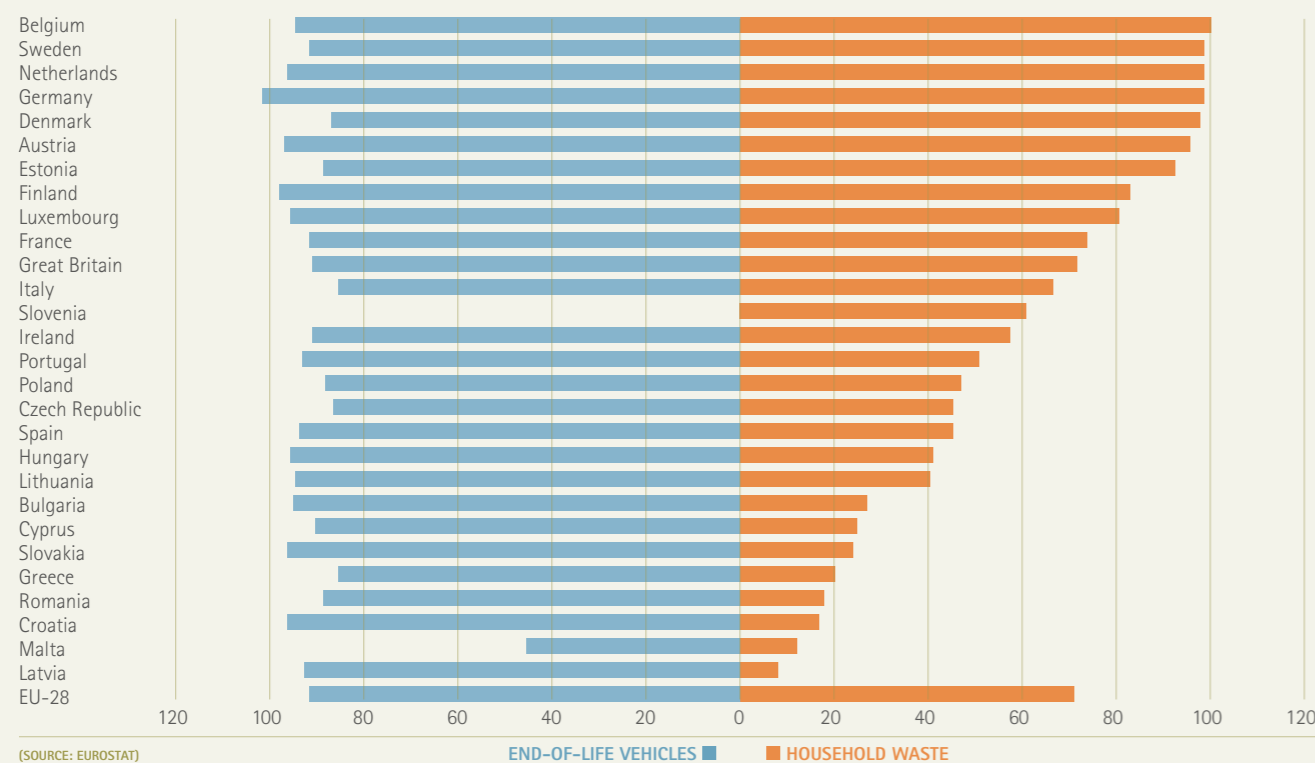
# 6 DEVELOPMENTS ABROAD

For the most part, recycling targets for end of life vehicles are being achieved in the EU. Especially in the economically weaker countries, the recovery of spare parts is making an important contribution.

Once again, China's announcement that it will prohibit imports of plastic waste from 2018 is casting a long shadow. The automobile industry is not directly concerned as sorted goods from packaging are affected in the first instance. Discussion in the professional media clearly shows that plastic recycling is not as successful as

had previously been supposed. Only a part – generally a significantly lower quantity – is in fact recycled. We are affected indirectly as thermal recycling in refuse incineration plants is becoming more expensive because of increasing capacity use. However, the example also shows that plastic recycling from end of life vehicles would

RECOVERY AND RECYCLING RATES 2014 OF EU-STATES



be complex and expensive if not even «simple» plastic waste can be correctly recycled.

In a study, the German Federal Office of the Environment examined what happens to end of life vehicles. Despite the evidence of recycling and the declaration of disposal, there is a big statistical gap. The investigation concluded that this is due in large measure to inaccuracy of the fundamental data. It submitted a whole range of proposed solutions all of which lead to greater bureaucracy. On one key point no patent recipe has been found as yet, namely the distinction between previously used vehicles (product) and end of life vehicles (waste). If there were uniform and practicable Europe-wide criteria, checks at the borders and exporting ports would still have to be intensified and that costs money. In Switzerland the topic is less an issue of new regulations than one of the priorities set by the environmental authorities. That explains the credo: better minimum standards to ensure that they can be consistently respected.

A comparison of the recycling rates of residential waste and end of life vehicles for 2014 in the EU Member States is interesting. In some countries, the big difference in the rates of recycling of residential waste and end of life vehicles is striking. However, we must remember that vehicle recycling starts with a clear advantage. Metals make up more than 70 per cent of every car and are easier to recover. In many countries, such as the USA or France, the second-hand trade in spare parts from end of life and accident-damaged vehicles is flourishing. Re-use comes second in the waste hierarchy after avoidance. On the other hand, a spare part always replaces a defective component which then finishes up as waste so that in the end this is an issue of the boundary between two systems.

## ANNEX

### DOCUMENTATION

Publications such as press releases, annual reports, INFO newspapers etc. can be consulted on the Foundation's website: [www.stiftung-autorecycling.ch](http://www.stiftung-autorecycling.ch).

### MEMBERSHIP OF THE FOUNDATION BOARD

#### Foundation Board Chairman

Dr. iur. Hermann Bürgi\*

#### auto-schweiz

Christine Ungricht, Vice-Chairwoman\*

François Launaz\*

Walter Frey

Andreas Burgener

Tobias Lukas

#### Automobile Club of Switzerland

Thomas Hurter

#### Auto Trade Association Switzerland

Urs Wernli

#### Swiss Commercial Vehicle Association

Adrian Amstutz

#### Department for the Environment,

#### Canton of Aargau

Dr. Peter Kuhn

#### Swiss Shredder Association

Dr. Tobias Thommen\*

#### Touring Club of Switzerland

Christoph Erb\*

\*Members of the Foundation Board Committee

### BUSINESS OFFICE

Daniel Christen, Chief Executive Officer

Urs Eberle, Administration



Foundation Auto Recycling Switzerland  
Wölflistrasse 5, P.O.Box 47, CH-3000 Bern 22

T +41 (0)31 302 36 24

F +41 (0)31 306 65 60

[info@stiftung-autorecycling.ch](mailto:info@stiftung-autorecycling.ch)

[www.stiftung-autorecycling.ch](http://www.stiftung-autorecycling.ch)

