

NEA (2007): Organised theft of commercial vehicles and their loads in the European Union

Relevant information	Remarks	Resulting data/calculation	Cited Source	Page
Difference between claimed vs. actual loss	Common problem			iii
Total costs of theft should include repair and re-ordering, quantifiable data cannot be derived from any source				3
Unclaimed property is not accounted: usually own risk value: loss <1000€ not reported, also fear of bad image				3
Risk level depends on number of loads transported and level of security	More thefts when more loads transported?	0.08% of transported loads are subject to theft	AHTS Danish Study	4
TAPA EMEA total reported loss values road freight transport		See Figure 1		14
No. of incidents can be estimated relating to number of loaded trips	In line with 0.08% mentioned above	1 in 10'000 for medium distances (<600km, without night stop); 1 in 5'000 for long distance runs		15, 51
Derived shares of incidents multiplied with 3 loss value categories	Calculation can be reproduced with current data (see pp.51-53)	Total EU loss in 2004: €8.2 billion → €2.2 billion due to unsecure parking (27%), €328 million in secure parking	See Figure 2	15
Stratfor Forecasting Inc.: \$50 billion each year in merchandise loss due to cargo theft worldwide	Worldwide estimation, unreliable		See footnote	16
Location of thefts	Other shares seem to be irrelevant for TPA IRS, total loss needs to be reduced	Only 27% of theft accounted for in non-secure parking, but also 4% in secure parking	See Figure 3	17/18
Method of theft		63% from vehicle, 14% of vehicle...	See Figure 4	

General remarks	Page
Overall picture of theft currently unavailable	2
Parsec project: Data for 6 countries , availability of statistical data primarily limited to theft of vehicles, driver and cargo crimes difficult to derive	11
TAPA EMEA IIS database: Incidents (organized theft of commercial vehicle and their load) reported by members,	12
Direct damage: replacement value of cargo and/or vehicle, total damage should include indirect damage but this is not easily done	15
TAPA EMEA data is biased towards western European countries (esp. UK) due to number of reports: country specific data cannot be adopted	21

Table 2.3. Total loss value in road freight transport IIS database (average per year based on the period January 2003-December 2006)

<i>Item</i>	<i>number of incidents</i>	<i>average value per incident (*€ thousand)</i>	<i>total value (*€ thousand)</i>
Total value of 'High Loss value' (more than €500.000 per incident)	16	1.701,7	26.800,9
Total value of 'Medium Loss value' (between €150.000 and €500.000 per incident)	42	268,8	11.288,9
Total value of 'Low Loss value' (between €5.000 ¹⁾ and €150.000 per incident)	262	30,7	8.042,8
Total	383	144,2	46.132,5
Reported without loss value known ²⁾	63	-	-

Source: IIS-database; years: 2003-2006; stakeholder questionnaire, interviews

Notes:

1. €5.000 is believed to be the average value of the 'own risk'. Loss of property below this value will not be claimed at the insurance company nor be remarked to the IIS database. It is believed that about 20% of this amount are direct costs.
2. Part of these incidents may belong to the group of non-declared direct losses of property with a property value of less than € 1000 per occasion (however, because of for instance vehicle damage as result of theft, the actual costs may easily be much higher).

Figure 1: TAPA EMEA, p.14

Table 2.4. Estimated loss value in road freight transport as a result of theft of cargo and/or freight vehicle (basic year: 2004²³)

<i>EU Member State</i>	<i>Number of loaded trips (figures for the year 2004) (* 1 m)</i>	<i>Claimed theft of cargo and/or vehicle during road transport (* € m)</i>	<i>Total costs of theft of cargo and/or vehicle during road transport (* € m)</i>
Austria	22	139,6	147,9
Belgium	26	164,9	174,8
Bulgaria	missing	missing	missing
Cyprus	3	19,0	20,2
Czech Rep	53	336,2	356,3
Denmark	16	101,5	107,6
Estonia	3	19,0	20,2
Finland	27	171,3	181,5
France	152	964,2	1021,9
Germany	232	1471,6	1559,8
Greece	missing	missing	missing
Hungary	22	139,6	147,9
Ireland	22	139,6	147,9
Italy	92	583,6	618,5
Latvia	7	44,4	47,1
Lithuania	5	31,7	33,6
Luxembourg	3	19,0	20,2
Malta	missing	missing	missing
Netherlands	49	310,8	329,4
Poland	79	501,1	531,1
Portugal	24	152,2	161,4
Romania	missing	missing	missing
Slovakia	25	158,6	168,1
Slovenia	6	38,1	40,3
Spain	144	913,4	968,1
Sweden	21	133,2	141,2
UK	195	1236,9	1311,0
Total EU	1228	7789,5	8256,1

Source: Parsec, Eurostat, IIS-database, stakeholder questionnaire, NEA-cost calculation models.

Figure 2: NEA calculation, p.16

Table 2.6. Location of the theft

<i>Location</i>	<i>share (%)</i>
en route ²⁴	41
secure parking ²⁵	4
non secure parking facilities ²⁶	27
total (%)	100
total (abs)	1359 ²⁷

Source: IIS-database; years: 2003-2006: stakeholder questionnaire, interviews.

²⁴ 'En route' means in this study: during the trip and the freight vehicle not being parked at facilities or dedicated (truck) parking areas. A stop at a truckers' pub for a cup of coffee therefore belongs to 'en route'.

²⁵ 'Secure parking' = a special area on which additional measures are taken that increase the security level (e.g. fenced, surveillance camera's).

²⁶ 'Facilities' = all areas on which a truck is parked for a longer period (more than half an hour) and not being actual parking areas, e.g. loading and unloading facilities, mode-shift facilities.

²⁷ This figure presents the total of all relevant incidents in the IIS-database for the years 2003-2006. As this figure is not available for all incidents, this total is lower than the overall total presented in table 2.5.

Figure 3: TAPA EMEA, p.1

Table 2.7. Method used with the theft

<i>Method</i>	<i>share (%)</i>
theft from vehicle	63
theft of vehicle	14
robbery	8
hijacking	7
other	8
total (%)	100
total (abs)	1530 ²⁸

Source: IIS-database; years: 2003-2006: stakeholder questionnaire, interviews. ⁸

Figure 4: TAPA EMEA, p.19

BMVBS (Federal ministry of transport, building and urban development, Germany) (2012): Information about safe and secure parking, ppt

Relevant information	Remarks	Resulting data/calculation	Cited Source	Page
Truck parking capacities in Germany		430 rest areas with services, 1'510 rest areas without → 37'000 parking spaces, 190 private truck stops → 20'000 parking spaces		2
Damage including dark figure (in total, without declaration on where it happened)		€ 100 million, 70-80 complete trucks stolen	Insurance organizations, federal police	16

French report (OCLDI) for 2010/2011

Relevant information	Remarks	Resulting data/calculation	Cited Source	Page
Economic loss due to cargo theft in France	Only available in French	€28 million (2011)		32-33
Number of incidents in France		See figure 5		

Graphique 1. Nombre de vols de fret commis ou tentés, portés à la connaissance de l'OCLDI et évolution annuelle entre 2002 et 2010.

Year	Volumes des vols de fret	Evolution annuelle
2002	3 403	-
2003	3 222	-5,3%
2004	2 392	-25,8%
2005	2 194	-8,3%
2006	2 545	16,0%
2007	1 491	-41,4%
2008	1 474	-1,1%
2009	1 630	10,6%
2010	1 276	-21,7%

Source : Office central de lutte contre la délinquance itinérante - Traitement ONDRP - Métropole

← Figure 5: Incidents between 2002 and 2010 (OCLDI 2010), p.563

TruckPol: Annual Reports 2007-2010 (+2011 quarterly reports)

Crime value	UK vehicle values	Load values	Total loss	Page
2007	€48 million	€60 million	€108 million	1
2008	€48 million	€48 million	€95 million	1
2009	-	-	-	-
2010	€31 million	€30 million	€60 million	1
2011 (Jan-Sep, plus estimates)	-	-	-	-

Type of incidents	Theft of vehicle	Theft from vehicle	Theft other+attempts	Hijack+Attempts	Others
2007	51%	28%	14%	4%	3%
2008	51%	36%	10%	1%	2%
2009	-	-	-	-	-
2010	53%	33%	13%	1%	1%
2011 (Jan-Sep, plus estimates)	46%	43%	9%	2%	<1%

Additional information	Resulting data/calculation	Year	Page
Average loss per incident reported	€47'146	2007	1
Majority of thefts occur from foreign vehicles		2007	5
Fuel theft is an increasing category (reported as theft from vehicle, but data only available for 2011, excluded above)	42% (Q2), 38% (Q3) of all incidents reported	2011	Q1, p.6 Q2, p.8
Most crimes occur close to major road networks with good escape routes		2008	6
Freight crime must be regarded as part of organized crime		2008	7

Europol (2009): Cargo Theft Report

Relevant information	Remarks	Resulting data/calculation	Cited Source	Page
Risk level of theft is calculated through losses per GDP		See Figure 6		5
A single truckload of cigarettes might be worth up to €2 million	How does this compare to avg. loss of €47'146 (TruckPol)? Avg. might be too low!			8
France: 1491 incidents in 2007		77% offences are theft from vehicle	OCLDI	12

Definitions	Summary of definition	Page
Hijack	Occasions where force, violence or threats are used against a driver and the vehicle is stolen with its load	
Theft of...	Where an unattended vehicle and/or trailer are stolen with the load	
Theft from...	Thefts of load from stationary vehicles or from delivery vehicles left unlocked/unattended	

General remarks	Page
Reference to NEA 2007 study: highlighting an important problem. €8.2 billion in losses are just a fraction, indirect costs have to be added	2, 3
Reference to IRU 2008 study	3
Interventions usually only displace the problem to different locations	6
Successful MO spread quickly and efficient supply chains for stolen goods are in place	8
Driver are a weak link in security: involvement possible	8

TAPA IIS Loss rate per Billion Euro of GDP

Country Risk Ranking	Country	IIS Losses [€]	2007 GDP [\$]	TAPA Losses per Billion of Euro
1.	United Kingdom	€ 232,767,928	\$ 2,773,000,000,000	€ 83,941
2.	Netherlands	€ 46,794,607	\$ 768,700,000,000	€ 60,875
3.	Luxemburg	€ 1,865,390	\$ 51,600,000,000	€ 36,151
4.	Belgium	€ 11,500,280	\$ 453,000,000,000	€ 25,387
5.	France	€ 47,737,308	\$ 2,560,000,000,000	€ 18,647
6.	Latvia	€ 504,950	\$ 27,340,000,000	€ 18,469
7.	Spain	€ 21,206,000	\$ 1,439,000,000,000	€ 14,737
8.	Sweden	€ 5,801,000	\$ 455,300,000,000	€ 12,741
9.	Hungary	€ 1,712,951	\$ 138,400,000,000	€ 12,377
10.	Germany	€ 32,286,594	\$ 3,322,000,000,000	€ 9,719

Figure 6: Europol p.5

IRU (2008): Attacks on drivers of international heavy goods vehicles: survey results

Relevant information	Remarks	Resulting data/calculation	Cited Source	Page
Estimates about number of HGV drivers in Europe	Including Russia, excluding Iran	About 1.6 million drivers	Survey	13, 119
Drivers gender		About 97% male		20
Drivers age and relation to attacks	Evenly distribution of attacks/age	Normal distribution		20-21
Time of attacks		75% of attacks betw. 18:00 and 6:00		43
Time until driver recovered (fit to work again)	This might be an indicative of lost man-hours due to cargo crime	24% continued working, 23% took one day, 37% did not specify		48
Types of cargo stolen	Different source to categorize theft. Data on goods transported needed to evaluate risk potential	27% high value, 11% bulk, 47% general freight/reefer ...		49
Reported crimes	Markup to report values in police statistics?	60% reported to police, 30% not reported		50
Insurance claims	Large share is unknown, not reliable enough?	36% of incidents followed insurance claims, 12.5% were not claimed		52
Average loss value (assumed reasonable by the study)	No original source!	Across 6'000 incidents: avg. €40'000	TruckPol	53
Share of drivers attacked (derived from survey responses)	Statistical significance questionable, biased responses → lower shares assumed	17.8% over a 5 year period		55
Total value of direct losses surveyed (€ 11 million over five years in the survey), calculated total of 178'285 incidents	Extrapolation, avg. value: €40'000, excluding indirect cost	€7.2 billion over 5 period		54-55

General remarks	Page
1'275 interviews with drivers conducted, 2'003 surveys in total filled → statistically sound for 1.6 million drivers? Assumed to be valid	19
Statistical part covering the respondents/characteristics of drivers in the survey is extensive	20-29
Statistics on attacks are mostly biased and cannot be regarded as statistically sound. Caution is advised repeatedly	37
Drivers do not mention ITS as a part of a solution for theft/cargo crimes (hotlines, information centers might be considered somewhat related though)	52-53
Incidents commonly not reported because authorities are perceived as not interested (probably only for low value incidents)	58
Number of attacks/risk level depends largely on the international traffic intensity in a location	78

ECMT (2002): Crime in road freight transport

Relevant information	Remarks	Resulting data/calculation	Cited Source	Page
Private sector suffers considerable losses from the theft of goods in transport: an initiative by an association of 20 high tech companies to measure the value of goods stolen between 1999-2000: 150 incidences of theft of which 25% were hi-jacks. The type of products stolen were all of high value: total value of known losses was € 32 million	Not statistically sound, only limited range of goods and small sample. But relevant for comparison with other average loss values. Thefts occurred throughout Europe	average loss value € 213'333 21 incidents happened in truck parks with a value of €3.5 million → avg. loss value € 166'667		12

General remarks	Page
"In some countries, up to 1% of the goods vehicles in circulation are stolen annually - that is many tens of thousands of commercial vehicles"	11
Identified problems for data collection: 1. lack of comparability of crime statistics; 2. categorisation of vehicles and risk factors (Europol now has a common definition set, but statistics are still scarce or not detailed enough)	12
Compare recommendations: crime fighting is an entirely different issue. Own statistics and data collection is needed	12

Further findings/sources considered

Source	Content	Findings
Europe Economics (2010): An assignment by Europe Economics to support an evaluation by DG TREN on "Pilot project SETPOS (grant agreement TREN /SETPOS /007 /S07.71879)"	Quantification of SETPOS benefit. Calculation of project break-even in terms of prevented crimes to account for project cost (pp.55-56).	Adheres to NEA calculation, concludes that no additional benefit resulted from SETPOS
DfT (2011): Lorry parking study (Chapter 3)	Provides number of parking spaces and demand, shares of offsite parking and of freight crime in UK	Regions with high shares of offsite parking also show high shares of freight crime (p.27)
LABEL (2011): Handbook for Labelling	Benefits of Reliable Information: What's in it for the users?	Table containing qualitative benefits for all stakeholders through dissemination of information on location and security level (p.11)
Interview with IRU (conducted by xxx/Date?)	Interview with Michael Nielsen, general delegate of IRU permanent delegation to the EU	Data provided is neither statistically sound nor reliable but it proves that a problem exists! Not within capacity of IRU to do so.
NEA (2007): Study on feasibility of organizing a network of secured parking areas for road transport operators on the TERN (final report; country studies)	Assessment on availability of data and statistics on freight crime and on parking areas along the TERN in EU27 countries.	8 countries provided data. Most important: UK case study: No. of incidents seen falling over past 5 years. Most crimes are petty crimes, but low economic impact, most impact through organized crime, but low incident count. Parking in secured areas improves situation particularly vs. petty crimes (p.150) According to Truckpol the most efficient way to reduce lorry related crime in UK is the setup of a central information sharing network for approx. GBP320'000.(p.151)
Council of the EU (2010): Secured parking areas as a preventive measure against cargo theft – Questionnaire	Survey among EU member states concerning main actors and concepts in fighting cargo crimes as well as awareness of existing initiatives	No original output from answers of member states can be seen. Varying level of awareness and involvement of the problem and measures to fight it.