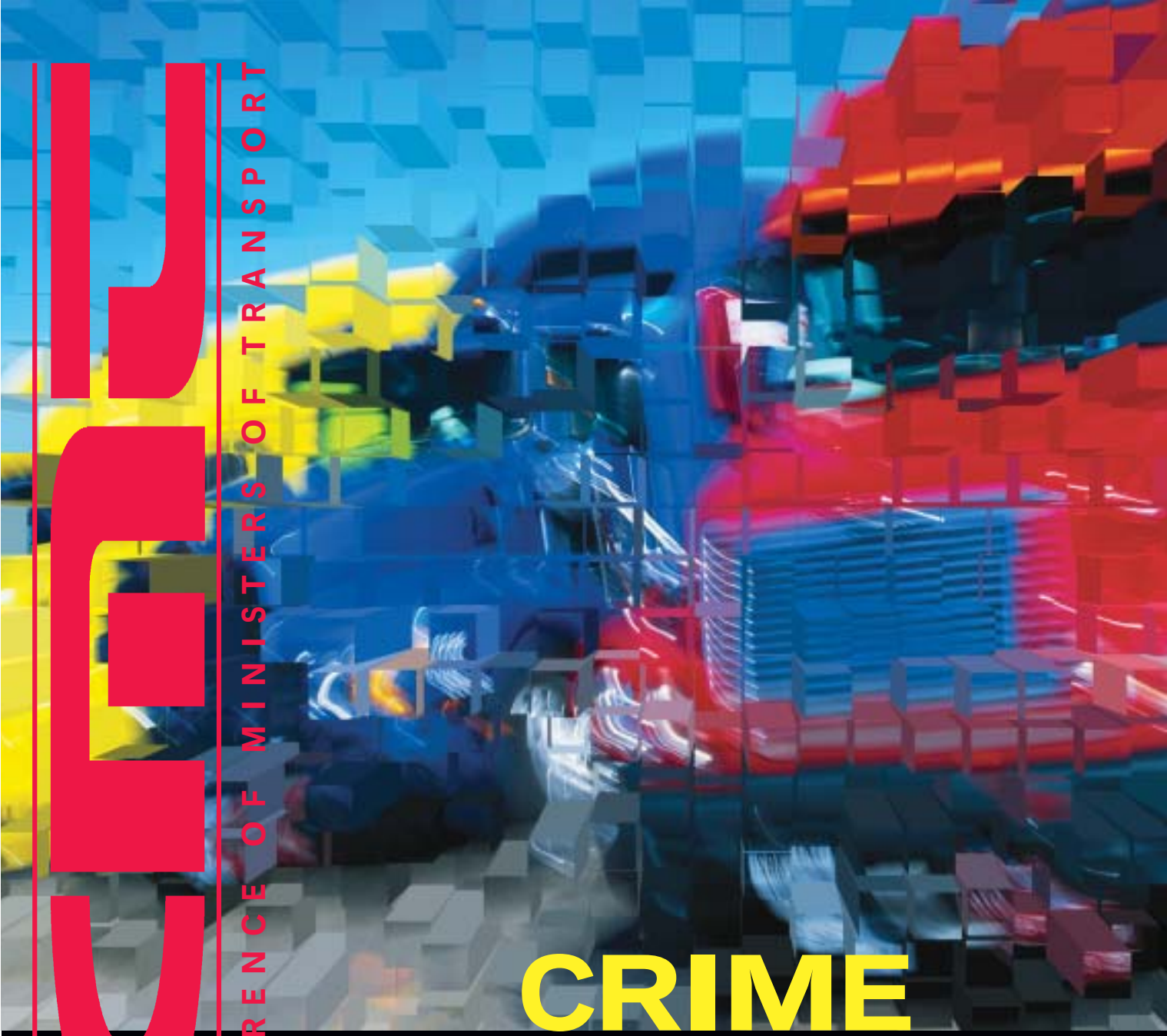

ECMT

EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT

CRIME IN ROAD FREIGHT TRANSPORT

OECD

EUROPEAN CONFERENCE
OF MINISTERS OF TRANSPORT

CRIME IN ROAD FREIGHT TRANSPORT

EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT (ECMT)

The European Conference of Ministers of Transport (ECMT) is an inter-governmental organisation established by a Protocol signed in Brussels on 17 October 1953. It is a forum in which Ministers responsible for transport, and more specifically the inland transport sector, can co-operate on policy. Within this forum, Ministers can openly discuss current problems and agree upon joint approaches aimed at improving the utilisation and at ensuring the rational development of European transport systems of international importance.

At present, the ECMT's role primarily consists of:

- helping to create an integrated transport system throughout the enlarged Europe that is economically and technically efficient, meets the highest possible safety and environmental standards and takes full account of the social dimension;
- helping also to build a bridge between the European Union and the rest of the continent at a political level.

The Council of the Conference comprises the Ministers of Transport of 41 full Member countries: Albania, Austria, Azerbaijan, Belarus, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, the Czech Republic, Denmark, Estonia, Federal Republic of Yugoslavia, Finland, France, FYR Macedonia, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Moldova, Netherlands, Norway, Poland, Portugal, Romania, the Russian Federation, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine and the United Kingdom. There are six Associate member countries (Australia, Canada, Japan, New Zealand, Republic of Korea and the United States) and two Observer countries (Armenia and Morocco).

A Committee of Deputies, composed of senior civil servants representing Ministers, prepares proposals for consideration by the Council of Ministers. The Committee is assisted by working groups, each of which has a specific mandate.

The issues currently being studied – on which policy decisions by Ministers will be required – include the development and implementation of a pan-European transport policy; the integration of Central and Eastern European Countries into the European transport market; specific issues relating to transport by rail, road and waterway; combined transport; transport and the environment; sustainable urban travel; the social costs of transport; trends in international transport and infrastructure needs; transport for people with mobility handicaps; road safety; traffic management; road traffic information and new communications technologies.

Statistical analyses of trends in traffic and investment are published regularly by the ECMT and provide a clear indication of the situation, on a trimestrial or annual basis, in the transport sector in different European countries.

As part of its research activities, the ECMT holds regular Symposia, Seminars and Round Tables on transport economics issues. Their conclusions serve as a basis for formulating proposals for policy decisions to be submitted to Ministers.

The ECMT's Documentation Service has extensive information available concerning the transport sector. This information is accessible on the ECMT Internet site.

For administrative purposes the ECMT's Secretariat is attached to the Organisation for Economic Co-operation and Development (OECD).

Publié en français sous le titre :
La délinquance et la fraude dans les transports routiers de marchandises

Further information about the ECMT *is available on Internet at the following address:*
www.oecd.org/cem

FOREWORD

Transport related crime is a serious and growing problem. The ECMT Council of Ministers' meetings in Berlin in 1997 and in Warsaw in 1999 discussed the problem and agreed specific Recommendations on combating it. These are included in this publication.

To follow up these recommendations a multidisciplinary Steering Group on Combating Crime in Transport, consisting of representatives from different backgrounds (Ministries of Transport, Economics and Interior, International organisations - EU, UN/ECE, EUROPOL, INTERPOL, police, customs, insurance, industry, transport operators etc.) was set up in autumn 1999 to make proposals on how ECMT can contribute to combating transport crime, to suggest priorities for ECMT work and to guide particular projects that are to be undertaken.

Two immediate priorities were identified. First to obtain and make available comparable information on transport crime and second to examine how anti-theft devices and communication systems can be introduced.

This publication summarises the work done so far on these topics and contains the conclusions adopted by ECMT Ministers in May 2001.

The events of September 11th 2001 have added a new dimension to this subject and undoubtedly, improving security in transport will need to be a feature of ECMT activities in the future.

ECMT gratefully acknowledges the work of the Steering Group on Combating Crime in Transport in preparing this report. In particular thanks are due to Ms. Elaine Hardy for her work in Part I on the Theft of Goods and Goods Vehicles) and to Mr. Frank Heinrich-Jones (Preventive Anti-Theft Devices for Road Freight Vehicles), Mr. Jean-Pierre Paschal (After-Theft Systems) and Mr. Dietbert Kollbach (Short Range Vehicle Identification System) for their contributions to Part II of the publication.

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Part I.

THEFT OF GOODS AND GOODS VEHICLES

1. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

The objective was to examine available information on goods vehicle crime in Europe and if possible to suggest how data and methodologies could be improved.

Initial contacts were made through the Transport Ministries which led to queries being directed to other Ministries, including the Interior. The bulk of the available data is kept by police authorities or statistics departments within the Ministries of Interior. This report contains data from 23 countries.

The report describes the methodologies used in Europe and demonstrates that there is no simple way to provide a clear picture of the extent and nature of the theft of goods and commercial vehicles in Europe. This is because:

- Historical and legal practices and codes vary between countries and thus the definitions of theft and the information collected on the precise occurrence/timing of the crime differ and are not comparable.
- Each country has a unique system for gathering information about vehicle theft and goods theft which does not facilitate comparable studies.
- The collation of information is not always undertaken at a national level.
- Most of the systems set up by national authorities are intended for operational purposes and not for analytical purposes.
- The categorisation of vehicles is inconsistent and does not always distinguish between Light and Heavy Goods Vehicles.
- Data on the theft of goods is not normally collected from the authorities collecting data on vehicle theft.

Despite these caveats, the data show that theft of goods and vehicles is a significant problem costing many millions of Euro.

In some countries, up to 1% of the goods vehicles in circulation are stolen annually - that is many tens of thousands of commercial vehicles. The information on trends shows that the problem is becoming worse in many countries; thefts of vehicles between 1995 and 1999 were analysed for 11 countries and while two countries showed decreases, the other countries showed increases of up to 50%. The average overall increase for these countries was 21% over the five year period. The data also indicate very different levels of recovery of stolen vehicles.

The goods stolen are especially electrical and electronic goods, clothes and footwear, and then household goods, food, cigarettes and alcohol. However, there is no known data relating to the value of goods stolen from vehicles at a European level. Insurance companies and associations have been, so far, unable to provide comprehensive information.

It is clear that the private sector suffers considerable losses from the theft of goods in transport. For example, an initiative by an association of 20 high tech companies to measure the value of goods stolen showed between September 1999 and December 2000, 150 incidences of theft of which 25% were hi-jacks. The type of products stolen were all of high value: mainly computer equipment and related peripherals, or mobile telephones. The total value of known losses was 32 million Euro.

There are two main issues facing the authorities collecting data on vehicle theft: -The general problem of the lack of comparability of crime statistics and -The specific one of the categorisation of vehicles and risk factors. The former is being reviewed by statisticians under the auspices of the Council of Europe. The latter is being examined by Europol in an endeavour to establish a protocol for the member states. This protocol is based partly on the results of this study and includes the information mentioned below.

Co-ordination on this subject between ministries of Transport and the Interior is poorly developed.

There are other sources of information on vehicle and goods crime that this work was not able fully to exploit. In particular, insurance companies appear to have data but it is not aggregated or widely available.

In most countries vehicle and goods theft is not seen as a priority and few resources are given to collecting and analysing data on it. The same is true at international level.

Recommendations

1. The collection and analysis of information is essential to the fight against crime in transport. Regular compilation and the gradual improvement of data are needed to understand better the extent and nature of the problem and to develop strategies to deal with it. Resources need to be given to these tasks.

2. It is necessary to improve gradually the comparability of available data. For this, two layers of information are required: the first concerns the categorisation and identification of vehicles and the second the categories of goods stolen, the location and mode of theft. The definitions and categorisation set out in Section 6.2 should be the basis for a standardised data collection format for the recording of vehicle theft and the theft of goods.

3. In each country, relevant data are available from different sources (police, interior ministries, transport authorities, insurance companies) and closer contacts and improved co-ordination between these is needed at national level.

4. At international level, international organisations such as Interpol and Europol are best placed to work on improving data on vehicle theft as they are the points of reference for the national police authorities. In the medium term, they should examine how to take on this task.

5. In the short term, ECMT could continue to work on this subject in co-operation with other authorities. The data here should be updated in two years.

6. Private companies, shippers, operators, insurance companies all have a keen interest and can also contribute to providing a better understanding of the nature of crime and on finding ways to combat it.

2. FRAMEWORK

2.1 Scope

The scope of the study is to determine the level of statistics on Commercial vehicle theft and the theft of goods from or with these vehicles, available in Europe. Also to identify the organisations and study groups which can provide information on this subject.

2.2 Objective

The objective of the study is to:

- analyse all the available data on Commercial Vehicles and Goods theft in Europe;
- clarify the status of information on the subject;
- enable the European Conference of Ministers of Transport Steering Group to make recommendations to the Council of Ministers on how to improve information databases relating to commercial vehicle crime.

2.3 Background

Council of Ministers Meeting, Berlin - April 1997

A resolution on Crime in International Transport was adopted by the Ministers during this meeting. They expressed their concern about the sharp increase in criminal acts affecting international transport especially fraud in the transit system as well as the theft of vehicles and goods and attacks on drivers.

The Ministers asked to be kept regularly informed of progress in the implementation of the recommendations set out. In relation to information and statistics on the extent of crime the Ministers recommended that competent bodies "*examine available national and international data sources with a view to having more reliable information on the extent of the problem*".

Seminar on Crime in Transport, Paris – January 1999

From the discussions at the January 1999 seminar, some major points emerged that had received little consideration to date.

One recommendation related to both of the areas covered in the April 1997 Resolution. This was the recommendation to improve information on crime, since existing information had proved insufficient to gauge the scale of the problem. The information on theft and assaults on drivers provided in the background report, CEMT/CM(97)7, was incomplete, uncoordinated and insufficient to confirm the very widely held opinion among transport professionals and the authorities responsible for combating crime that the problem was on the increase.

In this regard, the situation had not really improved and it was still not possible to assess the scale of criminal activities. However, it was pointed out that efforts have been made and several initiatives have been taken.

The January 1999 seminar pointed out the benefits of developing information systems. It stressed that there was a difference between "operating" databases, which were aimed at facilitating investigations, and "information" databases, which were designed to gauge the extent of theft, identify its characteristics. Through detailed analyses of those characteristics (if necessary on limited samples for a more in-depth analysis), to improve our insight into factors in crime and its mechanisms. It was important to standardise concepts and definitions for both types of databases, but particularly for the latter.

Council of Ministers Meeting, Warsaw – May 1999

During the Council of Ministers Meeting in Warsaw, the Ministers were presented with a report which analysed the current situation with regard to the theft of goods or vehicles and attacks on drivers, as well as fraud in transit regimes. This report noted that, despite some progress, many of the issues addressed by the 1997 Resolution were still of concern and that more should be done to implement the provisions of the Resolution. The report also proposed that a number of new recommendations be added to the Resolution. These regarded issues that, in the light of developments over the past two years (new forms of fraud and crime, extension of such crime to all modes of transport, growth in illegal immigration), appear to be of particular importance.

A new Resolution on crime in transport designed to meet these new objectives was approved by the Council of Ministers. With regard to the availability of data sources and information on theft of goods and vehicles, the new Resolution recommended that:

- The EUCARIS system be enlarged through the accession of new countries.
- International databanks on thefts of goods and vehicles be expanded.

European Conference of Ministers of Transport (ECMT) Steering Group – November 1999

The ECMT Secretariat wrote to participants in the 1999 Seminar on crime in transport and to other bodies and people working on the subject for their views on the implementation of the Resolution and to indicate further concrete steps for this. Based on replies to this letter and following a proposal to the Committee of Deputies, it was decided to set up a Steering Group consisting of representatives from different backgrounds (police, transport Ministries, customs, insurance, industry, etc.) to guide further actions. The General Terms of Reference for the Steering Group were to:

- Make proposals on how ECMT can contribute effectively to implementing the two Resolutions on Crime in Transport.
- Suggest priorities for ECMT work in line with the decisions of Ministers.
- Guide particular projects that are to be undertaken.

A project to determine the availability of data sources and information on theft of goods and vehicles was decided upon by the Steering Group and Ms Elaine Hardy was asked to carry out this study on behalf of ECMT.

2.4 Methodology

The methodology for the study of Commercial Vehicle theft and the theft of goods with or from these vehicles was as follows:

- Draft letters requesting data, data sources and contacts. (These letters were sent to Transport Authorities in ECMT Member Countries and other Organisations who might have information and/or contacts).
- Request replies by the end of March 2000. Proceed with an analysis and follow-up of these replies.
- Collate information that resulted from the response to the follow-up in order to write an outline report for the meeting of the ECMT Group on Crime in Transport on 11th May 2000.
- Write an interim report by end March.
- Write a final report to be presented at the Steering Group Meeting on 11th May.

Activities

Contacts were made at different levels between January and March 2000: through the Ministries of Transport, Police, Ministries of Justice, Ministries of the Interior and through other competent authorities. The overall collaboration and response of these organisations enabled the task force to carry the study on the status of Commercial Vehicles and Goods theft in Europe, as recorded and reported by these respective authorities.

Stage 1: The first task was to send out a brief questionnaire to organisations throughout Western and Eastern Europe to find contacts and information (see Annex 1). The organisations contacted were Ministries of Transport, Justice, the Interior, Police, Statistics Departments etc. The response to the first questionnaire was encouraging because it demonstrated that there was information available, although the extent of the information was not clear.

Stage 2: The task of sending out a second questionnaire was divided amongst the same components of the Steering Group who sent out the first questionnaire (see Annex 2). This questionnaire was targeted to the organisations sourced or to the contacts obtained through these sources in order to complete the Terms of Reference as indicated by the ECMT Secretariat. The number of respondents and their answers are detailed in the Summary of the Interim Report (see Section 2.5).

The second questionnaire was far more detailed than the first and was divided in two parts. Part one related to the definitions of data records and requested information about methodology of recording theft, the age of the vehicle stolen, definitions of theft, and contacts for further data and records. The Second part of the questionnaire related to the definitions of data records on the Theft and recovery as well as the value of Goods Vehicles, Trailers and Goods over a 10 year period. Information was also requested about the location, mode and methodology of theft. Every effort was made by the members of the task force to ensure that the authorities contacted had received the questionnaire and were at least attempting to answer it.

Overall, the ECMT Secretariat sent out the 2nd questionnaire to 16 contacts in 10 countries. Europol, sent out the questionnaire to police authorities in all the EU member states and E. Hardy sent out requests to 9 other contacts in various countries received from the Research Statistics Department at the Home Office in England. By the third week of April a reminder was sent to all Central and

Eastern European as well as Belgium, Estonia, Italy, Denmark, Spain and Sweden by Ms Hardy, while Europol ensured that Austria, Greece, Portugal and Finland had received the questionnaire.

2.5 Summary of the Interim Report

During the month of January 2000, a brief questionnaire was sent to organisations throughout Western and Eastern Europe to find contacts and information relating to Theft of Goods Vehicles and Goods.

- 33 organisations representing 25 countries replied to this questionnaire.
- 24 organisations representing 21 countries replied that there was data and information available in their country.
- 9 of the organisations representing 7 countries responded negatively.
- 4 organisations representing 4 countries did not respond at all to the questionnaire.

The data was requested from 5 categories of organisations and the response from these organisations was as follows:

Transport	15
Justice	8
Statistics	8
Police	3
Customs	1

There were 11 questions pertinent to theft of goods and vehicles, which represented 4 categories of questions. There is an average of 67% availability of data from all the responding organisations, (see response) with a maximum of 81% for incidences and historical data to a low of 44% relating to the value and categories of the goods and vehicles stolen, shown as follows:

Table 1. **Data on the theft of goods and vehicles**

		Availability of data
1.	Incidences of theft and historical data	81 %
2.	Value and Categories of goods and vehicles	44 %
3.	Location of theft and recovery	80 %
4.	Mode and methodology	64 %

No action was taken to follow up the contacts where there was no response due to the lack of time and because alternative sources were identified.

2.6 Representatives and Organisations involved

Mr Jiri Matejovic of the ECMT Secretariat, Messrs Hans Fallenegger and Dirk vande Ryse of Europol and Elaine Hardy were directly involved in finding sources and sending requests to organisations throughout Europe for information. Of the 33 organisations contacted the following organisations responded to indicate whether or not they were able to provide data:

Table 2. **Organisations involved**

Country	Organisation	Yes	No
Austria	Statistics Austria		✓
Belarus	Ministry of Transport	✓	
Belgium	Ministry of Communications (Transport)		✓
Belgium	Dept. of Statistics	✓	
Czech Republic	Ministry of Transport & Communications	✓	
Denmark	Ministry of Transport	✓	
Denmark	Denmark Statistics		✓
Engl. & Wales	Home Office: Research, Development & Statistics		✓
Engl. & Wales	DETR (Department of Transport)		✓
Estonia	Ministry of Transport	✓	
Finland	Statistics Finland		✓
Finland	Customs		✓
France	IHESI	✓	
France	Ministry of Interior	✓	
Germany	Bundeskriminalamt	✓	
Hungary	Ministry of Transport	✓	
Hungary	Public Prosecutors Office	✓	
Netherlands	Dept. of Transport	✓	
Netherlands	National Police Agency	✓	
Northern Ireland	RUC Statistics Unit	✓	
Norway	Statistics Unit	✓	
Poland	Ministry of Transport	✓	
Portugal	Ministry of Justice		✓
Romania	Ministry of Transport	✓	
Russia	Fed. Assembly of the Russian Federation	✓	
Scottish Exec.	Justice Department	✓	
Slovakia	Ministry of Transport	✓	
Slovenia	Ministry of Transport	✓	
Sweden	Interpol NCID	✓	
Sweden	Nat. Council for Crime Prevention	✓	
Switzerland	Fed. Office of Transport		✓
Turkey	Ministry of Transport	✓	
Ukraine	Ministry of Transport	✓	

2.7 Response

The aim of the questionnaire was also to determine whether specific information relating to the theft of Commercial Vehicles and goods was available to establish whether there was an opportunity to continue the research. Eleven sub-questions requesting relative information on incidences and historical data were submitted to the organisations. Their overall response was as follows:

Table 3. **Incidences of theft**

		Yes	**No**	**None**
1.	Incidences of goods vehicle theft	21	4	
2.	Incidences of trailer theft	18	7	
3.	Incidences of theft of goods from/with vehicles	19	6	
4.	Historical data of the above (> 5 years)	20	5	
5.	The value of the vehicles stolen	10	14	1
6.	The value of the goods stolen	11	12	2
7.	Category of goods	12	12	1
8.	Location of theft	22	3	
9.	Location of recovery of stolen vehicle/trailer	17	8	
10.	Mode of theft	13	11	1
11.	Methodology of recording vehicle/trailer theft	17	7	1
	Total	**180**	**89**	**6**

The response to these questions by country was as follows:

Table 4. **Incidences of theft by country**

	Qx 1		Qx 2		Qx 3		Qx 4		Qx 5		Qx 6		Qx 7		Qx 8		Qx 9		Qx 10		Qx 11		Total	
	Yes	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
Belarus	✓		✓			✓	✓			✓		✓		✓	✓		✓		✓		✓		7	4
Belgium	✓		✓		✓			✓		✓		✓		✓	✓		✓			✓		✓	5	6
Czech Republic	✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		11	0
Denmark	✓		✓		✓		✓		✓		✓		✓		✓		✓			✓	✓		10	1
England & Wales		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	0	11
Estonia	✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		11	0
Finland		✓		✓		✓		✓		✓		✓		✓		✓		✓				✓	0	10
France (IHESI)	✓		✓		✓		✓			✓					✓		✓		✓		✓		8	1
France Min. Int	✓			✓		✓	✓			✓		✓		✓	✓			✓		✓	✓		4	7
Germany	✓		✓		✓		✓			✓	✓		✓		✓		✓		✓				9	1
Hungary (Transport)	✓			✓		✓		✓	✓			✓		✓	✓			✓	✓			✓	4	7
Hungary (Crim.Just)	✓		✓			✓	✓		✓		✓			✓	✓			✓	✓		✓		8	3
Netherlands	✓		✓		✓		✓			✓		✓	✓		✓		✓		✓		✓		9	2
Northern Ireland	✓			✓	✓		✓						✓		✓			✓		✓	✓		6	3
Norway	✓		✓		✓		✓			✓		✓		✓	✓		✓			✓	✓		7	4
Poland	✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		11	0
Romania	✓		✓		✓		✓			✓		✓	✓		✓		✓			✓	✓		8	3
Russia	✓		✓		✓		✓			✓	✓		✓		✓		✓		✓		✓		10	1
Slovakia	✓		✓		✓		✓		✓		✓			✓	✓		✓		✓			✓	9	2
Slovenia	✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		11	0
Scotland		✓		✓	✓		✓			✓		✓		✓		✓		✓		✓		✓	2	9
Sweden		✓		✓	✓		✓			✓		✓		✓	✓			✓		✓	✓		4	7
Sweden	✓		✓		✓		✓		✓		✓		✓		✓		✓			✓	✓		10	1
Turkey	✓		✓		✓			✓		✓		✓		✓	✓		✓			✓		✓	5	6
Ukraine	✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		11	0
Total	**21**	**4**	**18**	**7**	**19**	**6**	**20**	**5**	**10**	**14**	**11**	**12**	**12**	**12**	**22**	**3**	**17**	**8**	**13**	**11**	**17**	**7**	**180**	**89**

Note: The responding countries are amalgamated unless there is a different response from the organisations therein. In that case, the responses are indicated separately.

3. A COMPARATIVE ANALYSIS OF METHODOLOGIES IN EUROPE

This section and Sections 4 and 5 evaluate the information and data collected from the replies to the second questionnaire.

3.1 Definitions

This section is dedicated to the definition of data records. While every effort has been made to ensure that the responses in this report are a reflection of the recording of Commercial Vehicle Theft and the Theft of Goods in Europe, it must be noted that each country has a method of recording crime statistics which is unique and, because of this diversity of methodology, the raw data are not comparable. This questionnaire has endeavoured to examine these differences by identifying the areas where definitions may blur. Thus the request for categories of vehicle weights was included as well as the request for the definition of theft and recording procedures.

3.2 Methods of recording

The purpose of documenting methods of recording is to understand how each country does this. The benefit is to enable researchers to have a clear picture of the background of criminal statistics when analysing the data relating to numbers of thefts and recoveries presented later in this report.

Timing of recording incidence

It is important when analysing crime data to consider the timing, because this can and does dramatically change the outcome of the count. In the European Sourcebook of Crime and Criminal Justice Statistics prepared by The European Committee on Crime Problems and published in July 1999, specific reference is made to the methodology of counting rules.

> *"The point in time in which the data are recorded varies between countries…. It is difficult to interpret these findings but it seems safe to assume that the answers "immediately" and "subsequently" imply that the legal labelling of the offence is the task of the police (input statistics) while the answer "after investigation" seems to indicate that the labelling is done by the prosecuting authorities (output statistics) once the police enquiry has been completed* [1]*…. "*

The main purpose of the question was to determine when the offence is recorded: either when it is reported to the police (input statistics) or at a subsequent point in time e.g. when the police have finalised their investigation or later (output statistics). Input statistics tend to be more inaccurate and might over-estimate the amount of reported crime, since an investigation has not yet been conducted.[2]

1. European Sourcebook on crime and criminal justice statistics (Council of Europe), 1.A.2 Comments, 1.A.2.1. Methodology, (21) July 1999, page 32.
2. European Sourcebook on crime and criminal justice statistics (Council of Europe), Counting Rules June, 1995, page 4.

Where the countries have not answered directly (by returning the questionnaire), the information has been extracted from the European Sourcebook of Crime and Criminal Justice Statistics: Austria, Italy, Portugal, Russia, Slovenia, Spain, Switzerland, Turkey.

Table 5. **Timing of recording incidence**

	At the point of reporting the offence	**After investigation or later**
Austria		✓
Belgium	✓	
Czech Republic	✓	
Denmark	✓	
England & Wales	✓	
Estonia	✓	
Finland	✓	
France		✓
Germany		✓
Greece	✓	
Hungary	✓	
Ireland	✓	
Italy		✓
Luxembourg	✓	
Netherlands	✓	
Norway	✓	
Northern Ireland	✓	
Poland	✓	
Portugal		✓
Russia	✓	
Slovenia		✓
Spain	✓	
Sweden	✓	
Switzerland		✓
Turkey		✓

Make or model of vehicle/trailer

Determining the make or model of the vehicle/trailer stolen can help to identify those vehicles which are more prone to theft than others. This may be due to a weakness in the security system of the vehicle or alternatively due to the preference of the thief. For example a particular type or model of

vehicle may have more value for the resale of the vehicle as a whole or the spare parts. The question asked was whether the respondents recorded the make or model of the vehicle or trailer stolen.

Table 6. **Recording of make/model of stolen vehicles/trailer**

	Yes	No
Belgium	✓	
Czech Republic	✓	
Denmark	✓	
England & Wales	✓	
Estonia	✓	
Finland	✓	
France	✓	
Germany	✓	
Greece	✓	
Hungary	✓	
Ireland	✓	
Luxembourg	✓	
Netherlands	✓	
Norway		✓
Northern Ireland		✓
Poland	✓	
Russia		✓
Sweden	✓	

Age of vehicle/trailer

The age of the vehicle or trailer can be helpful in identifying the percentages of vehicles stolen. Older vehicles may be more valuable for their spare parts or may be easier to steal because of the lack of security systems, while newer vehicles may have more value to the thief if sold on as a whole. Knowing the age of the vehicle can help to indicate the probability of theft over the life span of that vehicle.

Table 7. **Recording of age of vehicle**

	Yes	No
Belgium		✓
Czech Republic	✓	
Denmark	✓	
England & Wales	✓	
Estonia	✓	
Finland		✓
France		✓
Germany		✓
Greece	✓	
Hungary		✓
Ireland	✓	
Luxembourg		✓
Netherlands		✓
Norway		✓
Northern Ireland		✓
Poland		✓
Russia		✓
Sweden	✓	

Definition of theft

According to the standard definition in the Council of Europe's Crime & Criminal Justice Statistics sourcebook, "theft" means "depriving a person or organisation of property without force with the intent to keep it". In some cases this may or may not exclude embezzlement (appropriate fraudulently). Thus there is no clear interpretation in the sourcebook as to which statistics are included or indeed excluded. For example in most continental countries, theft by employees is considered embezzlement, so may or may not be included.

Table 8. **Definition of theft**

Belgium	The illicit removal of property belonging to another person.
Czech Rep.	Code of Criminal Procedure No: 140/61 Coll., §247 – theft.
Denmark	Vehicle theft is defined as “theft for use” and is specific to vehicle theft.
England & Wales	To permanently deprive the owner of that item/vehicle.
Estonia	Criminal Code: 139: thefts; 140 public thefts; 141: Robbery; 197: Theft for temporary use.
Finland	Appropriation of moveable property from the possession of another person shall be sentenced for theft to a fine or imprisonment for at most one year and six months.
France	Penal code – No further explanation offered.
Germany	Penal Code – No further explanation offered.
Greece	The removal (totally or partially) of a movable property from the possession of another person with a view of illegally appropriating it. Art.372 of the Hellenic Penal Code.
Hungary	Verified Appropriation is stealing; Somebody taking something away from another person because he/she wants to appropriate it unlawfully.
Ireland	Any person who steals without consent of the owner, fraudulently & without a claim of right made in good faith, takes & carried away anything capable of being with intent at the time of such taking, permanently to deprive the owner thereof.
Luxembourg	Defined by law and statements are distinct in relationship with articles in the criminal code.
Netherlands	Any person who takes any property belonging wholly or partially to any other person with the intention of unlawfully appropriating it shall be guilty of theft.
Norway	Simple and aggravated theft.
Northern Ireland	A person is guilty of theft is he dishonestly appropriates property belonging to another with the intention of permanently depriving the other of it.
Russia	A hidden act of stealing somebody's property - Art.158 of the Criminal Code of Russia.
Sweden	A person with intent of unlawfully appropriating what belongs to another. If this involves loss the person is sentenced for theft with imprisonment for 2 year.

Misappropriation

In some other countries in Europe, theft also includes misappropriation or theft by deception – whether this can also be interpreted as embezzlement is unclear. England and Wales and possibly

Ireland include “conversion”: hire vehicle theft and may include fraud. Also in some countries, this definition may also exclude “taking property not in control of the owner”. So within the boundaries of these interpretations, a proportion of vehicles will be excluded from being recorded in many countries.

Table 9. **Taking into account of misappropriation**

	Yes	No	Other
Belgium	✓		
Czech Republic	✓		
Denmark	✓		
England & Wales	✓		
Estonia			
Finland	✓		
France	✓		
Germany	✓		
Greece	✓		
Hungary	✓		
Ireland			✓
Luxembourg	✓		
Netherlands	✓		
Norway		✓	
Northern Ireland		✓	
Poland	✓		
Russia			✓
Sweden	✓		

Temporary use

The theft of a vehicle leaves the recording of this offence open to interpretation if the vehicle is recovered within a specific point in time. Each country appears to have a specific definition of “temporary use” and in some countries this means that by definition, “temporary use” is excluded from the count of recording that offence. Also, the offence of “joyriding” with commercial vehicles is less likely than with cars. This definition which seems to infer “temporary use” may or may not be included in some countries. According to the Council of Europe's sourcebook, Hungary, Italy and The Netherlands exclude both joyriding and temporary use.

Table 10. **Taking into account of temporary use**

	Yes	No
Belgium		✓
Czech Republic	✓	
Denmark	✓	
England & Wales	✓	
Estonia		
Finland	✓	
France	✓	
Germany		✓
Greece	✓	
Hungary		✓
Ireland	✓	
Italy		✓
Luxembourg		✓
Netherlands	✓	
Norway	✓	
Northern Ireland	✓	
Poland	✓	
Russia		✓
Sweden		✓
Switzerland	✓	

Note: Response for Switzerland, Italy and Hungary from Council of Europe's Crime & Criminal Justice Statistics sourcebook 1999.

Definition of temporary use

For example, in England & Wales, there is the offence of "unauthorised taking of a motor vehicle". In 1960, the length of recovery which determined the offence, became 30 days. However, if a vehicle is recovered within this time and it appears that the offender has "assumed the right of the owner" then this would be recorded as theft. This is also the case for Ireland, thus for both these countries, "temporary use" as such is subjective. In Finland, temporary use is defined as unauthorised use, usually one week but a time limit is not defined in the Penal Code. In Ireland, the term "unauthorised taking" is used for theft of vehicles for a period of two months. After two months it is recorded as a larceny.

Table 11. **Definition of temporary use**

	< 24 hours	< 48 hours	< 1 week	Other
Belgium				No definition
Czech Republic				Penal Code
Denmark				"Theft for use"
England & Wales				30 days
Estonia				No limit
Finland			✓	
France				✓
Germany				✓
Greece				A very short period of time
Hungary				No definition
Ireland				2 months
Luxembourg				No definition
Netherlands				No Limit
Norway				✓
Northern Ireland				No definition
Poland				No definition
Russia				No definition
Sweden				No definition

3.3 Location

Of theft stolen vehicle or trailer

The purpose of this question was to determine whether the location of the theft of vehicles or trailers was recorded by the authorities. The reason for this is to enable analysts to identify areas which are more vulnerable than others.

Table 12. **Recording of location of theft**

	Yes	No
Belgium	✓	
Czech Republic	✓	
Denmark	✓	
England & Wales	✓	
Estonia	✓	
Finland		✓
France	✓	
Germany	✓	
Ireland	✓	
Luxembourg	✓	
Netherlands	✓	
Norway	✓	
Northern Ireland	✓	
Poland	✓	
Russia	✓	
Sweden	✓	

Of recovery of stolen vehicle or trailer

The purpose of identifying locations where the vehicle or trailer are recovered is to assess co-operation between authorities, best practices and modus operandi of the offenders.

Table 13. **Recording of location of recovery of stolen vehicles**

	Yes	No
Belgium	✓	
Czech Republic	✓	
Denmark	✓	
England & Wales		✓
Estonia		✓
Finland	✓	
France	✓	
Germany		✓
Ireland	✓	
Luxembourg	✓	
Netherlands	✓	
Norway		✓
Northern Ireland		✓
Poland		✓
Russia	✓	
Sweden	✓	

3.4 Mode of theft

The fundamental difference in studying HGV theft compared to car theft is the 'intent'. There are two specific reasons why commercial vehicles are stolen: For the goods they carry as well as for the vehicle. Five questions relating to people, means of transport, technology used and aggression were asked. The response to these questions was very limited. It is reasonable to assume that there are no aggregate statistics made available by countries to determine the level of national information on these issues. Any organisational or national information will be carried in the following section "Information by Country".

People involved

The purpose of this question is to determine whether one or more than one person was involved in the offence. This indicates that the theft may be either opportunistic or professional (organised).

Estonia and Russia (Insurance Association) answered this question – Russia gave no figures.

Means of transport

When stealing trailers or goods, the criminal does not only use the vehicle carrying the goods or pulling the trailer. Knowledge of how the trailer or goods are removed from the vehicle can help identify patterns and trends and can also indicate whether the theft was planned previously.

Estonia and Russia (Insurance Association) answered this question – Russia gave no figures.

Use of technology

The use of technology by the offender can help to indicate whether professional thieves are involved. As security systems become more complicated, the chance of opportunistic thieves breaking into a vehicle become more remote. Thus by determining the level of professionalism of the thief can assist manufacturers and authorities to improve their security.

The Netherlands and Estonia responded and gave indications of incidences. Russia (Insurance Association) answered this question affirmatively – no figures given.

Violence

Anecdotal evidence suggests that violent theft of vehicles and goods is increasing. The reason may be because security has improved or simply because there is more involvement of organised criminals. Knowledge of this information can help to assess the risk factor for drivers.

The Netherlands England & Wales (Essex Police), Estonia and Russia (Insurance Association) responded and gave indications of incidences.

Hijacking

There seems to be uncertainty as to the exact definition of the word “hijacking”. In these cases it means when the driver is threatened with firearms or menace and is kidnapped with the vehicle. The definition “jacking” in connection with theft of vehicles of whatever category, has taken on a different meaning in some countries. The Belgian authorities for example, have taken to using the definition “car-jacking” to mean “theft with menace” the purpose appears to be related to the need of the offender to take possession of the electronic “key” or “transponder” in order to open and start the vehicle.

The Netherlands England & Wales (Essex Police), Russia (Insurance Association) responded and gave indications of incidences. The High Tech manufacturers association TAPA-EMEA was able to give details which represented 25% of all incidences.

Robbery

The definition of robbery here is theft with menace, that is to say that the offender threatens the victim with or without arms and steals the goods or vehicle in the presence of the victim. However, the Council of Europe's sourcebook points out that the definition of robbery can vary and this is because of the non-existence of certain legal concepts in certain countries.

The Netherlands England & Wales(Essex Police), Estonia and Russia (Insurance Association) responded affirmatively and gave indications of incidences.

3.5 Conclusions

The purpose of gathering information about definitions and methods of reporting and recording vehicle theft, was to understand whether there were variations of a greater or smaller magnitude. The reason for this was to determine whether these methods and definitions could distort the final picture of the statistics collected and analysed in the next section.

Timing of recording incidence

Twenty five countries were analysed for this question.

Table 14. **Recording of incidence**

At the point of reporting of the offence	After investigation or later
17	8

Make or model of vehicle/trailer

Eighteen countries were analysed for this question.

Table 15. **Recording of make or model of the stolen vehicle/trailer**

	Yes	No
Number of Countries responding	15	3

Age of vehicle/trailer

Eighteen countries were analysed for this question.

Table 16. **Recording of age of the vehicle/trailer stolen**

	Yes	No
Number of Countries responding	7	11

Definition of theft

Eighteen countries were analysed for this question. Seventeen countries answered the survey.

Misappropriation

Eighteen countries were analysed for this question.

Table 17. **Taking into account of misappropriation**

	Yes	No	Other	n.a.
Number of Countries responding	13	2	1	2

Temporary use

Twenty countries were analysed for this question.

Table 18. **Taking into account of temporary use**

	Yes	No
Number of Countries responding	12	7

Definition of temporary use

Eighteen countries were analysed for this question.

Table 19. **Definition of temporary use**

Number of countries responding	< 24 hours	< 48 hours	< 1 week	Other
			2	16

Location

a) Of theft stolen vehicle or trailer

Sixteen countries were analysed for this question.

Table 20. **Recording of location of theft**

	Yes	No
Number of countries responding	15	1

b) Of recovery of stolen vehicle or trailer

Sixteen countries were analysed for this question.

Table 21. **Recording of location of recovery of stolen vehicles**

	Yes	No
Number of countries responding	10	6

The Group that prepared the European Sourcebook of Crime and Criminal Justice Statistics published first in June 1995 and again in July 1999, put a lot of effort into collecting quantitative data in order to see how comparable data on crime and criminal justice statistics in Europe were. They found that there were vast difference in counting which was due to the variation of legal concepts in Europe and the way that each nation collects and presents its statistics. They commented: "the lack of uniform definitions of offences, of common measuring instruments and of common methodology makes comparisons between countries extremely hazardous"[3].

This section has provided sufficient information to concur with the Council Europe's sourcebook and demonstrate that that any consideration of the statistics provided in this report must only be considered in the light of those observations.

The lack of information concerning the mode of theft is obvious. There are some pockets of information given, which has been reported within the section dedicated to the country analysis. Overall there seems to be no consistent aggregated collection and analysis of this type of information.

3. European Sourcebook of Crime and Criminal Justice Statistics, 0.6 Comparability, July 1999, page 11.

Whether there are separate bodies gathering these facts, is not clear. However there does not seem to be co-ordination amongst authorities, this information is either not passed on for gathering at a national level or simply the information is not deemed important enough to record.

4. COUNTRY PROFILES

Introduction

Because of the variation of sources and the quality of information at national level, the data received relating to the numbers of incidences of theft of goods and vehicles did not always fit into the format of the questionnaire. In some cases the categories of goods and vehicles stolen were not total annual figures but isolated Incidences. In other cases, the information on theft of vehicles and goods was just not available in a format that could be analysed for the purpose of creating comparative trends or overviews.

While every attempt has been made to create an overview of commercial vehicle theft in Europe and at national level, it seemed necessary to document the data relating to each country as they were presented, rather than attempt to interpret them. This section illustrates the type of information made available by the respective authorities and organisation answering the questionnaire. In some cases: Spain and partly Belgium and the Netherlands, data received from Europol relating to the theft and recovery of Commercial Vehicles is also reported herein.

The countries included in this section are: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Russia, Spain, Sweden, Turkey and United Kingdom.

4.1 Austria

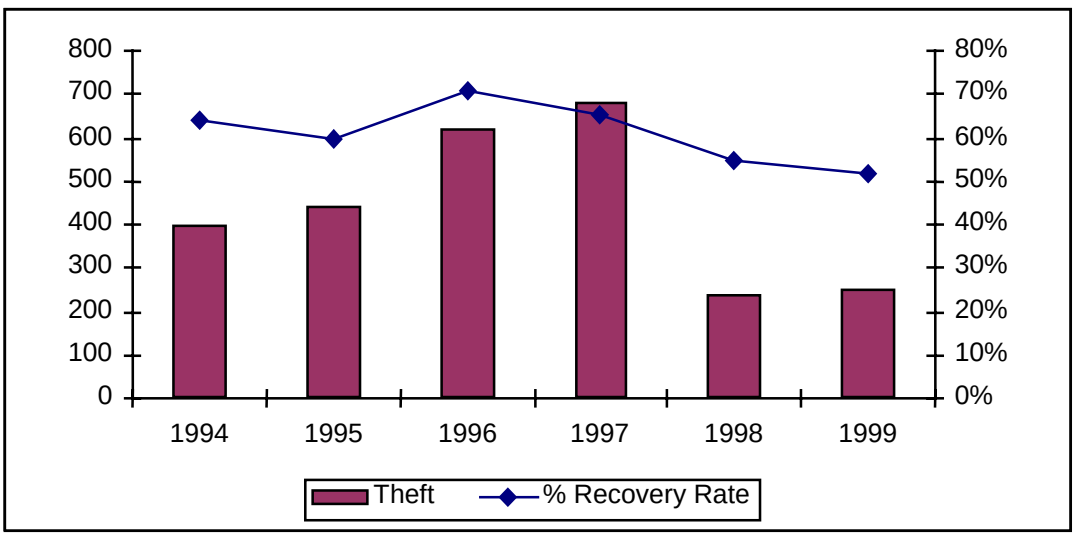
Mag. Rupert Sprinzl
Ministry of Interior
Interpol Vienna
Tel: 00 43 1 31345 85430
Email: Rupert.SPRINZL@bmi.gv.at

These data for Austria were received from the Austrian Police and cover the period 1994 to 1999. There was no indication whether these statistics refer to Commercial Vehicles of all categories or only vehicles over 3.5 tonnes.

Table 22. **Theft and recovery of commercial vehicles in Austria**

	1994	1995	1996	1997	1998	1999
Theft of commercial vehicles	402	444	623	683	242	253
Recovery of commercial vehicles	257	268	440	445	132	131
Recovery rate of commercial vehicles	64 %	60 %	71 %	65 %	54.5 %	51.7 %

Figure 1.



4.2 Belgium

The data for 1999 for Belgium was from:

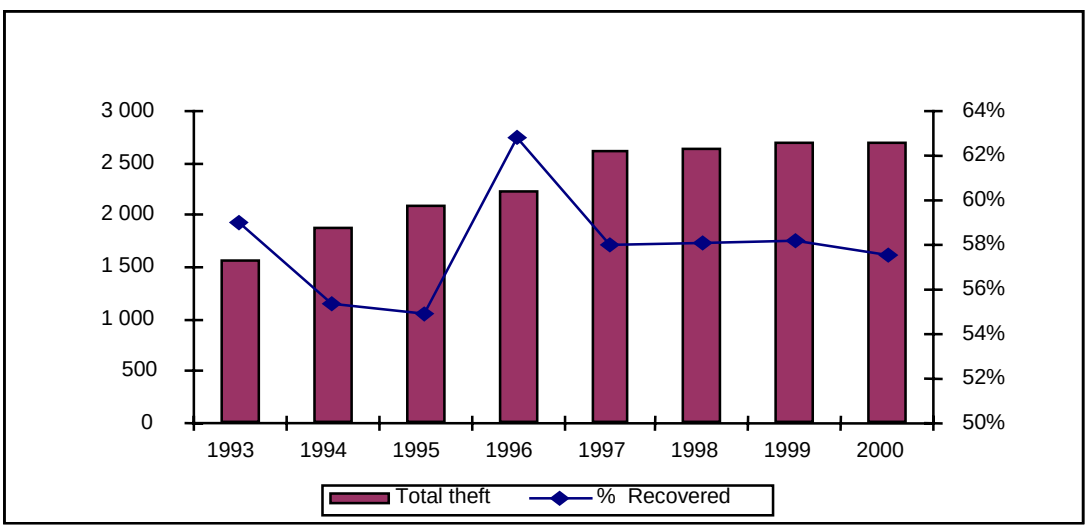
Gendarmerie-Bureau central de recherches
Av. de la Force aérienne 10
1040 Bruxelles
M. Claude Vandepitte and M Kurt Boudry
Tel: 0032 2 6427990
Fax: 0032 2 6427834

The data for 1993-2000 indicate theft and recovery of as well as attempts of theft for both categories of vehicles. There are no statistics available for the theft of trailers or goods.

Table 23. **Theft and recovery of commercial vehicles in Belgium**

	1993	1994	1995	1996	1997	1998	1999	2000
Total theft								
< 3.5 tonnes	1 287	1 509	1 659	1 854	2 086	2 075	2 298	2 268
> 3.5 tonnes	200	250	279	253	361	343	255	282
Tractor	90	138	167	131	191	225	154	164
Total	1 577	1 897	2 105	2 238	2 638	2 643	2 707	2 714
Recovered								
< 3.5 tonnes	783	837	925	1 176	1 211	1 238	1 347	1 296
> 3.5 tonnes	108	132	162	153	194	182	152	154
Tractor	39	81	68	77	125	115	77	113
Total	930	1 050	1 155	1 406	1 530	1 535	1 576	1 563
Attempts								
< 3.5 tonnes	4	14	9	65	135	204	251	238
> 3.5 tonnes	4	5	2	17	22	52	59	49
Tractor	0	0	1	0	6	10	29	25
Total	8	19	12	82	163	266	339	312
Recovered vehicles	59 %	55 %	55 %	63 %	58 %	58 %	58 %	58 %

Figure 2. **Commercial vehicles stolen in Belgium 1993-2000**



4.3 Czech Republic

Ministry of Transport & Communications
PO Box 9
Nabrezi Ludvika Svobody 12/22
Prague 1 CZ-11- 15
Jana Rybenská
Tel: 00420 2 514 31 223
Fax: 00420 2 24 81 22 93
Email: rybenska@mdcr.cz

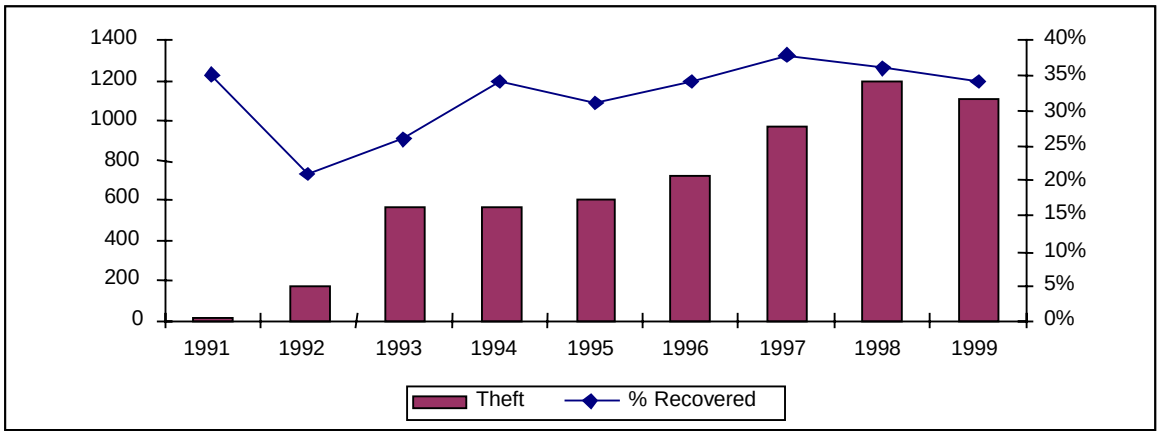
The definition of both tractor and lorry is assumed to mean the cab of a heavy goods vehicle though possibly of a different weight, however no category of vehicle weight was included.

Table 24. **Theft and recovery of commercial vehicles in the Czech Republic**

	1991	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Lorry									
Theft	16	119	359	365	411	507	703	903	813
Recovery	7	31	112	137	121	183	262	302	251
Recovery rate	44 %	26 %	31 %	38 %	29 %	36 %	37 %	33 %	31 %
Trailer behind a lorry									
Theft	4	59	151	126	119	137	132	143	154
Recovery	0	5	21	27	31	23	34	52	40
Recovery rate	0 %	8 %	14 %	21 %	26 %	17 %	26 %	36 %	26 %
Tractor									
Theft		4	33	37	44	43	63	71	62
Recovery		2	9	15	21	19	31	37	41
Recovery rate		50 %	27 %	41 %	48 %	44 %	49 %	52 %	66 %
Trailer behind a tractor									
Theft		1	31	47	45	47	68	78	81
Recovery		0	9	14	21	22	41	38	49
Recovery rate		0 %	29 %	30 %	47 %	47 %	60 %	49 %	61 %
Commercial vehicles									
Total theft	20	183	574	575	619	734	966	1 195	1 110
Recovery	7	38	151	193	194	247	368	429	381
Recovery rate	35 %	21 %	26 %	34 %	31 %	34 %	38 %	36 %	34 %

The following graph shows the theft of commercial vehicles in Czech Republic and the percentage rate of recovery of these vehicles.

Figure 3.



4.4 Denmark

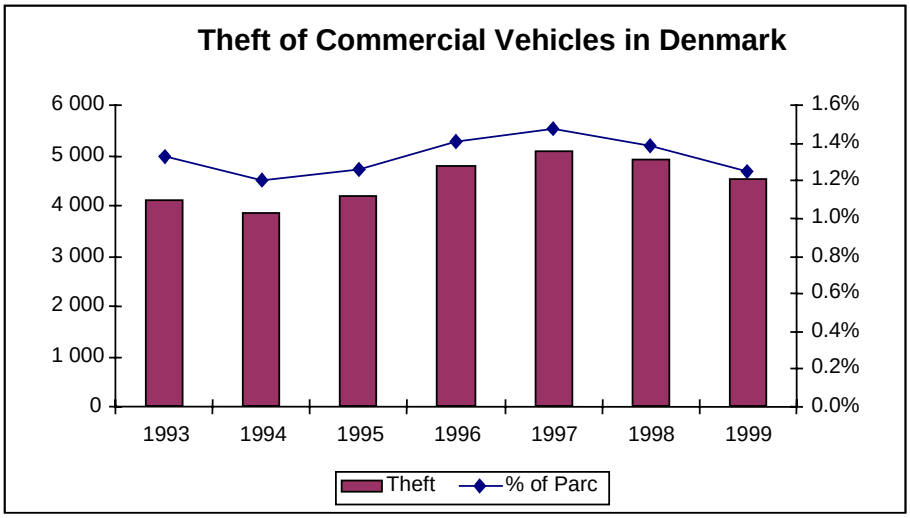
Rigspolitichefens Afd. A Polititorvet 14
DK-1780 Copenhagen
Denmark
International Relations Interpol Copenhagen
Det. Chief Inspector Hans Ellehauge
Tel: 0045 33 14 88 88
Fax: 0045 33 32 2771

Table 25. **Theft of commercial vehicles in Denmark**

	1993	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Theft of commercial vehicles	4 133	3 861	4 224	4 793	5 118	4 946	4 566

No recovery rate of commercial vehicles stolen is available. The following graph shows the total number of commercial vehicles stolen each year and these vehicles as a percentage of commercial vehicles registered in this country.

Figure 4.



Overall, 24 incidences of theft of Commercial Vehicles are reported by the Danish Insurance Association over a three year period from various locations.

Danish Insurance Association House of Danish Insurance
Amaliegade 10
DK-1256 Copenhagen K
Tel. +45 3343 5500
Fax +45 3343 5501
Email: fp@ForsikringensHus.dk

It is not clear whether these incidences took place within Danish territory or elsewhere. The total value for claims relating to these incidences was declared as 56 million Euros.

Table 26. **Value of goods stolen (in Euros)**

	1996 (millions)	**1997 (millions)**	**1998 (millions)**	**1999 (millions)**
Overall	4.5	18.8	20.6	11.9
Average	1.5	1.9	2.6	4
Number of incidences	3	10	8	3

Table 27. **Type of goods stolen (number of incidences)**

	1996	1997	1998	1999
Food	2	2		1
Electrical		1		
Household				
Electronic		2	2	
Alcohol				
Metal				
Clothes		3	1	
Footwear				
Misc.		1	2	
Cigarettes	1	1	3	2

4.5 Estonia

The information for Estonia came via the Estonian Road Hauliers Association in collaboration with the Estonian Police.

Estonian International Road Hauliers Association
Narva mut 91
10127 Tallinn Estonia
Mr Lauri Lusti
00 372 627 3750
00 372 627 3741

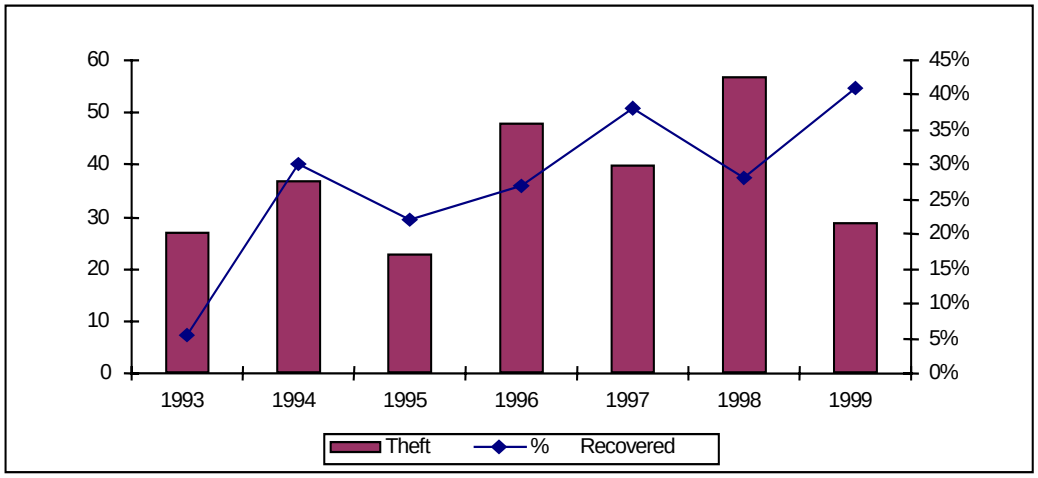
Estonian Police Board
1 Pagari Street
Tallinn Estonia
Tel: 00 372 612 33 17
Fax: 00 372 627 3741

The data provided are quite detailed and give a very good indication of the theft rate and the value of goods and vehicles. What has not been made clear is the categories of commercial vehicles stolen. The information regarding values of goods stolen highlights that over a 7 year period, 17.5 million Euros worth of goods have been stolen from vehicles in this country. Other detailed information which serves to support the concerns of the authorities is the level of thefts from vehicles for such a small country and the number of Incidences of violence and robberies against the drivers.

Table 28. **Theft and recovery of commercial vehicles and goods in Estonia**

	1993	1994	1995	1996	1997	1998	1999
Theft of commercial vehicles	27	37	23	48	40	57	29
Recovery of commercial vehicles	2	11	5	13	15	16	12
Recovery rate	5.4 %	30 %	22 %	27 %	38 %	28 %	41 %
Goods stolen with commercial vehicles	1	1	1	2		7	
Goods stolen from commercial vehicles	3 887	4 354	5 667	5 413	6 012	7 958	9 341
Goods stolen from commercial vehicles and later recovered	404	467	671	783	979	882	1 001
Value of vehicles in Euros (000s)							
Overall	40	63	39	54	35	289	237
Number of incidences	11	12	9	20	14	18	11
Average	4	5	4	3	2	16	22
Value of goods stolen in Euros							
Overall (in millions)	1.4	1.5	2	2	2.8	3	4.8
Average	361	348	367	362	344	355	515
Number of incidences	3 887	4 354	5 667	5 413	6 012	7 958	9 341
Type of goods stolen							
Food	50	46	70	62	61	61	69
Electrical Household	17	21	18	21	31	34	39
Electronic	54	59	62	28	43	57	75
Alcohol	28	19	26	19	28	31	27
Metal	2	3	3	4		2	2
Clothes	220	221	254	240	285	472	560
Footwear	60	41	60	45	42	58	36
Misc.	1 354	1 869	2 106	2 297	2 614	4 013	5 026
Cigarettes	16	24	28	17	30	29	43

Figure 5. **Theft of commercial vehicles in Estonia**



Mode of theft

1. Use of more than one person
2. Use of other means of transport to remove the vehicle
3. Use of technology to enter/remove vehicle (i.e. radar systems, disarming immobilisers etc)
4. Use or violence to steal vehicle/goods
5. Incidences of hi-jacking (Kidnapping of the driver with the vehicle)
6. Incidences of robberies (theft with menace)

Table 29. **Mode of theft**

	1993	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
1.	148	199	201	200	202	252	217
2.							
3.							
4.	17	35	32	16	16	13	23
5.							
6.	24	40	30	21	11	21	10

4.6 Finland

The data for commercial vehicle theft between 1993 and 1997 are from Europol. There is no indication whether these vehicles are intended to be all commercial vehicles or only the category of

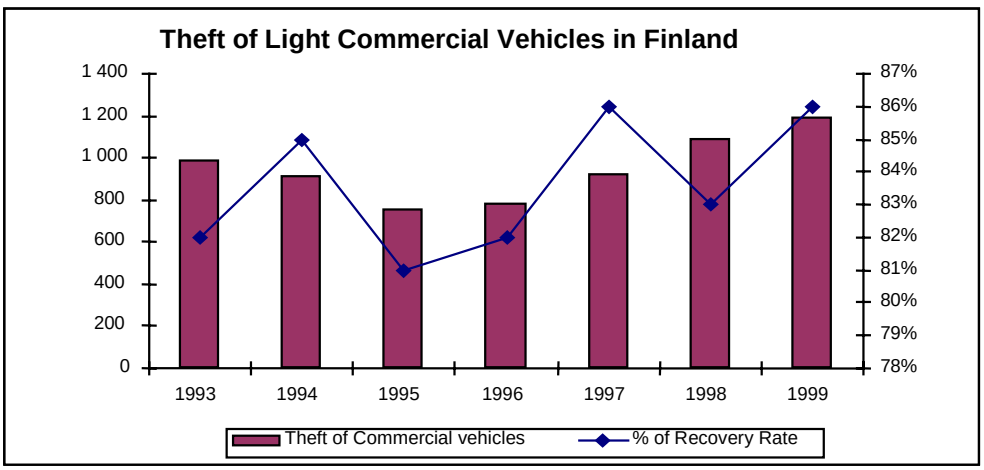
less than 3.5 tonnes. The data for 1997 (>3.5 tonnes) and the data for 1998-99 are from the Finnish National Bureau of Investigation.

National Bureau of Investigation
Criminal Intelligence Division
Box 285, 01301 Vantaa
Jari Nyström Detective Superintendent
Tel: 00358 9 8388 661
Fax: 00 358 9 8388 6284

Table 30. **Theft and recovery of commercial vehicles in Finland**

	1993	1994	1995	1996	1997	1998	1999
Theft of vehicles							
< 3.5 tonnes	989	919	758	789	925	1 092	1 193
> 3.5 tonnes	n.a.	n.a.	n.a.	n.a.	12	86	75
Trailers	n.a.	n.a.	n.a.	n.a.	n.a.	719	703
Total	n.a.	n.a.	n.a.	n.a.	n.a.	1 917	1 971
Recovered vehicles							
< 3.5 tonnes	811	781	613	644	791	910	1 018
> 3.5 tonnes	n.a.	n.a.	n.a.	n.a.	n.a.	72	67
Trailers	n.a.	n.a.	n.a.	n.a.	n.a.	372	342
Total	n.a.	n.a.	n.a.	n.a.	n.a.	1 354	1 427
Recovery rate	82 %	85 %	81 %	82 %	86 %	83 %	86 %

Figure 6.



4.7 France

The information from France received from the CILDI and ARGOS relates to the theft and recovery of commercial vehicles.

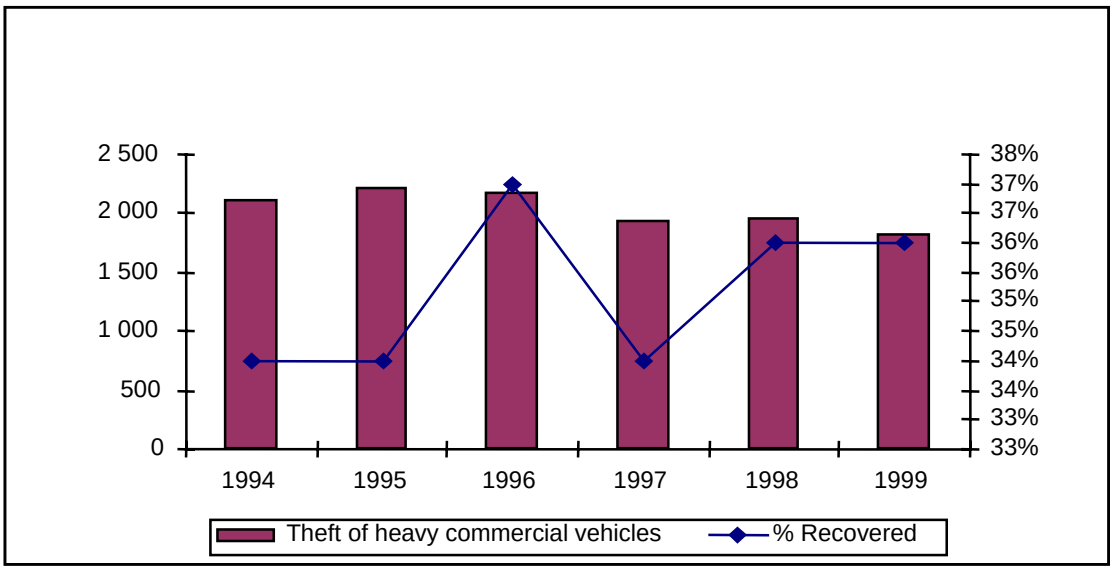
CILDI (Cellule interministérielle de liaison sur la délinquance itinérante)	ARGOS
1 boulevard Théophile Soeur	Avenue du Corps Franc Pommies
93111 ROSNY SOUS BOIS.	64110 Jurançon
Under the direction of Colonel MOREL	Jean-Pierre Cassan
Telephone: 00 33 1 53 65 45 22	Telephone: 00 33 5 5906 9804
Fax: 00 33 1 53 65 45 28	Fax: 00 33 5 59 06 0006

No statistics were made available relating to the theft of goods. The data for the recovery of vehicles is assumed to relate to vehicles of >3.5 tonnes only.

Table 31. **Theft and recovery of commercial vehicles in France**

	1991	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Theft of vehicles									
<3.5 tonnes	n.a.	n.a.	n.a.	32 927	n.a.	32 814	n.a.	n.a.	n.a.
>3.5 tonnes	628	788	1 346	2 131	2 229	2 193	1 957	1 973	1 831
Recovery of vehicles									
>3.5 tonnes	n.a.	n.a.	n.a.	746	734	732	677	702	659
Recovery rate									
>3.5 tonnes	n.a.	n.a.	n.a.	34 %	34 %	37 %	34 %	36 %	36 %

Figure 7. **Theft of commercial vehicles (> 3.5 tonnes) in France**



4.8 Germany

The data for Germany was received from:

Interpol Weisbaden
Bundeskriminalamt OA 32-33-KP-101
D-65173 Weisbaden
Germany
Frau Preisler, LKW-Diebstahl (hgv)
Herr Stillger, Ladungsdiebstahl (cargo)
0049 611 55 15805
0049 611 55 15919

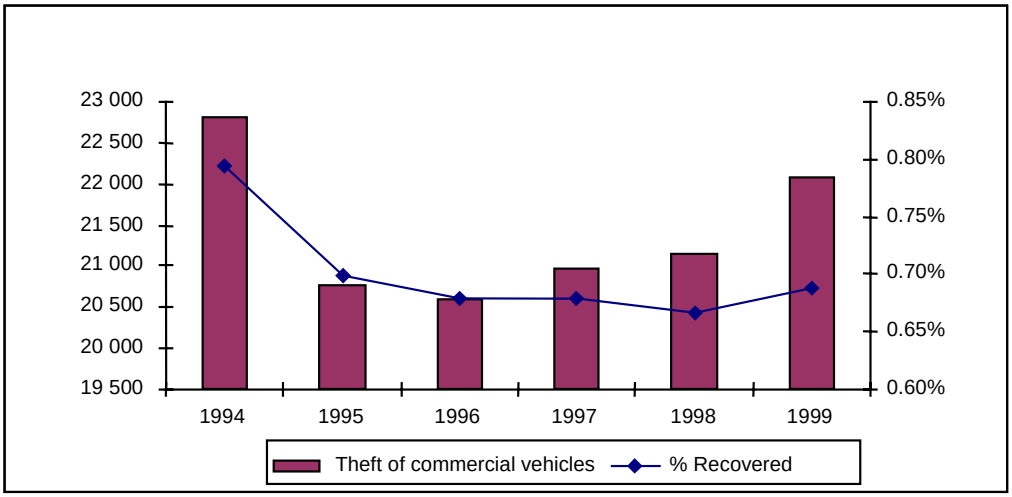
The following are the only statistics available and relate to the theft of all commercial vehicles i.e. there is no breakdown of categories. Because of the elevated numbers, it would appear that Light Commercial Vehicles of less than 3.5 tonnes are included.

Table 32. **Theft of commercial vehicles in Germany**

	1994	**1995**	**1996**	**1997**	**1998**	**1999**
Theft of all commercial vehicles	22 813	20 788	20 613	20 993	21 161	22 085

The German authorities estimate recovery of vehicles at 90% but there are no statistics available. The following graph shows the total number of commercial vehicles stolen each year and these vehicles as a percentage of commercial vehicles registered in this country.

Figure 8. **Theft of commercial vehicles in Germany**



The following information provided appears to be incidences of theft of goods rather than an indication of the overall number for each year in Germany.

Table 33. **Theft of goods in Germany**

	1993	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Goods stolen	44	42	100	54	54	48	21

The following information provided also appears to be incidences of the types of goods stolen for loads equal to 105 in 1998 and 87 in 1999. It is assumed that these are not representative of the overall theft of goods from vehicles in Germany.

Table 34. **Type of goods stolen**

	1998	**1999**
Food	5	5
Electrical	11	6
Household	4	5
Electronic	17	7
Alcohol	6	4
Metal	3	7
Clothes	7	8
Footwear	1	1
Misc.	40	40
Cigarettes	11	4
Total	**105**	**87**

4.9 Greece

The information available for Greece was from:

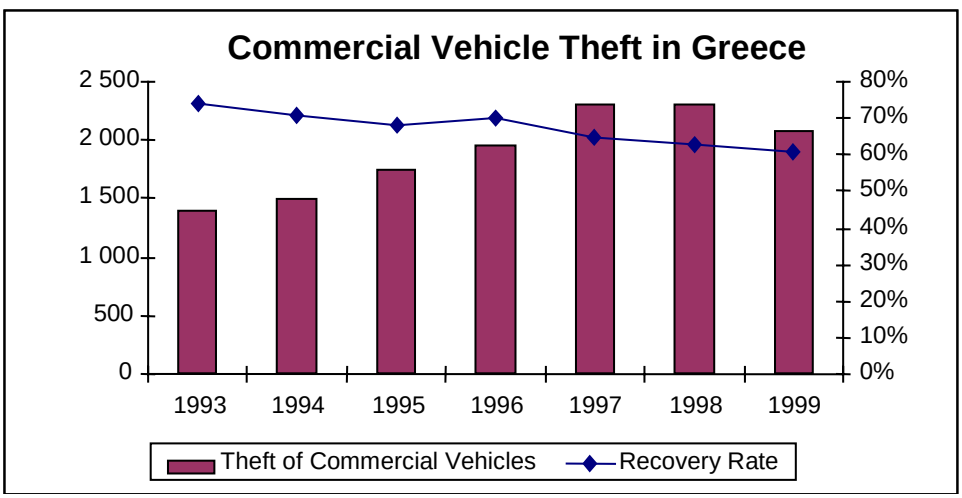
Public Security Division of the Ministry of Public Order
Major KASSAPAKIS Konstantinos
Tel: 003 01 6927793,
Fax: 003 01 6925140

There is no indication of vehicle categories therefore the following figures are assumed to be total commercial vehicle theft and recovery. However, the information regarding the theft of goods gives a breakdown by vehicle weight.

Table 35. **Theft and recovery of commercial vehicles in Greece**

	1993	1994	1995	1996	1997	1998	1999
Theft of all commercial vehicles	1 407	1 514	1 755	1 953	2 323	2 317	2 080
Vehicles recovered	1 036	1 069	1 253	1 390	1 672	1 471	1 275
Recovery rate	74 %	71 %	68 %	70 %	65 %	63 %	61 %
Theft of goods with vehicles							
> 3.5 tonnes	n.a.	n.a.	n.a.	n.a.	46	59	43
< 3.5 tonnes	n.a.	n.a.	n.a.	n.a.	97	79	65
Total	n.a.	n.a.	n.a.	n.a.	143	138	108
Recovery of goods with vehicles							
> 3.5 tonnes and < 3.5 tonnes combined	n.a.	n.a.	n.a.	n.a.	14	13	13

Figure 9.



The table below shows the breakdown of goods stolen either from or with vehicles by value in Euros over a three year period.

Table 36. **Type of goods stolen**

	1997	1998	1999	Total
Food	445 511	114 969	10 712	571 192
Electrical & Household	296 405	79 237	n.a.	375 642
Electronic	447 982	21 943	188 720	658 645
Alcoholic drinks	70 433	33 506	7 131	111 070
Metal	316 654	43 140	n.a.	359 795
Clothes & Footwear	224 505	65 429	n.a.	289 934
Misc.	1 772 536	1 448 369	1 643 786	4 864 691
Cigarettes	7 043	n.a.	186 746	193 790
Total	**3 581 070**	**1 730 796**	**2 037 095**	**7 348 961**

4.10 Hungary

The data for Hungary was received from:

Hungarian National Police HQ
Lt. Col. Pausz Ferenc - Head of Section
Tel: 0036 1 443 56 52
Fax: 0036 1 443 56 52

The Hungarian Police were able to provide details of thefts of commercial vehicles over a nine year period, however there is no indication as to the weight categories of the vehicles stolen.

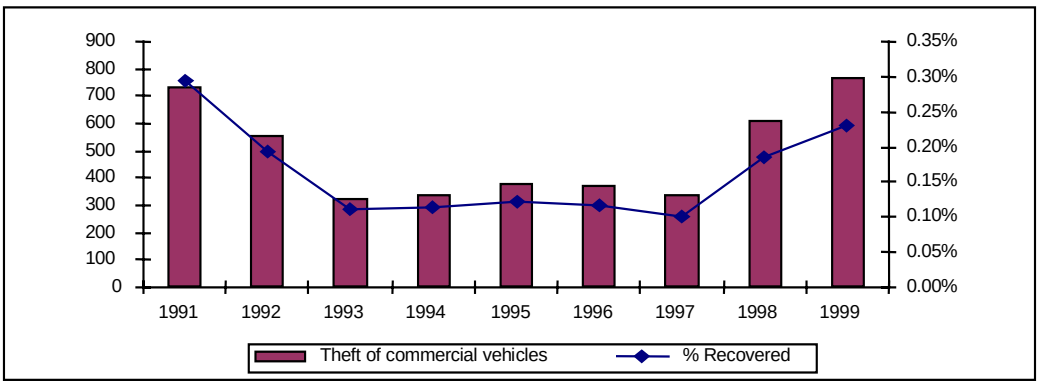
Table 37. **Theft and recovery of commercial vehicles in Hungary**

	1991	1992	1993	1994	1995	1996	1997	1998	1999
Theft of commercial vehicles	739	562	326	339	384	374	338	612	769
Recovery of commercial vehicles	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	162	134	139
Recovery rate	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	48 %	22 %	18 %
Value of goods stolen (in Euros)	3 965	12 503	3 965	6 566	8 816	11 856	8 555	37 003	44 663

There are no statistics available for recovery between 1991 and 1996. The following graph shows the total number of commercial vehicles stolen each year and these vehicles as a percentage of commercial vehicles registered in this country.

The following are aggregates of values for goods stolen, vehicles, trailers though there is no indication as to how many incidences they refer to. It was unclear whether the values are only indications of the goods stolen from the vehicles.

Figure 10. **Theft of commercial vehicles in Hungary**



4.11 Ireland

The information for Ireland was received from:

An Garda Siochana
Crime Administration, Garda Headquarters
Phoenix Park Dublin
Contact: V McGuire for Assistant Commissioner
Tel: 00-353-1-6661951
Fax: 00-353-1-6661958

Figure 11.

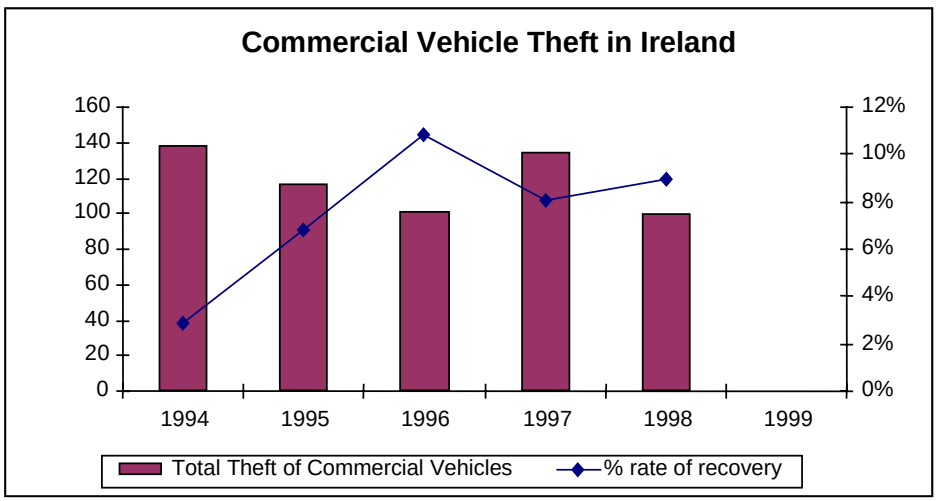


Table 38. **Theft and recovery of commercial vehicles in Ireland**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Theft of vehicles										
<3.5 tonnes	110	121	160	131	145	120	103	84	118	90
>7.5 tonnes	14	12	13	18	23	18	14	18	17	10
Total	124	133	173	149	168	138	117	102	135	100
Recovery of stolen vehicles										
<3.5 tonnes	n.a.	n.a.	n.a.	n.a.	n.a.	3	7	11	11	9
>7.5 tonnes	n.a.	n.a.	n.a.	n.a.	n.a.	1	1			
Total	n.a.	n.a.	n.a.	n.a.	n.a.	4	8	11	11	9
Recovery rate	n.a.	n.a.	n.a.	n.a.	n.a.	2.9 %	6.8 %	10.8 %	8.1 %	9 %

Table 39. **Value of stolen vehicles (in thousand of Euros)**

	1993	1994	1995	1996	1997	1998
Overall	822	632	597	630	905	670
Average	4.8	4.6	5.1	6.2	6.7	7
Total Vehicles	168	138	117	102	135	100

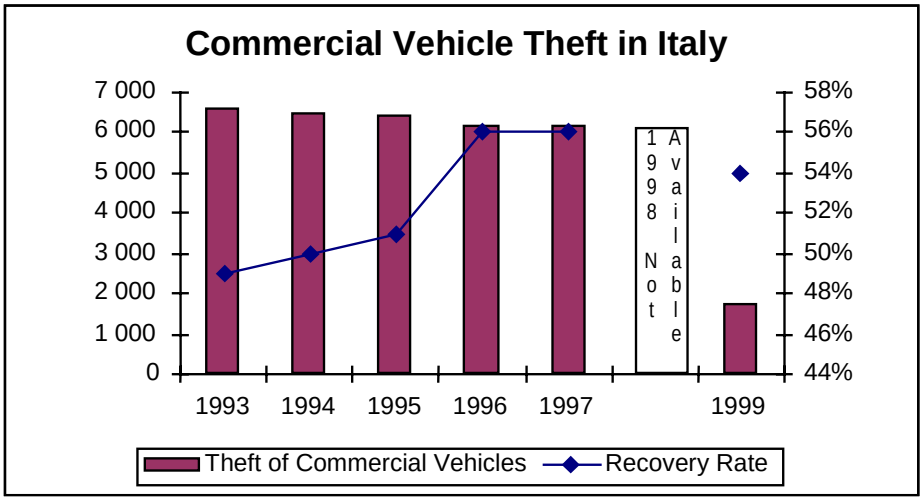
4.12 Italy

The information available for Italy was from the Carabinieri and Polizia Stradale. The theft figures are for commercial vehicles over 3.5 tonnes for theft and recovery.

Table 40. **Theft and recovery of commercial vehicles in Italy**

	1993	1994	1995	1996	1997	1998	1999
Theft of commercial vehicles	6 655	6 502	6 469	6 191	6 204	n.d.	1 736
Recovery of commercial vehicles	3 275	3 267	3 482	3 458	3 317	n.d.	935
Recovery rate	49 %	50 %	51 %	56 %	56 %	n.d.	54 %

Figure 12.



4.13 Luxembourg

The data for Luxembourg was received from:

Direction Générale de la Police Grand-Ducale
Direction de l'Information
1, rue Curie
L-2957 Luxembourg
Contact: François KRIES
Tel: 00352 4997 2510
Fax: 00352 4997 2599

The Luxembourg authorities are unable to analyse specific data from their database therefore were unable to reply to the questions in detail.

The data below refer to commercial vehicles, (there is no indication of vehicle weight) registered in Luxembourg and stolen between 1989 and 1999. However, the low numbers indicate vehicles over 3.5 tonnes.

Table 41. **Theft of commercial vehicles in Luxembourg**

	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Theft of commercial vehicles	1	2	2	28	51	56	44	62	54	54

These data for the theft and recovery of commercial vehicles for Luxembourg were provided by Europol and differ from the previous set of data with the exception of 1997.

Table 42. **Theft and recovery of commercial vehicles in Luxembourg**

	1993	1994	1995	1996	1997
Theft of commercial vehicles	10	9	71	36	62
Recovery of commercial vehicles	6	6	38	10	10
Recovery rate	21 %	12 %	68 %	23 %	16 %

There was only one Incidence where the value of the vehicle was indicated.

Table 43. **Value of stolen vehicles**

	1994
Value of vehicles in Euros	2.5 millions

Over a four year period only four incidences were reported in the response to the questionnaire. The significantly high values reported suggest that they may refer to a number of Incidences or even the total value for the year.

Table 44. **Number of incidences and value of goods stolen**

	1989	1994	1997	1998
Value of goods stolen (in Euros)	8 millions	1.2 million	24 millions	21 millions
Number of incidences	1	1	1	1

1989: clothes; 1994: spirits; 1997: hi-fi/cameras; 1998: food.

Table 45. **Type of goods stolen**

	1989	1994	1995	1996	1997	1998	1999
Food							1
Electrical/Electronic						1	
Alcohol		1					
Clothes	1			1			
Misc.						1	1
Cigarettes					1		

Overall there were eight incidences of types goods stolen from or with vehicles. These are isolated incidences and refer to the examples of goods theft reported in the response to the questionnaire.

4.14 Netherlands

The data for the Netherlands was received from:

National Police Agency Postbus 3016 2700 KX Zoetermeer Mr. Cees Feenstra 0031 79 345 92 50 0031 79 345 92 02	AVc Foundation De Klencke 12 NL-1070 BS Amsterdam Mr. Ton van der Lee 0031 20 549 79 33 0031 20 549 79 35

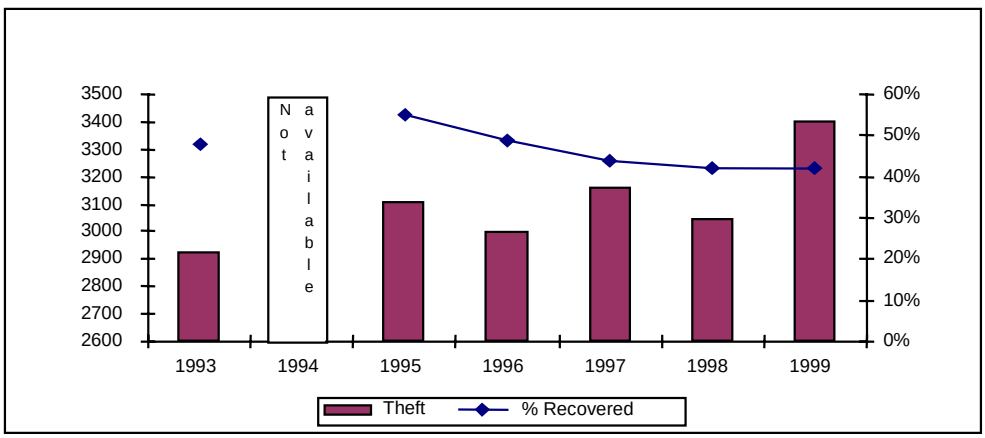
The data for 1993 for theft of commercial vehicles and the data for recoveries for 1993 to 1997 were made available by Europol. The remaining data for theft 1995 to 1999 which includes a breakdown of the categories of vehicle weight in 1998/99 and trailers for 1996-1999, were made available by the National Police Agency and the AVc Foundation, a public-private joint venture to tackle vehicle crime in the Netherlands. The Police were able to provide a breakdown of the theft of goods from commercial vehicles over 3.5 tonnes as well indications of the types of goods stolen from or with these vehicles over a four year period. There are also indications of Incidences of violence and hijackings over the same period of time.

Table 46. **Theft and recovery of commercial vehicles in the Netherlands**

	1993	1994	1995	1996	1997	1998	1999
Theft of commercial vehicles							
<3.5 tonnes[1]	2 927		3 108	3 000	3 167	3 047	3 404
>3.5 tonnes[1]						390	352
Trailers				201	170	173	166
Recovery of vehicles							
<3.5 tonnes	1 405		1 764	1 498	1 459	1 456	1 409
>3.5 tonnes							163
Trailers						53	61
Recovery rate	48 %		55 %	49 %	44 %	42 %[2]	42 %[2]
Goods stolen from vehicles							
>3.5 tonnes				96	59	107	122

1. Figures from 1993 to 1997 relate to all categories. There is no breakdown of the categories >3.5 and 7.5 tonnes for the whole period.
2. Refers to all commercial vehicles (1998 excludes >3.5 tonnes).

Figure 13. **Theft of commercial vehicles in the Netherlands**



It is not known whether these incidences of theft of goods are indicative of all offences relating to the theft from or with all the vehicles reported here.

Table 47. **Type of goods stolen**

	1996	1997	1998	1999
Food	11	15	15	9
Electrical	35	40	37	44
Household	2	9	4	3
Electronic	15	9	22	53
Alcohol	5	4	6	5
Metal	13	10	9	2
Clothes	20	10	21	20
Footwear	5	6	5	4
Misc.	132	86	90	124
Cigarettes	6	3	5	4
Total	**2 240**	**2 189**	**2 212**	**2 267**

Mode of theft

1. Use of more than one person
2. Use of other means of transport to remove the vehicle
3. Use of technology to enter/remove vehicle (i.e. radar systems, disarming immobilisers etc)
4. Use or violence to steal vehicle/goods
5. Incidences of hi-jacking (kidnapping of the driver with the vehicle)
6. Incidences of robberies (theft with menace)

Table 48. **Mode of theft**

Mode	1996	1997	1998	1999
1.				
2.				
3.	3	2	2	3
4.		1	3	16
5.	1	2	4	1
6.				3

4.15 Norway

The data for Norway was received from:

Statisticsk Sentralbyrå Norway
Mr Reid J Stene
Tel: 00 45 22 86 46 46
Email: rjs@ssb.no

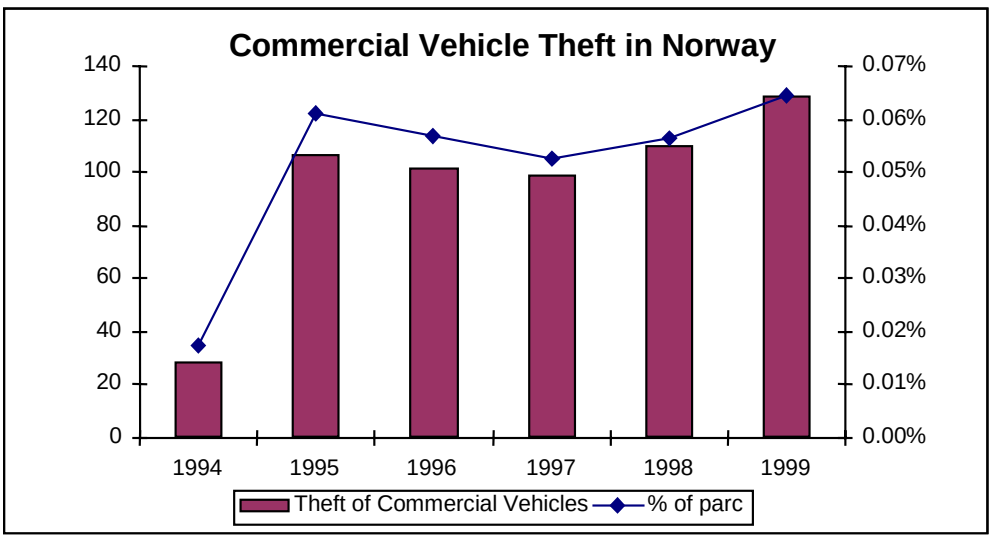
The only information available from Norway is the theft of commercial vehicles and trailers. There is no breakdown of the vehicle weight nor is there any information of the recovery of these vehicles. No information relating to the theft of goods was available.

Table 49. **Theft of commercial vehicles in Norway**

	1994	1995	1996	1997	1998	1999
Theft of commercial vehicles	29	107	102	99	110	129
Trailers	10	21	37	19	29	21

There are no statistics relating to the recovery of stolen commercial vehicles in Norway. The following graph shows the annual figures for stolen commercial vehicles and these vehicles as a percentage of parc.

Figure 14.



4.16 Poland

The reply for Poland was received from:

IT Dept. of the Polish Police Headquarters
Zbigniew Chwalinski (Director)
Ul. Wisniowa 58,
02 520 Warsaw
Tel: 0048 22 60 135 41
Fax: 0048 22 60 142 61
Zbigniew Chwalinski dyrbi@kgp.waw.pl

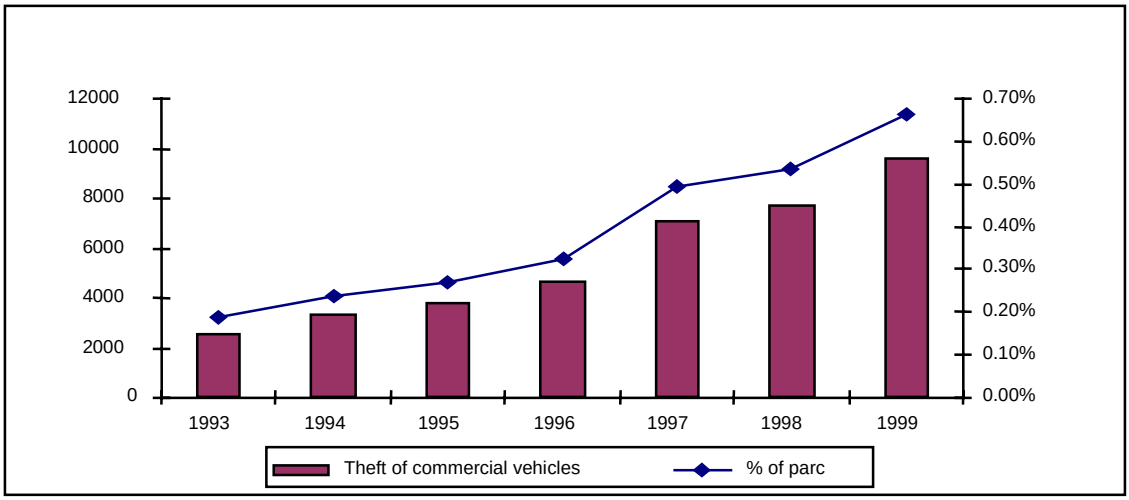
The following are the only statistics available and relate to the theft of commercial vehicles and their recovery. The categories are Light Commercial Vehicles of 3.5 tonnes and under and Heavy Goods Vehicles of over 3.5 tonnes.

Table 50. **Theft and recovery of commercial vehicles in Poland**

	1993	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Theft of commercial vehicles							
< 3.5 tonnes	2 212	2 847	3 200	3 746	5 477	6 128	7 520
> 3.5 tonnes	407	514	631	921	1639	1654	2099
Total	2 619	3 361	3 831	4 667	7 116	7 782	9 619
Recovery of vehicles							
< 3.5 tonnes	1 091	1 159	1 344	1 530	1 928	2 512	3 172
> 3.5 tonnes	175	222	281	376	479	572	860
Total	1 266	1 381	1 625	1 906	2 407	3 084	4 032

This chart shows all commercial vehicle thefts and as a percentage of all registered commercial vehicles in Poland from 1993 to 1999.

Figure 15. **Theft of commercial vehicle in Poland**



4.17 Russia

The Russian Police authorities were unable to provide data. The Russian Insurance Department of Non-Marine Carriers sent the following response – 2 sections of the Russian Insurance department replied

1. The Liability Insurance department of Non Marine Carriers
2. The Cargo Insurance department

Ingosstrakh Liability Insurance Department
of Non-marine carriers
Mr Vadim G Dorofeev
Tel: 007 095 234 36 17/14
Fax: 007 095 234 36 02/00
Email: atchern@ingos.msk.ru

There was no indication of weight categories for the vehicles. The information suggests that these are only Incidences of commercial vehicle theft in Russia, not the total number. The Incidences of theft of goods stolen as indicated by both departments over the period 1997 to 1999 show a total amount of 1.6 million Euros. The Liability Insurance Dept. indicates an amount of 339 000 Euros for 25 Incidences of theft.

Both departments indicated the type of goods stolen but did not give numbers of Incidences. For the “Mode of Theft” there are indications that violence, hijackings and robberies are committed, but no detail to how many Incidences is given.

Table 51. **Theft of commercial vehicles and goods in Russia**

	1995	1996	1997	1998	1999
Theft of vehicles (a)	31	22	11	37	16
Theft of Goods with vehicles (a)			3	3	
Theft of Goods with vehicles (b)	5	3	1	14	6
Theft of Goods from vehicles (a)			26	50	25
Theft of Goods from vehicles (b)	19	13	7	26	8
Value of goods stolen in Euros (a)					
Overall (000)			251 400	246 150	339 000
Average			967	492	1 356
Number of incidences			26	50	25
Value of goods stolen in Euros (b)	57 400	79 300	161 700	486 000	147 000
Type of goods stolen					
Food	✓	✓		✓	✓
Electrical	✓		✓	✓	
Household	✓	✓		✓	✓
Electronic			✓	✓	✓
Alcohol		✓		✓	
Metal					
Clothes	✓	✓	✓		
Footwear					
Misc.		✓	✓	✓	

Mode of theft

1. Use of more than one person
2. Use of other means of transport to remove the vehicle
3. Use of technology to enter/remove vehicle (i.e. radar systems, disarming immobilisers etc)
4. Use or violence to steal vehicle/goods
5. Incidences of hi-jacking (Kidnapping of the driver with the vehicle)
6. Incidences of robberies (theft with menace)

Table 52. **Mode of theft**

	1995	1996	1997	1998	1999
Mode (a)					
5.		✓	✓	✓	
6.		✓	✓	✓	
Mode (b)					
1.	✓				
2.	✓				
3.		✓			✓
4.				✓	✓
5.			✓	✓	✓
6.		✓	✓		

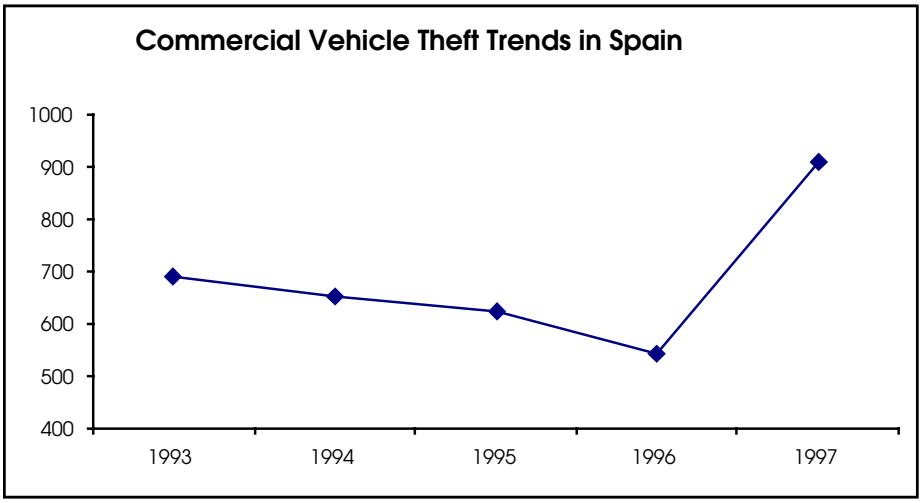
4.18 Spain

The data for both theft and recovery are from Europol. There is no indication of vehicle categories by weight.

Table 53. **Theft and recovery of commercial vehicles in Spain**

	1993	1994	1995	1996	1997
Theft of commercial vehicles < 3.5 tonnes and > 3.5 tonnes combined	692	654	623	543	910
Recovery of commercial vehicles < 3.5 tonnes and > 3.5 tonnes combined				335	610
Recovery rate				62 %	67 %

Figure 16.



4.19 Sweden

The data are provided by:

National Criminal Investigation Dept. Interpol
PO Box 12256
S-10226 Stockholm
Hans Horgren
0046 8401 3714
0046 8651 4203

There is no breakdown of vehicle weight available for commercial vehicle theft in Sweden.

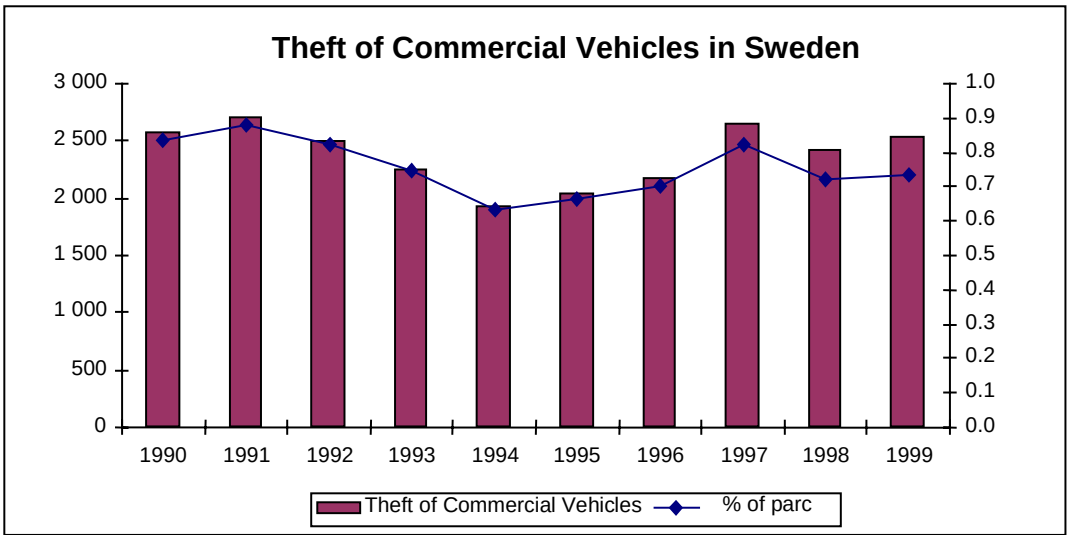
Table 54. **Theft and recovery of commercial vehicles in Sweden**

	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Theft of commercial vehicles	2 591	2 724	2 511	2 263	1 930	2 046	2 184	2 652	2 432	2 543
Recovery of vehicles				2 026	1 703	1 844	1 928	2 324		
Recovery rate				90 %	88 %	90 %	88 %	88 %		

The figures for recovery are from Europol. The response from the Swedish Police indicated recoveries of 88% to 91% for commercial vehicle theft over the ten year period.

This chart shows all commercial vehicle thefts and as a percentage of all registered commercial vehicles in Sweden from 1990 to 1999.

Figure 17.



4.20 Turkey

The data are provided by:

M. Oya Koken, Head of Section
Ministry of Transport and Communications
Dept. Of Foreign Relations
Tel: 0090312 212 4366
Fax: 0090312 212 7937

The statistics provided by the Turkish Ministry of Transport are aggregate figures for the 5 year period 1994 to 1999.

There is no breakdown of vehicle weight available for commercial vehicle theft in Turkey, however, the description of the vehicles e.g. Pickup (van) and Lorry and Long Vehicle(HGV) suggest that the categories could be separated as follows:

Table 55. **Theft and recovery of commercial vehicles in Turkey**

	Total 1994-1999
Theft of commercial vehicles	
Pickup (< 3.5 tonnes)	4 506
Lorry (> 3.5 tonnes)	2 142
Long Vehicle (> 3.5 tonnes)	40
Total	6 688
Recovery of vehicles	
Pickup (< 3.5 tonnes)	3 338
Lorry (> 3.5 tonnes)	1 497
Long Vehicle (> 3.5 tonnes)	40
Total	4 875

4.21 United Kingdom

England & Wales

The data are provided by:

Policing and Reducing Crime Unit, Home Office
Research Development & Statistics Directorate
Clive House, Petty France
London SW1H 9HD

Joanne Sallybanks
Tel: 0044 207271 8205
Fax: 0044 207271 8918

Essex Police National Lorry Load Desk
Central Intelligence Bureau
PO Box N°2 Headquarters
Springfield, Chelmsford
Essex CM2 6DA
Iain McKinnon
Tel: 0044 1245 452555
Fax: 0044 1245 452255

Vehicle theft statistics in England and Wales are not broken down by category of vehicle on an annual basis. Analysis of Commercial Vehicle theft in this country has only ever been carried out on two occasions. In 1994, Heavy Goods Vehicle Theft (more than 3.5 tonnes) was analysed as being 3 047 vehicles stolen[4] and in 1995, a study of Light Commercial Vehicle theft (<3.5 tonnes) showed that 47 181 LCVs were stolen[5]. In both these studies, the type of vehicles and age of vehicles were analysed as were the location and time of theft and recovery. The Scottish Executive (equivalent to the Home Office) also states that there is no annual analysis of categories of vehicle theft, so it is not possible to determine the Incidence of commercial vehicle theft in Great Britain over the period 1989-1999.

4. Police Research Group: Crime Detection and Prevention Series. Paper 66; The Nature and Extent of Heavy Goods Vehicle Theft: R. Brown (July 1995).

5. Police Research Group: Crime Detection and Prevention Series. Paper 88; The Nature and Extent of Light Commercial Vehicle Theft: R. Brown, J. Saliba (February, 1998).

1) The following data are as reported by the Home Office and refers to Heavy Goods vehicle theft and recovery for the whole of England & Wales during 1994 and Light Commercial Vehicle theft and recovery during 1995. Their data also include the value of the vehicles stolen and the value of the goods stolen from those vehicles:

Table 56. **Theft of commercial vehicles and value of goods stolen in England and Wales**

	1994	**1995**
Theft of vehicles		
< 3.5 tonnes		47 181
> 3.5 tonnes	3 047	
Vehicles not recovered		
< 3.5 tonnes		27 836
> 3.5 tonnes	2 647	
Value of vehicles stolen in Euros		
Overall	56 millions	340 millions
Average	18 400	10 180
Value of goods stolen in Euros		
Overall	5.4 millions	52 millions
Average	11 100	2 900

2) There is no annual national analysis of theft of goods either with or from commercial vehicles, nor is there any analysis of the types of goods stolen. However, the Essex Police National Stolen Lorry Load Desk, which is a self supporting, self-funded initiative, gathers details of Commercial Vehicle theft from most of the 43 constabularies in England & Wales. The information is not normally analysed. However, in 1998 the data was analysed by this author and presented to the European Conference of Ministers of Transport: Seminar on Crime In Transport. The data was analysed again in 1999 , though only for the first 9 months of the year. Although these data are not representative of the whole of England & Wales, they do indicate the types and values of thefts of commercial vehicles.

Table 57. **Theft of commercial vehicles and value of goods stolen in England and Wales**

	1998	1999
Theft of vehicles		
> 3.5 tonnes	264	529
Trailers	197	101
Vehicles recovered		
> 3.5 tonnes		135
Trailers		40
Theft of goods with vehicles		
> 3.5 tonnes/ trailers	302	579
Theft of Goods from vehicles		
> 3.5 tonnes/ trailers	218	575
Value of vehicles stolen (in Euros)		
Overall		2.9 millions
Average		37 000
Number of vehicles / trailers		78
Value of goods stolen (in Euros)		
Overall	29.4 millions	65.6 millions
Average	67 000	58 000
Number of incidences	439	1 133

Number of Incidences where the type of goods stolen were indicated:

Table 58. **Type of goods stolen**

	1998	1999
Food	12	91
Electrical/Electronic	61	162
Household	48	108
Alcohol	41	84
Clothes/shoes	71	130
Misc.	117	420
Cigarettes	5	6
Total	356	1 001

Number of incidences where the mode of theft was indicated:

Table 59. **Mode of theft**

	1998	**1999**
With violence	14	
Hi-jacking	25	24
Robberies		4

Northern Ireland

The Royal Ulster Constabulary Central Statistics Unit
Lisnasharragh, 42 Montgomery Road Belfast BT6 9LD
Gillian Hunter Assistant Statistician
Tel: 0044 01232 650222
Fax: 0044 01232 700998

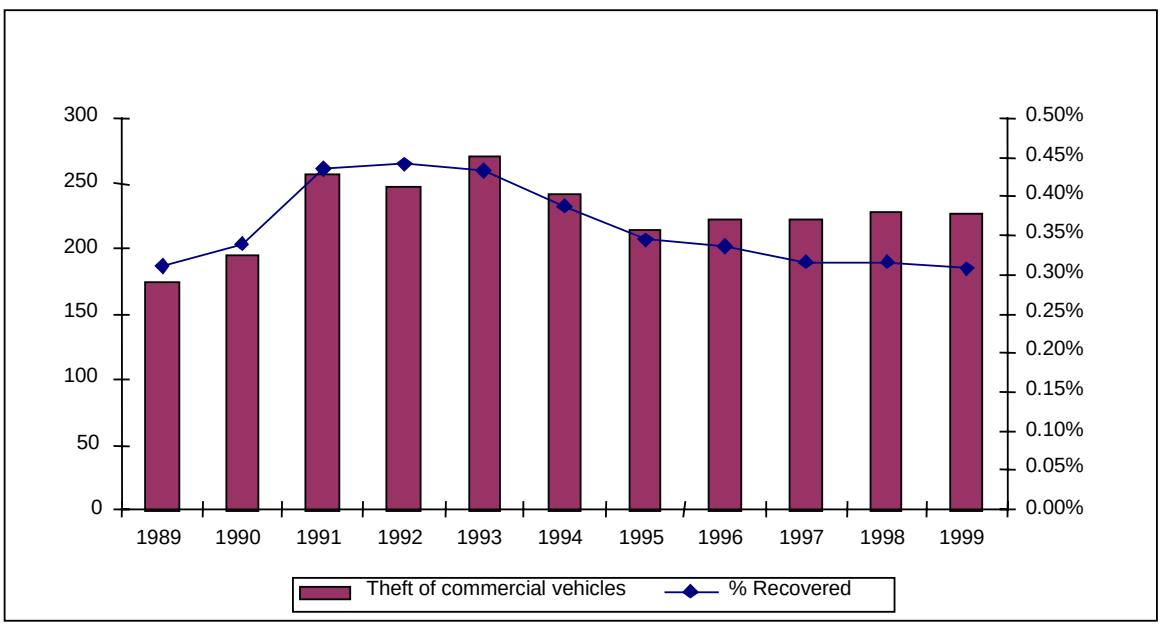
The information provided by the Royal Ulster Constabulary Statistics Department gives a breakdown of thefts over the 11 year period 1989 to 1999. This is the only country in this study to cover that period of time. There is no breakdown of categories of vehicle weights. The detail of the value of vehicles and goods stolen is quite detailed and covers the same 11 year period. The total value of vehicles stolen over that period amounted to 19 million Euros.: more than 2 million Euros for 1999 (227 vehicles). The overall value of goods stolen for the period amounted to 4.9 million Euros, about 1 million Euros for 1999 relating to 740 Incidences.[6]

6. Figures in each of these tables which are shown against 1998 and 1999 cover the financial years 1997/98 and 1998/99. No calendar year figures are available for 1998 or 1999.

Table 60. **Theft of commercial vehicles and value of goods stolen in Northern Ireland**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Theft of commercial vehicles	174	195	257	247	271	243	215	223	223	228	227
Theft of goods from vehicles	285	320	365	420	510	392	343	500	455	472	740
Value of vehicles (in Euros)											
Overall (in thousand of Euros)	946	1 234	1 733	1 510	1 791	2 199	1 609	2 102	1 766	1 928	2 088
Average value	5 435	6 330	6 743	6 115	6 607	9 047	7 484	9 426	7 921	8 456	9 196
Number of incidences	174	195	257	247	271	243	215	223	223	228	227
Value of goods stolen (in Euros)											
Overall (in thousand of Euros)	179	189	269	424	372	432	331	665	525	496	990
Average	627	591	738	1 009	730	1 101	844	1 329	1 154	1 050	1 337
Number of incidences	285	320	365	420	510	392	343	500	465	472	740

Figure 18. **Theft of commercial vehicles in Northern Ireland**

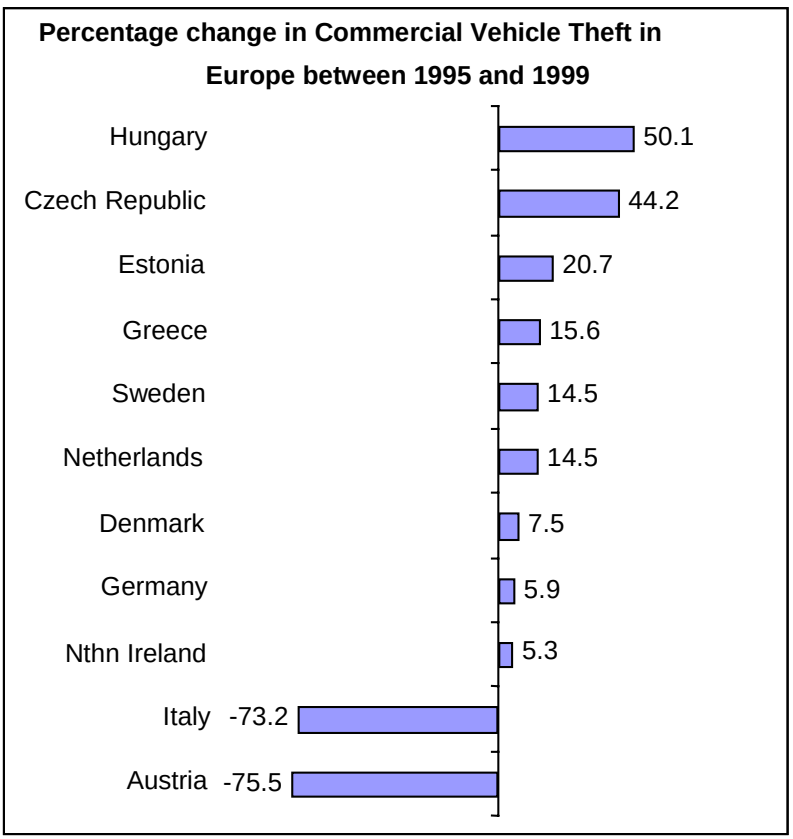


Conclusion

Overall, data was provided for 22 countries regarding the theft of commercial vehicles while 9 countries were able to give information regarding the goods stolen with or from these vehicles. The values of vehicles and goods stolen was reported by 7 countries. The most detailed information over a significant period of time (7 and 11 year) regarding the theft of goods stolen and the value of those goods was given by Estonia and Northern Ireland.

The following graph shows the percentage change for commercial vehicle thefts in 11 countries over the 5 year period between 1995 and 1999: 9 of these countries showed an increase while two had a decrease in the number of commercial vehicles stolen (in the case of Austria, there was an increase of 27% in 1999 over the previous year). The average overall increase for the 9 countries was 20% over the five year period.

Figure 19.



5. STATISTICAL ANALYSIS AND OVERVIEW

5.1 Introduction

This section focuses on the overview of data in Europe. Due to a lack of conformity, the data made available in this section is an aggregate of all the national statistics into a general overview. The issue of police statistics has been debated in detail in the Criminal Justice arena in Europe. Thus, with the understanding that the categories of vehicles (< 3.5 tonnes and/or > 3.5 tonnes) vary from country to country, the following caveat is essential reading before making any decisions about the validity of the statistics shown in this section.

Police statistics

An issue of importance when looking at the statistics of vehicles stolen is the percentage of crime reported. Specifically, "police statistics do not in themselves provide a good measure of crime[7]. One reason is that the victims may choose not to report the crime to the police or even be aware that they were a victim. There may be other reasons for not reporting an offence: it may be self-incriminating or the victim may think that nothing is to be gained by reporting (e.g. the victim expects the police not to be able to solve the theft or return the stolen goods). Whatever the reason, if a victim did not report and the police did not learn of the offence from another source, it will not be recorded, thus not counted in police statistics."

Even when a crime is reported to the police, it might not be recorded in police statistics. The main reason being that after initial inquiries the police may consider that the event reported did not actually constitute an offence.

The position of the police in the criminal justice system is not only relevant to the extent in which crime recorded at police level may be seen as a measure of the input into the criminal justice system. It may also directly influence the number of offences recorded and their classification. In some countries, police may be quite independent in its activities, while in others they work under the close supervision of the prosecutor or court. Secondly, the police may have the power to label the incidences they investigate as specific offences or they may have to leave it to the prosecution.

Another issue is that of "multiple offences": one offence can consist of several offences. So it is necessary to know whether the offences committed were counted separately or whether the principal offence rule was applied (only counting the most serious offence).

7. European Sourcebook of Crime and Criminal Justice Statistics, July 1999 Chap. 1 1.A.1.1 Police statistics as a measure of crime: para 2, 3, 4 and 8 Chap. 1.A.1.3 Counting offences and offenders: para. 10. Pages 29, 30 and 31.

5.2 Statistics and incidences

The questions were divided into five specific areas of interest:

- Incidences of theft and recovery of the vehicles and/or trailers
- Incidences of theft and recovery of the goods either with or from vehicles and/or trailers
- The value of the vehicles and/or trailers stolen
- The value of the goods stolen either with or from the vehicles and/or trailers
- The categories of goods stolen either with or from the vehicles and/or trailers.

Recording of theft of vehicles and trailers

Theft of vehicles

The categories of vehicles are broken down by gross vehicle weight, the reason for this is to identify the type of vehicle stolen. This is because the size of the vehicle could help to give an indication of the nature or nationality of the theft. Smaller commercial vehicles, for example vans, are more likely to stay within a country, because of the maximum volume of goods that any such vehicle could carry. It is reasonable to assume that a commercial vehicle under 7.5 tonnes would not be used frequently for international transport.

Vehicles weighing less than 3.5 tonnes – these vehicles refer to vans

Only 7 countries were able to define theft of vehicles under 3.5 tonnes. The importance of this category is to separate vans from cars (which normally have the same gross vehicle weight) and also trucks which weigh more than 3.5 tonnes. Overall, light commercial vehicles make up 10% of the light vehicle parc which refers to cars, vans, multipurpose vehicles, pickups, 4 x 4s and sports utilities.

Table 61. **Theft of vehicles (weighing less than 3.5 tonnes)**

	1989	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Belgium*					1 287	1 509	1 659	1 854	2 086	2 075	2 298
England & Wales							47 181				
Finland									925	1 092	1 193
France						32 927		32 814			
Ireland	110	121	160	131	145	120	103	84	118	90	
Netherlands										3 047	3 404
Poland					2 212	2 847	3 200	3 746	5 477	6 128	7 250

* In principle < 3.5 tonnes for the year 1993 to 1995 only.

Vehicles weighing more than 3.5 tonnes

None of the countries studied were able to separate out the gross vehicle weight of theft of more than 3.5 tonnes from more than 7.5 tonnes. Consequently both categories have been combined in order to analyse the available data.

Table 62. **Theft of vehicles (weighing more than 3.5 tonnes)**

	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Belgium				200	250	279	253	361	343	255
England & Wales					3 047					
Finland								12	86	75
France		628	788	1 346	2 131	2 229	2 193	1 957	1 973	1 831
Ireland	12	13	18	23	18	14	18	17	10	
Luxembourg	1	2	2	28	51	56	44	62	54	54
Netherlands									390	352
Norway						29	107	102	99	110
Portugal						42		39		
Poland				407	514	631	921	1 639	1 654	2 099
Russia*						31	22	11	37	16

* Assumed to be commercial vehicles over 3.5 tonnes.

Total theft of commercial vehicles

In 10 cases, there was no indication of a breakdown in categories for vehicle weight, therefore the following data are the figures for commercial vehicle theft where no other information was given. In four cases, (Belgium: one year; Finland: 3 years; and the Netherlands 2 years Poland 7 years) both categories of vehicle weight were indicated in the previous tables and the totals are reported here.

Table 63. **Total theft of commercial vehicles**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Austria						402	444	623	683	242	253
Belgium					1 577	1 897	2 105	2 238	2 638	2 643	2 707
Czech Republic			20	183	574	575	619	734	966	1 195	1 110
Denmark					4 133	3 861	4 224	4 793	5 118	4 946	4 566
Estonia					27	37	23	48	40	57	29
Finland									937	1 178	1 268
Germany						22 813	20 788	20 613	20 993	21 161	22 085
Greece					1 407	1 514	1 755	1 953	2 323	2 317	2 080
Hungary			739	562	326	339	384	374	338	612	769
Ireland	124	133	173	149	168	138	117	102	135	100	
Italy					6 655	6 502	6 469	6 191	6 204		1 736
Netherlands					2 927		3 108	3 000	3 167	3 437	3 756
Northern Ireland	174	195	257	247	271	243	215	223	223	228	227
Poland					2 619	3 361	3 831	4 667	7 116	7 782	9 619
Spain					692	654	623	543	910		
Sweden		2 591	2 724	2 511	2 263	1 930	2 046	2 184	2 652	2 432	2 543

Total theft of vehicles as a percentage of parc

The previous statistics made available by all countries have indicated that the incidences recorded were representative of all commercial vehicles – either by including all categories of vehicle weight or by indicating that the statistics were “Lorries” or “Trucks” or “Commercial Vehicles”. Therefore by presenting these statistics as a percentage of parc, they should, in theory, give an indication of the risk of theft. Realistically, the percentages for Belgium, Denmark, Finland, Germany, the Netherlands, Poland and Sweden seem feasible as an accurate picture of Commercial Vehicle Theft, considering all the caveats reported in Chapter 3. The other countries indicate that the statistics might only relate to one of the vehicle categories.

Table 64. **Total theft of vehicles (percentage of parc)**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Austria						0.12	0.13	0.18	0.19	0.07	0.07
Belgium					0.38	0.44	0.47	0.49	0.55	0.53	0.53
Czech Rep.			0.004	0.04	0.16	0.19	0.19	0.20	0.24	0.27	0.23
Denmark					1.33	1.20	1.26	1.41	1.48	1.38	1.25
Finland									0.32	0.40	0.42
Germany						0.79	0.70	0.68	0.68	0.67	0.69
Greece					0.17	0.18	0.21	0.23	0.26	0.32	0.27
Hungary			0.29	0.19	0.11	0.11	0.12	0.12	0.10	0.18	0.23
Italy					0.25	0.24	0.23	0.22	0.21		0.056
Netherlands										0.49	0.53
Northern Ireland	0.31	0.34	0.43	0.44	0.43	0.39	0.35	0.34	0.32	0.32	0.31
Poland					0.19	0.24	0.27	0.33	0.49	0.54	0.66
Spain					0.03	0.02	0.02	0.02	0.03		
Sweden		0.84	0.88	0.82	0.75	0.64	0.66	0.70	0.82	0.72	0.74

Commercial vehicle parc

It is useful to know the parc of vehicles or vehicles in circulation. 10% of all vehicles are light commercial vehicles or vans, while only 1 to 1.5% of all vehicles are commercial vehicles weighing more than 7.5 tonnes. This helps us to identify and understand the risk of vehicle theft. If the theft of vehicles is presented as a percentage of parc for each country, then it is possible to establish the risk factor by nation and thus it enables us to begin comparing risk.

Tableau 65. **Commercial vehicle parc by country**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Austria	277 473	285 567	295 408	308 747	317 883	328 108	338 040	343 615	353 187	364 734	*369 000*
Belgium	367 306	386 341	402 746	413 862	419 657	430 172	445 755	459 541	476 755	501 967	*507 000*
Czech Rep. ***	327 528	335 000	501 899	460 691	354 690	308 914	329 414	376 022	402 353	443 939	*475 000*
Denmark	293 523	292 719	297 780	304 984	311 756	321 492	334 593	340 750	346 701	357 772	*365 000*
England & Wales*	3 101 870	3 134 714	3 066 068	3 046 266	3 013 540	3 019 039	3 047 707	3 075 987	3 142 758	3 211 249	*3 250 000*
Estonia									83 100	86 900	
Finland	262 255	284 876	286 558	285 506	274 821	270 308	272 301	278 237	285 742	295 827	*301 000*
France	4 680 000	4 840 000	4 941 000	4 959 000	4 989 000	5 062 000	5 116 000	5 173 000	5 298 000	5 418 000	5 610 000
Germany	1 843 636	1 919 150	2 643 911	2 585 457	2 753 381	2 872 913	2 976 440	3 036 902	3 090 335	3 178 438	*3 211 000*
Greece	697 857	700 000	750 000	784 284	811 687	855 102	847 538	850 000	893 101	729 000	760 000
Hungary	181 062	289 210	251 999	289 926	296 212	297 000	311 981	322 085	334 242	331 269	*333 000*
Ireland	130 020	143 166	148 331	144 798	135 225	135 809	141 785	146 601	158 158	170 866	*177 000*
Italy	2 234 469	2 416 772	2 519 621	2 605 948	2 643 737	2 713 448	2 788 432	2 840 000	2 920 000	3 020 000	*3 100 000*
Luxembourg	16 776	17 000	19 535	22 895	22 425	26 069	27 144	28 017	28 454	29 673	*30 200*
Netherlands	544 897	570 007	592 172	632 588	666 981	675 348	646 336	643 607	684 000	697 399	*707 000*
Northern Ireland	56 000	57 669	59 148	56 155	62 906	62 746	62 272	66 421	70 534	72 210	*73 500*
Norway	300 212	308 299	311 063	314 882	323 387	335 779	349 504	358 128	377 012	390 829	*401 000*
Poland					1 406 920	1 400 000	1 410 000	1 430 000	1 440 000	1 448 000	*1 452 000*
Russia**								*8 400 000*	8 500 000	8 595 000	
Spain	2 162 421	2 332 928	2 495 226	2 649 596	2 735 144	2 825 747	3 024 246	3 151 904	3 310 095	3 509 751	*3 640 000*
Sweden	294 901	309 520	309 807	304 630	301 867	303 541	307 709	311 751	321 749	338 320	*345 000*

* Includes Scotland. ** Includes Belarus and Ukraine; *Source: Motorparc Published by the Society of Manufacturers and Motor Traders, Great Britain 1989-1998; France 1999 Journal d'Automobile; 1999 data from Pemberton Associates.* *** prior to 1995: includes Slovakia.

Theft of trailers

The only available information relating to the theft of trailers is reported here and from the information received, only four countries include trailers in the national count. The data from England and Wales are not a national representation, nor the figures for Russia, which were reported by the Russian Insurance Association.

Table 66. **Theft of trailers by country**

	1994	**1995**	**1996**	**1997**	**1998**	**1999**
Czech Rep.	47	45	47	68	78	81
England & Wales*					197	101
Estonia						
Finland					719	703
Norway	10	21	37	19	29	21
Netherlands			201	170	173	166
Russia		21	17	7	23	5

* Essex Police, 1999 = 9 months only.

Recovery of vehicles stolen by category

The following tables represent all the information regarding the recovery of vehicles and trailers as reported by the countries responding to the questionnaire.

Tableau 67. **Recovery of vehicles stolen by category**

	1993	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
< 3.5 tonnes							
Belgium	783	837	925	1 176	1 211	1 238	1 347
England & Wales			19 344				
Finland					791	910	1 018
Netherlands	1 405		1 764	1 498	1 459	1 456	1 409
Poland	1 091	1 159	1 344	1 530	1 928	2 512	3 172
>3.5 tonnes							
Belgium	108	132	162	153	194	182	152
England & Wales		365					135
Finland						72	67
Netherlands							163
Poland	175	222	281	376	479	572	860

* Refers to Essex Police Lorry Load desk.

Recovery of all commercial vehicles

Table 68. **Recovery of all commercial vehicles by country**

	1993	1994	1995	1996	1997	1998	1999
Austria		257	268	440	445	132	131
Belgium	930	1 050	1 155	1 406	1 530	1 535	1 576
Czech Rep.	151	193	194	247	368	429	381
Estonia	2	11	5	13	15	16	12
Finland					791	982	1 085
Germany*		*20 500*	*18 700*	*18 600*	*19 000*	*19 000*	*20 000*
Greece	1 036	1 069	1 253	1 390	1 672	1 471	1 275
Hungary					162	134	139
Ireland		4	8	11	11	9	
Italy	3 275	3 267	3 482	3 458	3 317		935
Luxembourg	6	6	38	10	10		
Netherlands							1 572
Poland	1 266	1 381	1 625	1 906	2 407	3 084	4 032
Spain				335	610		
Sweden**	2 026	1 703	1 844	1 928	2 324		

* Estimated; ** As reported by Europol.

Recovery of trailers

Only four countries were able to give information regarding the recovery of trailers.

Table 69. **Recovery of trailers by country**

	1994	1995	1996	1997	1998	1999
Czech Rep.	14	21	22	41	38	49
England & Wales*						40
Finland					372	342
Netherlands					53	61

* Refers to Essex Police Lorry Load desk.

5.3 Value of vehicles and trailers stolen

Only 5 countries provided details of the value of vehicles stolen. The quality and quantity of the information varied considerably from country to country. The most comprehensive was provided by Estonia and Northern Ireland. Estonia gave 7 years of data relating to 95 vehicles which showed that the total value of vehicles stolen over that period was 757 000 Euros which was an average of 8 000 Euros per vehicle. For Northern Ireland the total value of vehicles stolen over the 11 years

reported was 19 million Euros. This referred to 2 503 vehicles and the average value per vehicle was very similar to Estonia: 7 500 Euros. This indicates the importance of knowing the category of vehicles and their age, because that would help to ascertain the risk factor and type of vehicle typically targeted by criminals. The average value of Heavy Goods Vehicles stolen in England and Wales in 1994 is 18 400 Euros while the average value of Light Commercial Vehicles was 10 180 Euros.

Table 70. **Value of vehicles and trailers stolen in England and Wales**

	1994	**1995**
Overall	56 millions	340 millions
Average	18 400	10 180

Table 71. **Value of vehicles and trailers stolen (Essex Police)**

	1999
Overall	2.9 millions
Average	37 000
Number of vehicles/trailers	78

Table 72. **Value of vehicles and trailers stolen In Estonia**

	1993	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Overall (000)	40	63	39	54	35	289	237
Average (000)	4	5	4	3	2	16	22
Number of incidences	11	12	9	20	14	18	11

Table 73. **Value of vehicles and trailers stolen in Luxembourg**

	1994
Overall	2.5 millions

Table 74. **Value of vehicles and trailers stolen in Northern Ireland**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Overall (000)	946	1 234	1 733	1 510	1 791	2 199	1 609	2 102	1 766	1 928	2088
Average	5 435	6 330	6 743	6 115	6 607	9 047	7 484	9 426	7 921	8 456	9 196
Number of incidences	174	195	257	247	271	243	215	223	223	228	227

5.4 Value and incidences of theft of goods from or with vehicles

The following information was received from 7 countries. Denmark, England and Wales, Estonia, Hungary, Luxembourg, Northern Ireland and Russia. It is an overview of all the information provided by these countries on the theft of goods either from or with vehicles and the value of these goods.

Estonia reports thefts from vehicles and although the incidences are significant (42 632 over 7 years), the average values of goods stolen over this period is moderate: 442 Euros; whereas in Northern Ireland the average value for thefts from vehicles over the 11 years reported was much higher at 955 Euros.

Greece reported the types of thefts and aggregate values between 1997 and 1999 but did not state whether these thefts were from or with vehicles. The total value for the three year period for all goods stated was 7.3 million Euros.

For Denmark and Luxembourg, it is not clear whether the goods were stolen from or with the vehicle, nor in the case of Luxembourg whether the values reported represented an isolated incidence or were the sum of a number of incidences. Denmark reported 2.5 million Euros as losses for 24 cases. In the case of Denmark and Russia, the data came from Insurance companies.

For England and Wales, the police recorded the value of goods stolen either with or from vehicles at 5.4 million Euros in 1994 – this relates specifically to thefts with or from Heavy Goods Vehicles of more than 3.5 tonnes, while the values for goods stolen in 1995 (52 million Euros) relates specifically to light commercial vehicles. The significance of this information is that as expected, the average for thefts from Heavy Goods Vehicles is much higher (av. 11 100 Euros) than theft from Light Commercial Vehicles (av. 2 900 Euros). The data from the Essex Police, which refers only too Heavy Goods Vehicles, is far more detailed and shows that for 1998 and the 9 months Jan to Sept. 1999, 95 million Euros worth of goods were stolen with an average value of 62 500 Euros. This relates to 1 572 incidences and covers theft from or with the vehicle and also includes hijackings, robberies.

The information received from Hungary and Russia is not comprehensive and suggests that these incidences may be theft from vehicles. Total values of theft for 9 years in Hungary was reported as 137 000 Euros, with averages of 15 300 Euros per annum. The same applies to Russia, where there is information relating to the average values per incidence, (av. 938 Euros) the value is very similar to that of Northern Ireland – where the incidences of theft from vehicles was recorded. However, this an assumption.

What is apparent is the value of the information per se. If data were available from each country at the level of those supplied by Estonia, The Essex Police in England and Northern Ireland, then it

would be of enormous benefit to the authorities to understand the magnitude of crime at national and at European level.

5.5 Value of goods stolen with or from commercial vehicles

Only 8 countries were able to provide information about the value of goods stolen. The information for 2 countries came from Insurers. All the values have been converted into Euros. In all cases, it is assumed that the goods were stolen either with or from the vehicles. The tables indicate the overall value of the goods stolen for the number of incidences reported. The average values are determined by dividing the number of incidences by the overall value.

Table 75. **Value of goods stolen with or from commercial vehicles in Denmark (Insurance)**

	1996 (millions)	1997 (millions)	1998 (millions)	1999 (millions)
Overall value	4.5	18.8	20.6	11.9
Average	1.5	1.9	2.6	4
Number of incidences	3	10	8	3

Table 76. **Value of goods stolen with or from commercial vehicles in England and Wales**

	1994	1995
Overall value	5.4 millions	52 millions
Average	11 100	2 900

Table 77. **Value of goods stolen with or from commercial vehicles (Essex Police)**

	1998	1999
Overall value	29.4 millions	65.6 millions
Average	67 000	58 000
Number of incidences	439	1 133

Table 78. **Value of goods stolen with or from commercial vehicles in Estonia**

	1993	1994	1995	1996	1997	1998	1999
Overall value (in millions)	1.4	1.5	2	2	2.8	3	4.8
Average	361	348	367	362	344	355	515
Number of incidences	3 887	4 354	5 667	5 413	6 012	7 958	9 341

Table 79. **Value of goods stolen with or from commercial vehicles in Greece (1997-1999)**

	Value in Euros
Food	571 192
Electrical & Household	375 642
Electronic	658 645
Alcoholic drinks	111 070
Metal	359 795
Clothes & Footwear	289 934
Misc.	4 864 691
Cigarettes	193 790
Total	**7 348 961**

Table 80. **Value of goods stolen with or from commercial vehicles in Hungary**

	1991	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Overall value	3 965	12 503	3 965	6 566	8 816	11 856	8 555	37 003	44 663

Table 81. **Value of goods stolen with or from commercial vehicles in Luxembourg**

	1989	**1994**	**1997**	**1998**
Overall value	8 millions	1.2 million	24 millions	21 millions
Number of incidences	1	1	1	1

Table 82. **Value of goods stolen with or from commercial vehicles in Northern Ireland**

	1989	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Overall value (000s)	179	189	269	424	372	432	331	665	525	496	990
Average	627	591	738	1 009	730	1 101	844	1 329	1 154	1 050	1 337
Number of incidences	285	320	365	420	510	392	343	500	465	472	740

Tableau 83. **Value of goods stolen with or from commercial vehicles in Russia**

	1995	1996	1997	1998	1999
Russia (Liability Insurance)					
Overall value (000s)			251 400	246 150	339 000
Average			967	492	1 356
Number of incidences			26	50	25
Russia (Cargo Insurance)					
Overall value	57 400	79 300	161 700	486 000	147 000

5.6 Type of goods stolen from or with vehicles

Information was received from 7 countries relating to the theft of goods either from or with vehicles. Denmark, England & Wales (Essex Police), Estonia, Germany, Luxembourg, Netherlands and Russia. However, only 3 of these countries (Estonia, Germany and the Netherlands) had sufficient information to determine preferences of goods by thieves. The data for England & Wales came from the Essex Police, therefore is not representative of the country, also the data for 1999 refers to only 9 months.

The information shown in the four following graphs suggest that the preferred goods to steal from or with Commercial Vehicles are Electrical or electronic goods and clothes and footwear. Alcohol and cigarettes are not a priority.

Figure 20.

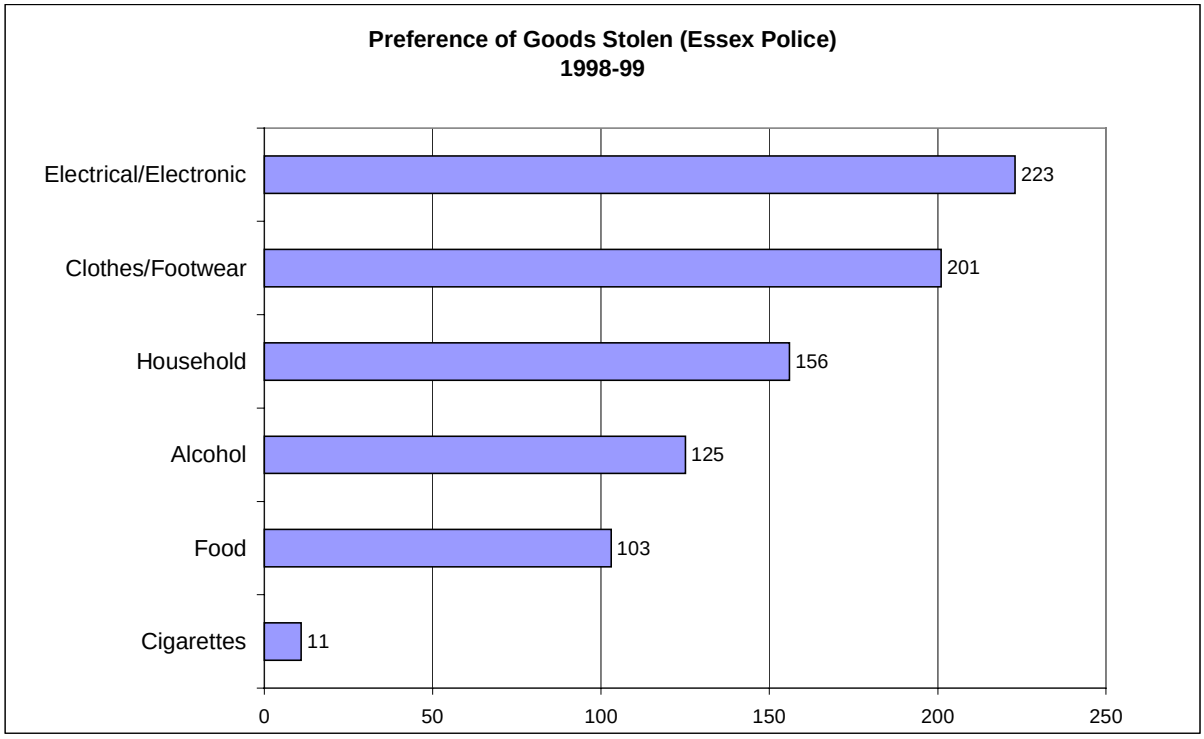


Figure 21.

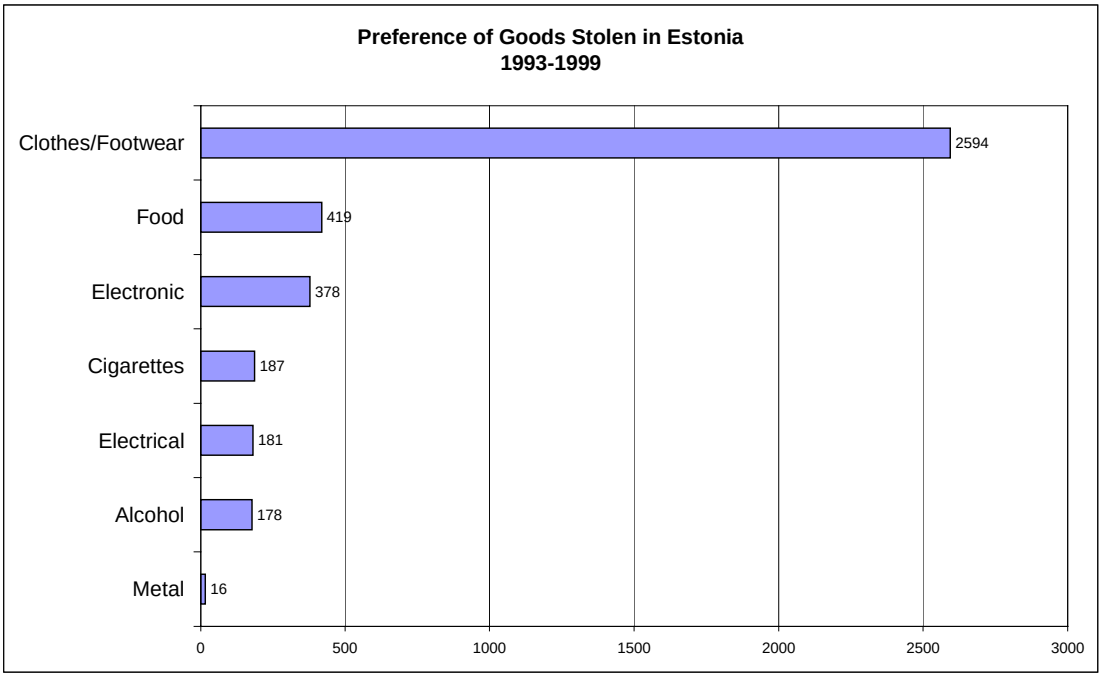


Figure 22.

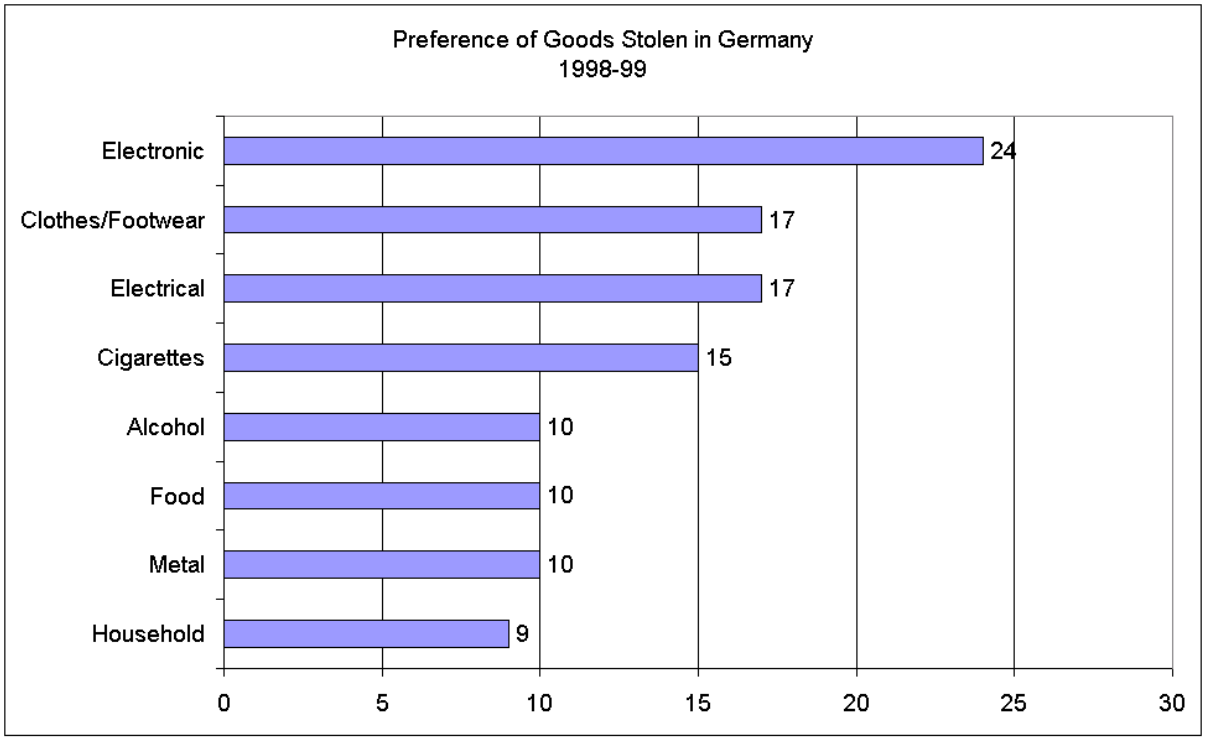
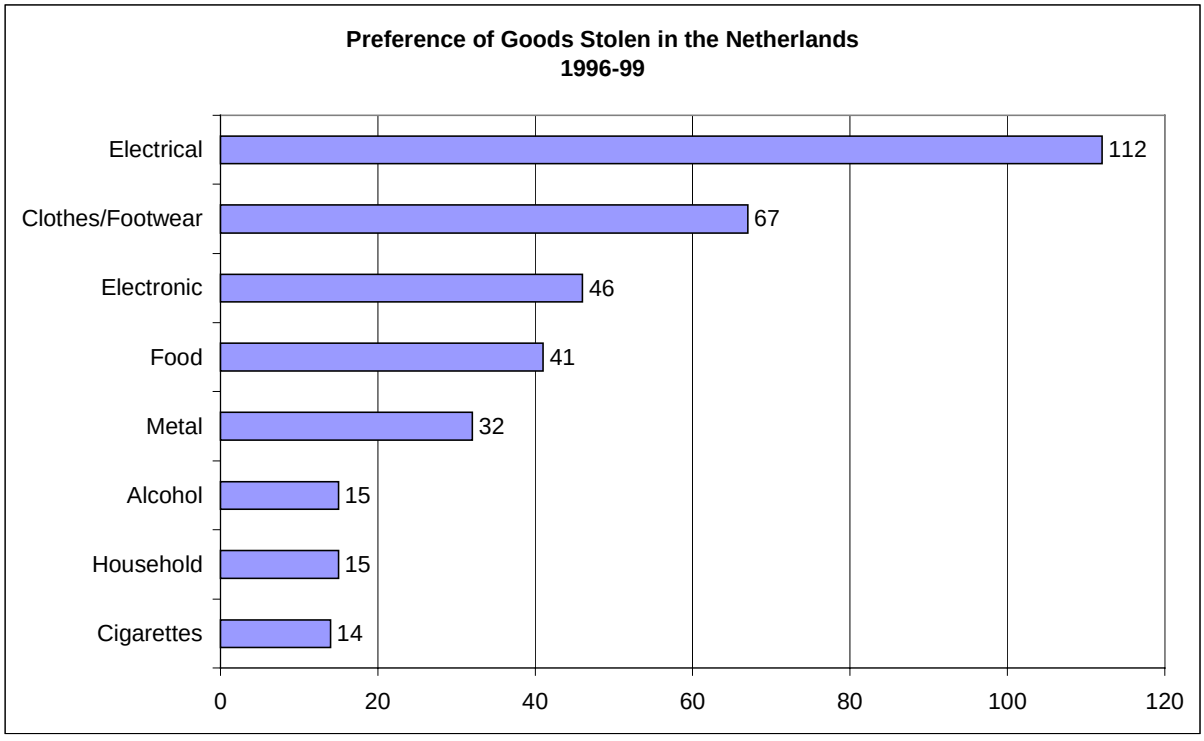


Figure 23.



5.7 Value of goods stolen - a case study of 13 companies

Determining the value of goods stolen from vehicles from the individual countries in Europe has been very difficult and the results do not allow for any realistic analysis. This is mainly due to the fact that the authorities gathering information relating to the theft of vehicles do not necessarily keep information about the contents of these vehicles. While it would be auspicious if authorities could keep that information, it would involve co-ordinating data from the private sector from a vast number of sources. Understandably these authorities would not have the funds nor the man power for such an enormous task.

The problem therefore arises: how can we determine the value of goods stolen from commercial vehicles? Also, what impact does this type of crime have on road transport?

In normal circumstances, individual companies within the private sector do not make their losses public for fear of negative publicity. This is understandable as no company wishes to divulge to competitors that they may be losing money. Equally insurers do not normally publish statistics relating to the value of losses of property through theft. So in these circumstances, it is necessary to rely on the goodwill of individual companies or associations to get that type of information.

However, the impact of freight theft including theft from commercial vehicles in Europe over the last few years has been so financially damaging to high-tech manufacturing companies, that they have formed an association called TAPA EMEA[8]. Frustrated with the perceived lack of police support and concerned about the losses their companies are suffering from, they decided to protect themselves from the persistent and rising number of thefts from vehicles transporting their products in Europe.

In order to measure the level of theft and the damage it causes, this association commenced gathering statistics. The following charts and tables are the results of 14 months of data relating to 13 companies. Overall however, the bulk of the losses refer mainly to 5 of these 13 companies. In total, these 5 companies suffered losses of 23 million Euros (72% of the total value lost by all companies) from 96 incidences (64% of the total number of incidences). This may be due to the fact that these companies appear to have been more consistent in providing details. What is clear is that this data only provides a very small window of opportunity to calculate just how problematic the theft of goods from vehicles in Europe may be.

The data reported in the following tables is a collation of information about thefts over the period September 1999 to December 2000. The type of products stolen were all of high value: mainly computer equipment and related peripherals, or mobile telephones. Overall there were 150 incidences during this period, of which 38 (or 25%) were hi-jacks. The total value of known losses (some of the thefts have yet to be quantified) was US$ 34 million or 32 million Euros.

8. TAPA EMEA (Technical Asset Protection Association – EMEA) was formed last year from a group of high tech manufacturers which originally got together at end of 1999. TAPA EMEA is a parallel organisation with TAPA US- (see their website at www.tapa3.org) and was set up to protect their freight as it moved in the supply chain through Europe (i.e. they are all suffering losses and working together to reduce them). They are mainly US based companies and have about 20 members at present. Projects are 1) introduction of agreed minimum freight security standards for freight forwarders handling their freight which they have played a large part in drawing up; 2) improvement of information exchange/ liaison on freight theft between themselves and particularly with law enforcement. This one is a Europe only project.

N.B.: The quality and reliability of the data is relative to the consistency of gathering statistics by each individual company and should not be used for comparative purposes. It is intended simply to determine whether there is sufficient information to raise concern about the theft of goods in transport in Europe. (Member companies are inconsistent in reporting, and some do not report anything. E.g. a separate exercise was carried out to determine total figures from TAPA members for thefts from Schiphol airport between January and June 2000. The total for the 6 months was at least $3.8m just from that one point.)

Figure 24. Number of Incidents

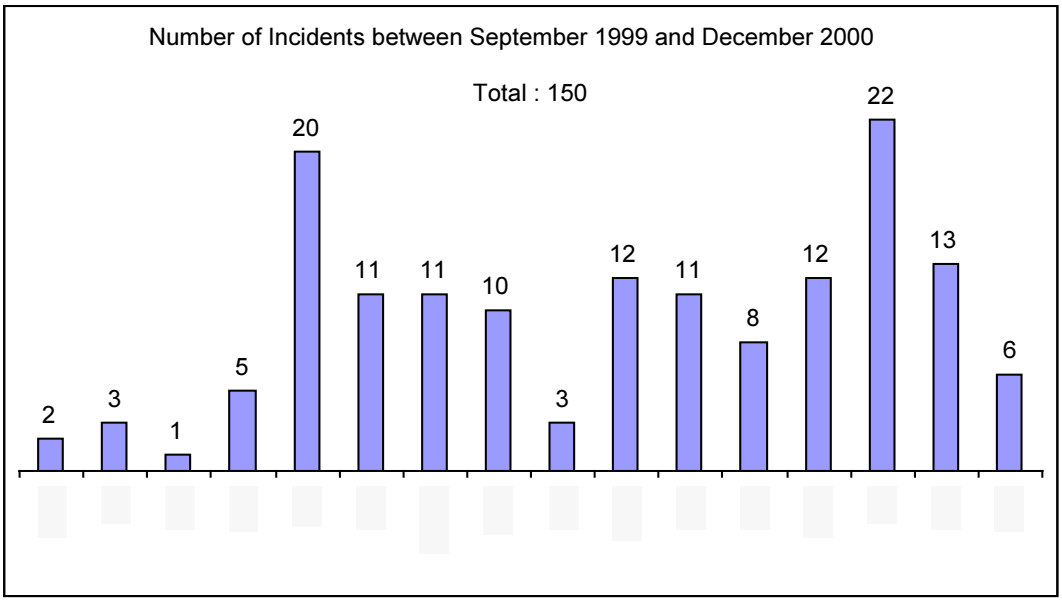


Table 84. **Type of products Stolen**

	Value in US $ (Millions)	**Number of Known Incidences**
Processors	10.4	28
Mobile phone	9.4	18
Components	3.8	11
Office PCs	3.5	28
Laptops	1.9	16
Supplies	1.5	7
Computer systems	1.5	7
Printers	1.2	15
Peripherals	0.7	20
Total	**(31.9 Million Euros) 33.9**	**150**

Table 85. **Type of theft**

	Value in US $ (Millions)	Number of known incidences
Hi-jacking	15.6	38
Warehouse	8	28
En-route	6.7	58
Truck parks	3.7	21
Jump-up (break in)	0.1	5
Total	**(31.9 Million Euros) 33.9**	**150**

The type of theft is closely linked to the value of the goods stolen. In the case of hi-jacks these incidences represented 25% of all the thefts and 46% of the value of the goods stolen.

Table 86. **Value of goods stolen by country**

Country	Value in US $ (000)	Number of Known Incidences
France	13 398	34
United Kingdom	6 948	43
Italy	2 633	8
Netherlands	2 623	13
Belgium	2 373	6
Germany	2 077	11
Sweden	722	3
Turkey	561	1
Spain	481	7
Rest	2 111	24
Total	**(31.9 Million Euros) 33.9**	**150**

Overall, 19 countries were represented in this analysis (three were not European countries and had a total loss of US$ 217 000). The country where the highest value of goods were stolen, was France with a total of US$ 13.4 million stolen: US$ 9.7 million were through hijacks. There were five other hijacks in France but the value of the goods stolen is unknown. However, the average value of the goods stolen by hi-jacking was US$ 966 400.

Table 87. **The top ten products stolen by value**

Type of stolen product	Type of theft	Value in US $ (000)
Mobile Phone	Hijack	4 000
Mobile Phone	Warehouse	2 125
M-Processor	Hijack	1 800
M-Processor	Hijack	1 538
M-Processor	Hijack	1 500
Supplies	Route	1 300
C-Components	Warehouse	1 000
Mobile Phone	Hijack	943
C-Components	Warehouse	733
Computer	Hijack	700
Total		**US$ 15 639**

The information provided by these companies has given us the opportunity to have an insight into their problems caused by the theft of goods from vehicles in transport. The need now arises to make further investigations in the transport industry in Europe to quantify and qualify losses suffered, not only by the private sector but also by governments that implicitly lose revenue from tax and customs duties. If 32 million Euros is representative of only 13 companies, then the overall losses from both the private and public sector must be considerably higher.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The overall response to the inquiry has been encouraging in the sense that it indicated that data are available. These data come from a variety of sources but in the majority of cases they are provided by the police or Internal Affairs Ministries. In some cases insurance data were available.

There are variations in how each country defines the different categories of vehicles. While comparisons were not possible between countries, the trend data showed that the percentage change for commercial vehicle thefts (comparing like for like) in 11 countries over the 5 year period 1995 and 1999, showed that 9 of these countries increased while 2 had a decrease (however one of these two countries showed an increase of 27% in 1999 over the previous year). The average overall increase for the 9 countries was 20% over the five year period.

The information from the individual countries is poor on the value of vehicles and the goods stolen. Although it was not possible to give an overview as to the total cost of theft, there is sufficient

detail to give information regarding the average value of vehicles stolen where countries provided information about the theft of goods either from or with vehicles and the value of these goods.

Information from the private sector shows alarming levels of theft in terms of values and it also demonstrates the level of violence used in stealing these goods. Thirteen companies suffered losses of 32 million Euros from only 150 incidences. Twenty five percent of these incidences were hijacks which represented 46% of the total value of goods stolen.

The value of the vehicle was very difficult to assess because of the uncertainty of the type of vehicle category. The best example was Northern Ireland, which gave consistent data over an 11-year period. The average value of the vehicle was 7 500 Euros. The two studies carried out in England and Wales for Heavy Goods Vehicle Theft and Light Commercial Vehicle theft suggested an average value of 18 400 Euros for Heavy Goods Vehicles and 10 200 Euros for Light Commercial Vehicles.

The problem of vehicle and goods theft is undoubtedly an important one for shippers, transport operators and the police. However, it is one of many competing issues and is not necessarily a priority for police, in particular the gathering and analysing of information on the topic. As a result, most of the systems set up by the authorities in each of the countries analysed are intended for operational purposes and do not necessarily take into consideration the benefit of analysing the data. The present quantity and quality of information from the public sector in the theft of vehicles and goods does not permit reliable analysis of trends or international comparison. However, limited information made available from a small group of high tech companies operating in Europe demonstrates there is an alarming number of incidences of hijackings related to valuable loads of goods being stolen from vehicles throughout Europe.

6.2 Recommendations

The gathering and collation of data and information for this report demonstrated that further time and effort is required to understand clearly the extent and nature of commercial vehicle theft and the theft of goods from these vehicles in Europe.

The statistics and methodology used in each country differ and effort needs to be made to improve their comparability. Further work is needed to understand the underlying differences in the recording of the timing of thefts and the definitions used for example whether misappropriation and or temporary use is included or not.

In order to have data for analytical use, two layers of information are required.

a) The first layer or primary data should concern vehicle:

- the make and model of vehicle:
- Registration Number and Vehicle Identification Number (VIN)
- Description of type of vehicle (include Gross Vehicle Weight) as follows:

  - 3.5 tonnes and under. These are normally defined as Vans
  - Over 3.5 tonnes. i.e. normally defined as Heavy Goods Vehicles, these vehicles are divided into two categories:
    - Articulated: this is when there is a pivotal point between the driver's cab (also called tractor) and the body of the vehicle.
    - Rigid: with the cab and body built onto the same chassis unit.

Trailers or containers: these are attached to the Articulated Vehicles.
These can be separated and removed with the use of another vehicle.

b) Secondary information should request:

- The location of the theft of the vehicle
- The location of the recovery of the vehicle
- The mode of theft:
  - Theft using technology to enter vehicle
  - Incidences of Violence
  - Hi-jacking
  - Use of weapons

c) The category of goods stolen from the vehicles (This should be kept to a simple list of products) for example:

- Electronics or electrical
- Clothes and shoes
- Food and beverages
- Household goods, i.e. cleaning products, toiletries, garden products
- Alcohol
- Cigarettes
- Other (please state)

(The possibility of using international goods classifications might also be studied)

As these databases are owned by the police or related bodies, collecting, analysing and publishing data on the topic of theft would logically be their responsibility. However, this report has identified two fundamental issues which these authorities are not in a position to resolve. The first is comparability of criminal statistics, the second is the categorisation of vehicles and risk factors. Progress needs to be made on both fronts if better data are to be obtained.

While it would be auspicious for the police and criminal justice authorities in Europe to develop and analyse the data from the individual nations, this is unlikely in the short term due to a lack of resources and a lower priority for this subject. It remains to find a solution whereby information is made available relating to the theft of vehicles and equally to the theft of goods from these vehicles. The Ministries of Transport, Finance and the Interior all need to know to what extent crime in transport affects their sectors and this can only happen if the problem is measured regularly and methodically.

Annex 1. **Organisations Contacted**

The following is a list indicating the country and organisation where the questionnaire was sent and also indicates the origin of the sender:

Country	Organisation contacted	Origin of sender
Austria	Statistics Austria	ECMT
Belarus	Ministry of Transport	ECMT
Belgium	Ministry of Communications (Transport)	ECMT
Belgium	Statistics Dept	EVTRP
Czech Republic	Ministry of Transport & Communications	ECMT
Denmark	Ministry of Transport	ECMT
Denmark	Denmark Statistics	ECMT
England & Wales	Home Office: Research & Statistics	ECMT
England & Wales	DETR (Department of Transport)	ECMT
Estonia	Ministry of Transport	ECMT
Finland	Statistics Finland	ECMT
Finland	Customs	EVTRP
France	IHESI	EVTRP
France	Ministry of Interior	ECMT
Germany	Bundeskriminalamt	Europol
Greece	University of Athens – Statistics	EVTRP
Hungary	Ministry of Transport	ECMT
Hungary	Public Prosecutors Office	ECMT
Ireland	Nat. Bureau Criminal Investigation	EVTRP
Italy	Carabinieri	EVTRP
Netherlands	Dept. Of Transport	ECMT
Netherlands	The National Police Agency	Europol
Northern Ireland	RUC Statistics Unit	EVTRP
Norway	Statistics Unit	ECMT
Portugal	Ministry of Justice	ECMT
Poland	Ministry of Transport	ECMT
Romania	Ministry of Transport	ECMT
Russia	Fed. Assembly of the Russian Federation	EVTRP
Scottish Exec.	Justice Department	EVTRP
Slovakia	Ministry of Transport	ECMT
Slovenia	Ministry of Transport	ECMT
Spain	Police	Europol
Sweden	Interpol NCID	Europol
Sweden	Nat. Council for Crime Prevention	EVTRP
Switzerland	Federal Office of Transport	ECMT
Turkey	Ministry of Transport	ECMT
Ukraine	Ministry of Transport	ECMT

Annex 2. **Data Collection and Co-operation**

The following is a list of national organisations that provided the information in Sections 3, 4 and 5 of this report.

Pays	Organisation
Austria	Ministry of Interior Interpol
Belgium	Gendarmerie-Bureau central de recherches
Czech Republic	Policejni prezidium/Ministry of Transport
Denmark	Rigspolitichefens Afd. Denmark and Danish Insurance Association
Estonia	Estonian International Road Hauliers Ass.
Finland	National Bureau of Investigation
France	CILDI/IHESI Ministry of Interior
Germany	Bundeskriminalamt
Greece	Greek Police
Hungary	Public Prosecutors Office
Ireland	An Garda Siochana, Crime Administration
Italy	Carabinieri and Polizia Stradale
Luxembourg	Direction Générale de la Police Grand-Ducale
Netherlands	The National Police Agency/Avc Foundation
Norway	Statistics Unit Norsk Forsikringsforbund
Poland	IT Dept. of the Polish Police Headquarters
Russia	Russian Insurance Dept. Ingosstrakh
Sweden	Interpol NCID
Turkey	Ministry of Transport Dept. of Foreign Relations
United Kingdom	Research & Statistics Department Home Office
(Engl. & Wales)	Essex Police Lorry Load Desk
United Kingdom (Northern Ireland)	Royal Ulster Constabulary Statistics Dept.

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The Nature and Extent of Light Commercial Vehicle Theft: Crime Detection and Prevention Series, paper 88. Police Research Group: R. Brown, J. Saliba, February, 1998.

Part II.

IMPROVING SECURITY FOR ROAD FREIGHT VEHICLES

1. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

The range and sophistication of anti-theft devices and after-theft systems available on the market is increasing rapidly; in particular, there are new developments to track the goods themselves throughout transport.

More goods vehicles are being equipped with such devices but goods vehicle crime is still increasing.

There are barriers to the wider introduction of these systems and equipment: Hauliers often underestimate the risks; manufacturers do not want to fit them as standard; insurance companies do not always give premium reductions; technical standards do not yet exist.

It is not possible to evaluate the cost effectiveness of the equipment used since there is not enough evidence on the extent of crime, or on the way the equipment is used and works.

Fitting anti-theft devices to vehicles and developing after-theft systems are only a part of a broader strategy to combat road freight transport crime. Such a strategy, to be successful, requires co-ordination and co-operation of many actors. At present this co-operation is not widely developed.

Recommendations to transport authorities

1. Set quantified targets for goods vehicle crime reduction, in co-operation and co-ordination with other authorities.

2. Create partnerships with other authorities and actors – in particular, appoint a co-ordinator of anti-crime activities in the Ministries of Transport.

3. Accelerate technical work in the framework of CEN and UN/ECE on standardisation of security equipment, on marking of vehicles and components and also work on legal requirements for fitting heavy goods vehicles with specific security equipment and on related issues - e.g. accreditation of responsible testing organisations to international standards.

4. In co-operation with the operators associations and the Police authorities examine the truck parking areas in their territory, to see what further security steps need to be taken. Improve these parking areas and indicate the degree of protection provided e.g. by a star or grading system. Use such an evaluation to improve further the joint IRU-ECMT booklet on safe parking areas.

5. Together with the Police and the operators associations provide and disseminate advice and guidance to operators, especially on safe routes, parking areas with high security, precautions to take and appropriate equipment.

6. Lobby police and interior ministries to provide more police attention and resources to monitoring, preventing and solving goods vehicle crime.

7. Examine the possibility of introducing incentives for meeting minimum security standards for goods vehicles at international level, linked to the ECMT multilateral quota.

8. Follow and support developments in technology to track the goods themselves throughout transport.

Requests to other authorities and actors

1. Operators:

- provide security advice to drivers on the risks and on good practice for achieving high security;
- verify and monitor security records of staff and agency drivers;
- improve depot and port area security, e.g. installation of Closed Circuit TV (CCTV) and disseminate information on the subject to operators.

2. Manufacturing industry:

- continue to participate in a dialogue on fitting devices at manufacturing stage with the objective to improve the level of security of vehicles.

3. Insurance industry:

- use their records and data to improve the dissemination of information on the extent of the problem;
- provide advice and guidance to operators on appropriate precautions and equipment.

2. INTRODUCTION

A study was undertaken with the purpose of:

- Providing information on anti-theft devices and vehicle tracking systems and on the contribution they can make to reducing vehicle-related transport crime.
- Assessing the cost effectiveness and commercial acceptability of the various anti-theft devices and tracking systems currently available.
- Reviewing and reporting on ways in which major European transport insurers, vehicle manufacturers and transport companies could support and encourage the introduction of effective security devices to prevent and minimise crime in transport.

– Considering ways to encourage the introduction and utilisation of the most effective devices and systems, which are supported by insurers, manufacturers and operators.

This report is focused mainly on security for road freight transport vehicles and structured as follows: Section 3 sets out the background and framework to the work. Section 4 describes the existing legal situation as regards vehicle security. Section 5 sets out the range of equipment that is available now to prevent vehicles being stolen, while Section 6 deals with the equipment and devices that are available to track and recover stolen vehicles. Section 7 contains the general conclusions and recommendations.

This report has focussed mainly on the vehicles. The goods transported are of course of equal or often of much greater value. Many of the techniques described here protect the goods as well as the vehicles. There is, and this is referred to where relevant in this report, a substantial and growing amount of work being done to protect and track goods.

3. NATURE OF THE PROBLEM

The report providing the available data on the topic shows that the theft of goods vehicles and their loads is a serious problem resulting in losses valued at many millions of Euros annually. Though comparative statistics are not reliable-the data show that in several countries up to 1% of the fleet is stolen each year. There is evidence too that the situation is getting worse in some countries and that the crimes are carefully organised since high value loads are targeted. However, the risks of theft vary widely and depend among other things on the location, on the goods carried, and on the level of security.

Theft of goods vehicles is part of a wider problem. According to 1996 statistics from the European Insurance Committee vehicle theft is a serious problem. In nine major European countries, 1 million vehicles were stolen in 1995, of which over half a million were never recovered. It is estimated that this type of crime results in an annual economic loss of over four billion Euro.

It is a problem that affects many countries and numerous companies. The partial evidence available indicates too that criminals act in increasingly sophisticated ways at both national and international levels to identify suitable loads, steal them and dispose of them. There is a large “market” for stolen goods, and not only high value goods.

The evidence available indicated that this problem is not given a high priority by police forces, though the economic losses are very high.

This report sets out some of the precautions that can be taken by the different actors involved. The focus of the report is mainly on the aids that are available to reduce the risk of crime and to increase the chances of recovery of stolen vehicles. But, in compiling the report, it became very clear that these aids were only a part of the solution.

There are numerous actors with responsibilities for the safe shipment of goods – the manufacturers, the shippers, the transport operators, the public and private authorities responsible for

ports, stations and other places of transit, the police, the customs authorities, the insurance companies and the different government departments involved.

All of the groups named above have responsibilities and possibilities to reduce crime. Actions taken together can have synergistic effects. The technical equipment described later will be more effective when it is used properly and when it is combined with other measures that create additional difficulties to criminals. Some of these are set out in Section 7.

The technologies set out here are for the most part available now – often quite cheaply. There are difficulties in implementation including the technical and legal issues set out in Sections 4, 5 and 6. But there is a more basic difficulty of getting all those involved in transport to reduce the risks and take appropriate precautions.

4. LEGAL REQUIREMENTS, GUIDELINES AND STANDARDS

This chapter first describes the international legal requirements for fitting security devices to vehicles and the specifications for these devices. It also describes international and national guidelines, codes of practice and standards in some countries.

4.1 Regulations for security devices

UN/ECE and EU regulations prescribe the conditions that vehicle alarm systems must meet; they do not say that such devices should be fitted. There is no legal requirement in this area except the necessity to have a Vehicle Identification Number (VIN).

UN/ECE

The adoption of international standards for construction and approval of power driven vehicles and their equipment and parts, as well as the classification and definition of vehicle categories is the responsibility of the World Forum for Harmonisation of Vehicle Regulations (WP.29), which works in the framework of the UN/ECE.

The classification and definition of power-driven vehicles and trailers are contained in the Consolidated Resolution on the construction of vehicles (R.E.3), annex 7/Rev.2 (document TRANS/WP.29/78/Rev.1/Amend.2).

The UN/ECE system of Regulations for vehicles and their equipment and parts functions in the framework of the Agreement of 20 March 1958 (amended as of 16 October 1995), entitled: "Agreement concerning the adoption of Uniform Technical Prescriptions for wheeled Vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions" (document E/ECE/324-E/ECE/TRANS/505/Rev.2).

There are currently 112 ECE Regulations annexed to the 1958 Agreement. Two of these Regulations concern uniform conditions for type approval of devices intended to protect vehicles against unauthorised use:

Regulation No. 18: "Uniform provisions concerning the approval of motor vehicles with regard to their protection against unauthorised use" (document E/ECE/324-E/ECE/TRANS/505/ Rev.1/Add.17/Rev.2).

Regulation No. 97: "Uniform provisions concerning the approval of Vehicle Alarm Systems (VAS) and of motor vehicles with regard to their alarm systems (AS)" (documents E/ECE/324-E/ECE/TRANS/505/Rev.1/Add.96 and Amend.1 and Amend.2).

Regulation No. 18 concerns mechanical locking devices, whilst Regulation No. 97 addresses electronic alarms and immobilisers. A new Regulation for passenger vehicles and light-duty vehicles has already been finalised by WP.29 which will combine mechanical and electronic devices. Once the internal European Community procedures have been completed, this document will be finalised.

No ECE Regulation exists for the approval or certification of tracking equipment installed to protect a payload and/or for tracking systems. If installed in vehicles, such systems would most likely be subject to type approval pursuant to ECE Regulation No. 10: "Uniform provisions concerning the approval of vehicles with regard to electromagnetic compatibility" (document E/ECE/324-E/ECE/TRANS/505/Rev.1/Add.9/Rev.2 and Amend.1, Corr.1); this ECE Regulation is fully aligned with the European Community Directive 95/54/EC.

EU Directives

The Vehicle Identification Number (VIN) - one of the special security markings - is a fixed combination of 17 alpha-numeric characters assigned to each vehicle by the manufacturer to ensure that every vehicle can be clearly identified by the manufacturer for a period of 30 years. EC Directive 76/114/EEC amended by Directive 78/507/EEC requires all manufacturers trading in the EC to firmly fix a manufacturer's plate in a conspicuous and readily accessible place on a part not subject to replacement in use. Amongst other information, the manufacturer's plate will show the full 17 digit VIN in characters of at least 4 mm in height. The above Directives also define rules concern the visibility of the VIN, which components should be marked, and so on.

Immobiliser - Directive 95/56 EC.

The Directive relates to devices to prevent unauthorised use of motor vehicles and amends Directive 74/61/EEC. The directive defines the requirements for a "device to prevent unauthorised use". A "device to prevent unauthorised use" means a system designed to prevent unauthorised normal activation of the engine or other source of main engine power of the vehicle in combination with at least one system which locks the steering, locks the transmission or locks the gear shift control. It therefore requires the application of an "immobiliser" and a "mechanical locking device". The directive also defines requirements for a Vehicle Alarm System (VAS) which are optional.

The scope of the directive applies to passenger cars and to small commercial vehicles. These vehicles have to comply with the requirements of fitting a mechanical device and an immobiliser. A "VAS" can be optionally fitted. However, if immobilisers or VAS are fitted to other vehicle categories, they have to comply with the requirements of the directive.

4.2 European standardisation for after-theft devices

Numerous new technologies and after-theft systems are coming on the market and aim to supply means and information to law enforcement agencies in order to recover stolen vehicles. Faced with this situation, the European standardisation committee, which deals with matters related to transport and road telematics (CEN/TC278), has created a Working Group, WG14, dedicated to after-theft systems.

WG14 has the mission to draw up European Standards for after-theft systems in order to harmonise their main characteristics, get maximum interoperability between such systems as well as specify performance and security characteristics against attack, with the following objectives:

- To provide European coverage of detection operations and after-theft systems services, given the ability of vehicles to cross borders.
- To reduce the number of different technologies and harmonise information that may be operated by law enforcement (e.g.: a vehicle stolen in Germany must be detectable by the means operated by French law enforcement agencies).
- To facilitate the fitting of these devices on new vehicles on production lines.
- To reduce the cost of these devices by a large implementation in Europe.
- To ensure guaranteed reliability and quality of these Devices (e.g.: to avoid false alarms …), as a basis for official accreditation and homologation of these Systems in Europe.
- To avoid monopoly positions.

WG14 involves about fifty Experts from 18 European countries, representing police officers, insurance associations, car manufacturers, transport associations, car rental association, consumers representatives as well as systems and products providers. Also it is working in co-ordination with others European and international organisations such as EPCWG (European Police Co-operation Working Group) EUROPOL, INTERPOL, CEA (European Insurance Association), VDA (German Car Manufacturers Association) and ECMT/Steering Group “Crime in Transport”.

The scope of standardisation work is restricted to technical aspects and does not concern the information exchanged between the European Law Enforcement Agencies. The standardisation work must also take into consideration the legal restrictions in force in each country such as Rules of privacy and protection, safety regulations for e.g. remote de-grading devices.

This standardisation work started in 1997 and has today compiled an inventory of Users requirements in Europe and specified the architecture of these Systems. Definition of the standards is scheduled for 2002-2003, though some countries would like faster progress.

4.3 Recommendations, codes of practice

ECMT Resolution No. 97/2 on Crime in International Transport adopted in Berlin in 1997 contains particular recommendations in relation to the protection of vehicles.

“Authorities responsible for vehicle regulations:

- To examine forms of vehicle identification which would make removal or falsification as difficult as possible.

- To examine security procedures that can prevent stolen vehicles being given new identities under their existing Vehicle Identification Number (VIN).
- To take initiatives to make the alteration or removal of a VIN a crime.
- To take initiatives to make the current voluntary practice of VIN to trailers over 750 kg compulsory (based on the EU Directive 76/114 on statutory plates).
- To encourage the voluntary marking of major components and the definition of a common European specification for making the VIN more visible.
- To encourage the development of European requirements for security features such as effective door and luggage compartment locks.
- To take measures for exchange of computerised information among registration authorities with a view to preventing registration of stolen vehicles and other vehicle-related fraud.

Road transport operators, through their national and international organisations:

- To work on introducing modern communication systems from vehicles and for tracking vehicles in international transport.

Vehicle manufacturers and equipment suppliers:

- To provide improved anti-theft systems on vehicles as indicated by EU Directive 95/56 of 8 November 1995 and ECE Regulations 18 and 97.
- To examine the possibilities for improving the security of vehicle identification systems.
- To test, for example in the context of the EU technological programmes, devices and equipment that can reduce the possibilities of theft or falsification.

Insurance companies:

- To encourage and provide incentives to operators to use effective anti-theft devices and systems.
- To provide information to operators on these systems and on good practice."

4.4 National guidelines

Some countries have issued recommendations to those involved in vehicle security intended especially for manufacturers and operators. This defines and describes areas of HGV security worthy of consideration by manufacturers - perimeter security, immobilisation, accessories and general equipment, special security markings, manufacturer's replacement key policy. Also in the United Kingdom the insurance industry has published guidelines (Axa Insurance) for operators and drivers.

5. PREVENTIVE ANTI-THEFT DEVICES

Anti-theft security devices are available for Heavy Goods Vehicles (HGV's) throughout Europe. There is a considerable market for products covering all aspects of security for vehicles and trailers, from a simple padlock to a fully integrated alarmed and immobilised locking system. Anti-theft devices, depending on the age of the vehicle, may have been installed at time of manufacture or through after-market installation. They can be mechanical, electrical or electronic. There is a wide choice of products including locking devices for handbrakes and steering locks. The more sophisticated security systems require to be installed by accredited installers, which may take several hours to be fitted properly. Nowadays practically all new commercial vehicles are equipped with antitheft devices which meet the condition of Directive 95/56/EC or the equivalent UN/ECE Regulations Nos. 18 and 97. But no single device is sufficient to provide adequate security for goods vehicles.

Anti theft devices

- Air Brake Immobilisers. The air brake lock once activated prevents the vehicle from being driven by locking the brakes on. The activation has several methods of operation, switching off the ignition system can automatically set the lock, with or without the driver's knowledge. The main advantage is no additional responsibility for the driver in setting the locking device. Earlier technology relied on the driver setting the locking mechanism separately from the ignition system. More sophisticated devices are controlled by chip technology. The Air Brake locking mechanism may also rely on the driver presenting the chip to control the locking device. The chip can be readily concealed, for example in the ignition key. This technology is also compatible with alarm systems, including the setting of the alarm in a single operation by the driver.
- Alarms. There are two distinct functions for alarms fitted to vehicles - audible siren and vehicle immobilisation. The audible alarm is to deter the thief by emitting loud noise. The immobilising alarm system activates devices that prevent the vehicle from being driven away. Alarms can include both facilities, audible and immobilising, which delays or prevents the attempt to steal the vehicle. The alarms are either set mechanically by a key or similar device, or by using a remote control facility. Both types of setting mechanism are subject to technological improvement. As with the case of keys, the variations are almost limitless. Current technology can extend the alarm function to other parts of the vehicle, such as the load area of a box van, which can be fitted with sensors detecting presence in the load-carrying compartment. The same sensor systems might also be used to detect stowaways during international journeys. It is also possible to fit silent alarms and radio paging systems.

  The after market in alarms caters for all eventualities, including attack by cutting the wires and the overt problems of power sources - the vehicles batteries being on open view.

  The alarm system routinely requires a back-up power source in the event of the vehicle batteries being subjected to interference or theft. Unlike building alarms, those fitted to goods vehicles have to be robust, designed to withstand extremes of temperature and disturbance caused by road journeys including high power truck washing.
- Alarm sensors. Alarm sensors including panic buttons are components used to activate the actual alarm system. These include movement sensors that, depending on the sensitivity of the setting, will operate the alarm function. Ultrasonic sensors work by emitting and receiving high frequency sound waves, any interruption of the frequency pattern outside of set limits will activate the alarm

system. Being sensitive to atmospheric pressure, this type of alarm sensor is prone to false alarm activation through high winds. In some cases microwave sensors may be more reliable. There are various limitations as to their use in a loaded goods area, which reduces the scope of the sensor.

Panic buttons can be installed. The system requires monitoring of the sending unit, backed up by the ability to establish where the call has come from and its effective use has to be balanced against the availability of response to the alarm activation. This type of system is more common in the cash in transit industry.

- Cab locks. Depending on the age of the vehicle, more sophisticated locks are now available to be fitted at the time of manufacture, or after, depending on the customers requirement. Deadlocks or Slamlocks may require physical use of a key or remote controlled device, which can be linked to include the setting of an integrated alarm system. Additional locking security in the cab includes mechanical devices such as hand brake and steering locks, which are locked in place by the driver. Other security devices associated with the HGV cab, include fuel locks, starter motor and ignition isolators.

  Depending on the level of security these devices can be activated by solenoids at the time of setting the alarm system. These systems are aimed at preventing the physical driving away of the vehicle with the load security and alarming an additional consideration depending on the type of vehicle. Clearly, a rigid box vehicle could have all the relevant alarm systems installed linked to the cab system. The financial commitment is dependent on the load, or potential goods being transported. Clearly goods valued in excess of Euro 100 000 should attract appropriate security investment.

- Cab tilt locks. The HGV cab unit on a truck is capable of being tilted forward to allow access to the engine compartment of the vehicle. For added security, access to this area can be prevented by locking the tilt mechanism.

- Container Locks. Containers are the steel structure boxes routinely used for the import and export of goods by sea. The containers are compatible with specially constructed trailers for the conveyance of goods of virtual every description and value. Routinely the containers are serviced by two doors at one end of the structure. The doors are designed to have locking devices and identification (Customs) seals fitted that can be put in place for cross-boarder road haulage. The locks used can be a simple padlock as the lowest level of security up to substantial locking devices, securing the doors against sustained attack. The locks may also be connected to an audible sounding alarm to alert the driver.

  The various locking systems also serve to prevent potential thieves from examining the container for goods worth stealing. Conversely, drivers may leave the container unlocked when empty or where the goods would not be attractive to a thief. Invariably the containers are the property of a container or shipping line company and are routinely serial marked and identifiable. The identification of containers routinely forms part of an audit trail, including the goods being carried. The container locks may also have a security seal with a unique identification number, which was installed at the time of loading, designed to be tamper proof for visual inspection throughout its journey. Locks that produce a random combination are also available for securing the doors.

- Double locks. A lock that is operated solely by the use of a key, to unlock or lock a door. The construction and installation of this type of lock is an effective means of preventing unauthorised entry. The Double lock relies on the driver literally turning the key to activate it; otherwise, it remains insecure. Correctly installed double locks can be very effective. However, if the driver does not lock it, the vehicle and load are exposed.

- Driver recognition systems. The driver is equipped with a smart card, similar to a credit card with an embedded chip. The chip can also be in a key fob or similar holder carried by the driver. The HGV cab is equipped with an aerial type detector unit that responds to the chip on recognition of the driver who has full command of the vehicle and its systems.

  In the absence of the chip, the vehicle cannot be moved, despite unlocked doors and including keys left in the ignition. The same technology is available for door locks, including goods doors of various descriptions for box vans and similar constructed load areas.

- Identification Systems. These systems allow the unequivocal identification of a vehicle as being the "registered stolen vehicle". This may be by means of a secure process that allows the unique vehicle data to be read, e.g. by electronically reading the VIN, registration number, and other data like theft status, model, colour and, if possible, position.[9]

- Key-switches. High security key-switches have in excess of 100 000 combinations. Replacement of the unique key is frequently only available from the supplying factory and not through normal key cutting services.

- King Pin Locks. A mechanical locking device for the Articulated Trailer designed to prevent the coupling to the towing unit. The King Pin Lock is secured to the male coupling link of the trailer, similar to securing a wheel clamp, immobilising the vehicle by preventing a towing unit from coupling up. The construction of the locks is mechanical, with a key, and requires to be fitted by hand. The fitting of this type of lock is not the most attractive of tasks for drivers, which can lead to non-use.

- Security Curtains. Heavy-duty security curtains with varying degrees of attack resistance. They can be fitted to an alarm system, which indicates when small wires that have been imbedded within the curtain material are cut.

- Slam locks. The locking of HGV doors by closing shut the door (slamming) which then requires to be unlocked to regain entry. The locking system takes the onus of locking the vehicle door from the driver, every time the vehicle is left unattended. The delivery driver does not have too physically "lock up" each time the doors are closed. This type of security is becoming the norm for parcel carriers and other multi-drop delivery vehicles and is normally fitted at time of manufacture. Slam locks are capable of being fitted to most vehicle doors, including panel vans, and barn and shutter doors at the rear or side of load carrying areas.

- Security window grills. Grills are available for making windows less vulnerable to attack, depending on the extent of security required. This type of grill security is common in the conveyance of cash-in-transit, where the crew are more exposed to personal attack whilst with the vehicle. Many vehicle manufacturers now built vans with all metal doors with windows as an option.

  Bulkhead grills are more common in box type vans, with a dual purpose of safety and visual access. Apart from affording visual control of the load, the grill also serves to protect the occupant from the potential of the load shifting into the cab area.

- Trailers, curtainside are the frequent preference for hauliers for the ease of access to the load from either side of the trailer or rigid vehicle and maximising the vehicles load (weight) carrying capacity. Consequently, the ease of access and the construction of the curtainside make them vulnerable to theft. This is despite similar locking systems and alarm systems that are available

9. This passage was taken from [1]: [CEN / TC 278, WG 14: "After Theft Systems for Vehicle Recovery", Conceptual Architecture & Terminology; Internal Technical Report, final version "T", November 2000].

offering varying degrees of protection to the load. The material used for the curtain varies in strength in preventing access to the load. It is not uncommon for sharp knives to be used to cut open and expose goods for theft. This is a common crime because of the ease of gaining access to the load.

The levels of security have the potential of being greatly advanced by the marketing of new products such as security curtains, and, a new product which has a type of gull wing construction, mechanically operated opening up to roof height throughout the length of the storage area. This product appears to have an added advantage of quicker access to the load area compared to curtainsides requiring numerous buckle and belt type securing. The Gull Wing is of metal construction, which should be readily compatible, to all other security and locking devices. However, weight limitations and costs may impede the take-up of this product.

Most if not all anti-theft devices described above are used in varying forms by international road hauliers throughout Europe. The cost of these items varies from country to country and Transport companies are well advised to seek expert advice on the efficacy of particular anti-theft devices. The cost effectiveness of anti-theft devices can not be readily measured unless adequate data is available for detailed analysis. Vehicle manufacturers have reported they would welcome such information to demonstrate the case for the fitting of improved anti-theft devices to HGV's prior to sale.

Improvements can certainly be made to the level of anti-theft devices fitted as standard by vehicle manufacturers, but acceptance of the cost of such devices, which would reduce with demand, is dependent on a better appreciation of the true cost of crime in transport and its consequences. The enhancement of the available information on the scale of crime in transport should have the affect of convincing both vehicle manufacturers and the buyers of such vehicles that improvements in vehicle security is a cost effective option.

There is a debate on the viability and value of the introduction of a legal requirement to fit improved anti-theft devices to HGV's by vehicle manufacturers. At present truck manufacturers argue that they obtain limited returns on the investment made by installing additional anti-theft devices in their vehicles. They also maintain that truck manufacturers already face onerous legislative burdens to satisfy existing requirements. If further requirements are to be imposed, the timescale enacted should be realistic. More discussion may be required with vehicle manufacturers, insurers, international haulage operators and transport companies before recommendations can be made.

There seems to be a reluctance by the truck manufacturers to fit any more than an electronic type of immobilisation system as standard equipment. This is understandable due to the fact that apart from tractor units, the manufacturers are unaware of the type of operation the vehicle will carry out. Furthermore the majority of vehicles will then have a specialist body fitted. The type of body fitted will vary greatly; additional security will typically be provided by specialist companies in the aftermarket.

6. AFTER-THEFT SYSTEMS

After-theft systems aim to provide to law enforcement authorities means, information and services in order to assist detection and recovery of stolen vehicles. They act when the anti-theft device has broken down or been bypassed by the thief and when the theft has been registered (theft registration) or eventually detected by sensors (theft warning). Unlike anti-theft devices, the on-board equipment of these systems interact with external communication means and information systems. Usually these systems involve security agencies or security service providers but in all cases involve the law enforcement for security and legal procedures (theft registration, control, detection, official statement, impound, arrest...).

Generally speaking, these systems consist of a radio device on vehicle, detection equipment (hand-held, mobile on vehicle or stationary) or infrastructure telecommunication network and operating centres operated by service providers or directly by the law enforcement agency.

Their electronic features allow the automatic detection of stolen vehicles and consequently reduce the routine controls operated by the law enforcement and insurance agencies.

6.1 Two types of operations

Short range operation

The short range operations are operated only in the vicinity (direct line of sight, less than one hundred meters) of vehicles with the help of detection equipment (hand-held, on police vehicle or stationary) usually used directly by law enforcement. So the law enforcement operations are restricted and located in their immediate vicinity during their own priority security mission. Short range radio technologies are used for these operations.

Long range operation

The long range operations are operated at distance normally greater than line of sight (up to several kilometres), and are generally associated to location functions. The long range radio technologies are used for these operations such as existing and standardised network (GSM, satellite system, soon the future technologies GPRS, UMTS, …), or other specific and property networks and protocols.

6.2 Short range systems

When the theft registration has been reported, two types of detection are possible.

Detection by signalling

The device of a stolen vehicle is remotely activated in alarm status via an infrastructure telecom. So during their service, the law enforcement can use short range hand-held detection devices and automatically detect this alarm when this stolen vehicle is located in their vicinity.

Detection by consulting

The data file of registered stolen vehicles integrated within the detection unit is updated. So the law enforcement agencies can use this hand held device that automatically interrogates all the vehicles in vicinity, compares the identifications sent by these vehicles, with its database and detect stolen vehicles.

The identification function can be operated in all cases independently of whether the vehicles are stolen or not.

The unequivocal identification of a vehicle can be checked using a reader in the vicinity. These hand held devices allow the identification data programmed in secure memory of on-board equipment such as vehicle identification number, model, colour, main components of the vehicle and other data to be recorded. (See Annex 1 for more detailed information on these identification systems).

6.3 Long range systems

Location by geographic position (tracking systems)

When the theft registration has been reported, the device on the stolen vehicle is remotely activated. Thus the geographic position and the tracking of this vehicle can be displayed in real time on a mapping station located in the operating centre (head quarters of the law enforcement or security agency).

These systems use the location technologies based on either the Global Positioning System (GPS), soon the future technologies Low Earth Orbiting (LEO) satellites, GALILEO European Satellite System, or other specific location networks. The GSM, GPRS and UMTS may be also used for an approximate location.

In the fleet management area, these systems are already being operated to improve the quality and profitability of the transport function. Unlike fleet management systems, after-theft location systems must resist criminal attacks on the antenna, power supply, jamming, breakdown, data, false alarms...

Location by homing (tracking systems)

When the theft has been reported, the device of the stolen vehicle is remotely activated. So with the help of a mobile detection on a police patrol vehicle, the direction and range of the detected vehicle is known and displayed in real time. Thus the law enforcement agency can track and intercept this vehicle without the necessary use of landmarks or absolute geographic references.

These systems use the homing technologies based on specific and property networks and protocols.

Remote degrading

When the theft has been reported, the device of a stolen vehicle is remotely activated. So the on-board device can command electronic degrading actions for this stolen vehicle.

These systems should be subject to legal conditions in order to preserve safety (e.g. immobilise the vehicle when the key is removed, not immobilise the vehicle whilst in motion unless through a progressive reduction of engine performance, etc.) The regulations required for setting up these new technologies are not yet fully drawn up or harmonised in Europe. The UN/ECE's WP.29 is already working on possible conditions for such a harmonisation.

Theft indication

These systems act independently of the theft registration. Once the vehicle has been subjected to abnormal use, vehicle sensors set off an alarm. The device on the vehicle relays the warning message to the operating centre via a radio communication network.

This function is usually attached to location systems (geographic position or homing) and can be considered as one service among the other transport management services such as time, temperature, delivery site, loading/unloading time.

6.4 After-theft systems particularities

Actors involved - The setting up of after-theft systems involves multiple actors such as law enforcement agencies, insurance companies, vehicle manufacturers, Telecom operators and service providers in security. During the successive operating steps, the functions and services supplied by the after-theft systems and private service providers are voluntarily restricted to give to law enforcement the information for detection and recovery. By legislation, the law enforcement agency is the one authority able to proceed to arrest and recovery of the registered stolen vehicles. Therefore, the global efficiency of after-theft systems depends in part on resources capability, priority missions and availability of the law enforcement authorities.

The European Law Enforcement Agencies (LEA) have underlined the following principles:

- There is no obligation on the LEA to respond to the operation of such a device.
- The system does not place an unwarranted burden on LEA resources through its operation, data handling or LEA response.

Security - With respect to security considerations, after-theft systems differ from the other systems for road telematics such as automatic toll collection, road traffic management, fleet management... Such systems are not subjected to illicit tampering: they operate in a co-operative environment.

On the other hand, after-theft systems must resist possible threats from thieves or organised gangs through breakdown, interference, jamming, copy, simulation, decoys, alteration, discovery (case of hidden device) etc. Their design and operation must include security devices and procedures and also strict approval procedures for security agencies or companies that operate these systems.

Regulation - The installation of on-board electronic devices that allow automatic detection and, in some cases, the location of vehicles, must be designed and operated in order to take into account rules on civil liberties, prevent possible fraudulent uses and individual security in road transport.

Power supply - Most after-theft devices require a power source, which is usually the vehicle's battery. If this power supply is interrupted or broken for any reason, the on-board device must be able to continue to operate for a certain duration. The European standardisation (see below) will specify this.

For loads normally transported in containers on articulated trucks or in canvas sided (tilt) trailers, both of which may be easily detached from the tractor unit (motorised cab), the design of a self-power supply for the after-theft device is a serious difficulty, mainly for the long range systems which require a significant radio power. On the other hand, some existing short range devices include a self-power supply giving self-operation over 5 years.

6.5 Economic considerations

The investment costs required to implement and operate such systems must be compared with the resulting benefits, taking into account the value of the vehicle and goods carried as well as the real impact on crime in road freight transport. In all cases, the amount for investment and operations must remain small compared to the damage costs.

Numerous parameters determine the costs: vehicle device cost with installation, detection equipment cost, communication network cost, operating cost, service providers cost (in any case, the annual subscription), as well as the additional costs spent by the law enforcement agencies. On the other hand, the benefits parameters concern: impacts on recovery rate and response/recovery time, arrest rate, theft rate, economic benefit for insurance companies, carriers, consumers, and for authorities, the improvement of security by the reduction of crime.

It would be very difficult to quantify each of these parameters considering the number and complexity of the factors involved and the fact that many are not easily measurable. Moreover, the cost/benefit parameters differ according to the type of after-theft systems operated and depend on regulation, law and procedures in place in each country. For information, the following cost scale of the device on vehicle is given for each type or technology of after-theft systems.

Table 88. **Cost of after-theft systems**

Active tag for short range operations	10 - 30 Euros
Active tag for short range operations	100 - 300 Euros
Vehicle device for location by geographic position	300 - 1 000 Euros
Others vehicle specific devices	> 1 000 Euros

7. IMPLEMENTATION ISSUES, CONCLUSIONS AND RECOMMENDATIONS

7.1 General conclusions

The report examines the extent to which the road haulage industry is using modern technology to combat the risk of theft of vehicles and goods.

Practically all new commercial vehicles are equipped with anti-theft devices. Increasingly vehicle alarm systems and tracking systems are also being fitted. The range and sophistication of available equipment is increasing rapidly and the information to hand indicates a steady take up in this equipment. However, it is not possible to evaluate the cost effectiveness of the equipment used since there is not enough evidence on the extent of crime, on whether the equipment used actually foiled determined theft attempts or contributed to recovering goods once stolen.

The evidence that vehicle crime is increasing implies that it is necessary to improve security and to reduce barriers to the introduction of systems that can contribute to lessening the risks.

The information in Section 5 and especially in Section 6, shows the promising possibilities offered by new technology. Introducing these technologies faces obstacles of several kinds: technical (standardisation, performance characteristics), economic (cost and especially benefits are very difficult to calculate), institutional (many agencies involved, different implications for each of them) and public policy (privacy, co-ordination of institutions).

The need for, and level of security that is appropriate varies due to the nature of the goods carried and the routes used. There is, therefore, no need for a uniform level of anti-theft protection. For example, companies transporting valuable goods often take two drivers or use GPS and other special devices. Some insurance companies insist on particular levels of security in particular cases; others have scales of protection depending on the value of the loads concerned. Operators themselves are often best placed to decide on the level of protection that is appropriate. But sometimes operators are not aware of the risks and are careless. Criminals too are always looking for new opportunities.

Fitting anti-theft devices to vehicles and developing after-theft systems are only parts of a broader strategy to combat road freight transport crime. Such a strategy is necessarily complex, partly because it involves many actors. In this regard it is widely agreed that there is a need for all those concerned to work more closely together to prevent thefts and to help to recover vehicles and goods if they are stolen.

There is an important role for the authorities in co-ordinating anti-crime activities, in providing a consistent framework for operators, in setting clear guidelines to manufacturers and others, and in working together to reduce the likelihood of crime and to solving it when it occurs.

While all agree on the need for more co-ordinated measures, there is not yet a full consensus on these measures or on the roles of the different actors. This report then should be seen as a contribution to work that needs to continue.

7.2 The role of transport authorities and ministries

Transport ministries are one of the actors involved and they can play an important role in several areas. These are set out below:

- **Set quantified targets for goods vehicle crime reduction**

  This is not simple, since neither the extent of crime nor the cost of reducing it are known with any precision. Nevertheless, quantified objectives can drive policy and help ensure that resources are made available.

  While such a target depends on individual circumstances, and obviously must be set in conjunction with the police and other actors, it is suggested that a target along the lines of reducing goods vehicle related crime by 50% in 5 years is both challenging and feasible.

- **Set up partnerships and closer co-operation with authorities and actors**

  A clear conclusion of this work is that more co-ordination and closer co-operation is needed between different groups which have, after all, the shared aim to reduce vehicle related crime.

  There are many possibilities for such improved co-operation including with interior ministries, the police, operators, insurance companies and manufacturers. An essential starting point should be to create a co-ordination and contact point in the Ministry to deal with the topic. Without this, the different efforts and initiatives risk to be inefficient.

- **Accelerate Standardisation of equipment and markings/accreditation**

  For heavy goods vehicles there are no legal requirements to fit specific alarm equipment. At present only a Vehicle Identification Number (VIN) is required. New cars and small trucks are required to be fitted with immobilisers and alarms (EU Directive 95/56 and UN/ECE Regulations Nos. 18 and 97). There is a voluntary provision in this directive to fit Vehicle Alarm Systems (VAS) and some manufacturers are now doing this. There is discussion underway on extending this Directive to trucks. This is a logical extension of the present rules and it would seem appropriate that it be applied to heavy vehicles too.

  There is also discussion on whether identification of vehicles should be extended to key vehicle components. Police favour this as vehicles are often broken into parts for resale, while manufacturers oppose it on the grounds of extra cost. On balance, the identification of a small number of specific parts should not pose a severe cost burden and could be of significant benefit. The recommendations made by the Council in 1997 on this topic still need to be implemented and work should be intensified here. Discussion on this should continue.

  Technical work on after-theft devices is going on, in the European Standardisation Committee (CEN) and elsewhere and should be followed and if possible, accelerated.

  Another issue is accreditation, whereby, once a specification has been agreed, the systems should be accredited by approved testing centres. Each such centre should test the equipment to agreed criteria. Approved equipment and testing organisations should be accredited to international standards where they exist.

  Aftermarket installation engineers should also be accredited for quality of installation. Random checks need to be carried out by accredited inspectorates to ensure that installations are being carried out to the required standard.

  For example, in the U.K. the VSIB (Vehicle Security Installation Board) and Mobile Electrical Security Federation (MESF) currently operate a code of practice for aftermarket security installation. The Freight Transport Association (FTA) carries out random checks on aftermarket installation. The interested companies have been working with the DETR (Department of the Environment, Transport and the Regions) since 1997 with a view to changing legislation with reference to immobilising a vehicle when the ignition is in the 'on' position.

- **Improve safe parking areas**

  The second edition of the joint IRU-ECMT booklet on safe parking areas has just been published. There is a need to continue to improve these parking areas and indicate the degree of protection provided (for example by a star or grading system). Each Ministry, in co-operation with the profession and the Police authorities might examine the areas indicated in their territory to see what further steps need to be taken. In the UK such a verification was undertaken and showed

that none of the indicated parking places met the security standards of the UK police guidelines for parking. Agreed guidelines for such parking places could be drawn up.

- **Provide advice to operators**

  Together with the Police and the operators associations, the transport Ministry should provide guidance and advice on safe routes, safe parking, precautions to take, equipment and advice on agency drivers. Co-operation with the police on risky locations or routes, on dubious companies or staff is often very limited and could easily be improved.

  As security in general improves the way criminals operate will probably change. Vehicles fitted with an immobiliser will be more difficult to steal. It is likely that criminals will therefore target vehicles in transit, because the immobiliser has already been deactivated. There is therefore a risk that the amount of hi-jack related thefts will increase. Consideration should be given on how best to prevent this type of crime.

- **Lobby police**

  In most countries the police give very few resources to dealing with goods vehicle crime. Transport Ministries need to campaign with their colleagues in other departments for more police attention and resources to be given to monitoring vehicle crime, to preventing it and to solving it. The creation in the UK of a Joint Action group on lorry theft is an example that other countries might consider following.

- **Examine incentives at international level**

  Other initiatives could be studied, for example, the idea that vehicles benefiting from the ECMT multilateral quota would be of a high standard of security.

  The discussion indicated that a technical requirement to fit specific devices to vehicle using the quota would be complicated because the appropriate equipment would be difficult to define and also because of the problem of verification. Nevertheless, the idea is consistent with the principle in the multilateral quota that the vehicles used should be the best quality available. Further study of this issue could be continued in the ECMT Road Transport Group.

  There is also a proposal that countries with a good security record might be given a bonus in the number of licences distributed. While this is also consistent with the political wishes of Ministers, there are practical problems to implement this idea including the poor quality of data on crime, but it could be pursued in ECMT's Road Transport Group.

7.3 Role of other actors

Operators

In additional to fitting appropriate equipment, operators can do a lot to reduce the risk of crime. The vehicle driver, the transport company's employees and depot security all must be considered, together with route selection and secure overnight parking facilities.

Security advice to drivers (raising awareness). In addition to the use of anti-theft devices to combat transport crime, education of drivers could reduce crime. Training schemes in which drivers are made aware of the risks to their cargo, the vehicle and themselves could help to reduce the problem. Each driver needs to be aware of how they can improve the level of security for their vehicle.

If a driver was made more aware of the danger and was encouraged by his company, through training initiatives, to check the load at regular intervals, the likelihood of ingress of illegal immigrants into the vehicle would be reduced. Drivers should also be supplied with details of accredited sites for overnight stops. They should be encouraged to plan routes that will allow them to avoid known risky parking areas.

Employee security and agency drivers "Code of conduct". A further area in which the road transport industry might be encouraged to make changes is with regard to the people they employ. A driver will often be chosen to deliver loads without any consideration to prior record on security matters. For example, a driver who has been the victim of theft more than once, due to poor personal security, could still be commissioned to transport valuable cargo.

However, if a record of employee security is kept, drivers who have previously exhibited low levels of security could then be limited to transporting goods of a lower value. Vice versa, the driver with excellent records of personal security could be commissioned to transport goods of high value. This type of record could be linked-in closely to driver training initiatives previously mentioned.

As some companies rely on obtaining drivers from agencies, this type of information could be kept by these as well. The agency could provide a suitably security cleared driver to match the value and importance of the cargo. This is beneficial to both the haulage companies and the agency; the company will be safe in the knowledge that the driver hired will have appropriate training to transport specific goods. The advantage to the agency is that good practice will instil customer loyalty.

In addition, agencies should be encouraged to set a code of conduct with regard to transport safety. This should take on board all the basic good practices for high security, and all drivers should then be required to follow them. The power of educating drivers to the risks, and then informing them of good practice, should not be overlooked. It is possibly the most cost-effective method of reducing crime.

Depot security - In addition to the direct threat to the goods vehicle whilst on route, further potential weakness are the depot, and ports. Whether the target of the crime is the vehicle itself or the goods to be transported, the depot is often a thieves paradise where the vehicle will be left almost completely unattended. In addition to the low levels of security that can exist at depot sites, there is also the added incentive to the thief if it is in a sparsely populated location, for example on an industrial estate. Low levels of security combined with the location can often allow thieves easy unhindered access to valuable goods and vehicles. This problem can be addressed however.

One deterrent for the criminal in this type of situation is the use of CCTV (Closed Circuit Television Cameras). For individual depots to install CCTV and then provide surveillance teams to watch the monitors twenty-four hours can be expensive.

However, one solution to this problem could lie with local governments and authorities. Most industrial areas are linked in some way to a local scheme of CCTV operations, so it is possible that local authorities and transport companies could be encouraged to work together to set up twenty-four hour surveillance. This could prove to be cost-effective for not only the company involved but also for the local government who might be able to use some form of payment incentive to allow the company to participate in such a scheme.

For example, if the company supplies the cameras on their site, and is then linked up to the town surveillance monitoring, the local authority could charge a small fee to incorporate the depot into the scheme.

To further encourage good security practice within depots and ports, schemes in which depots of high security standards are recognised could be developed. This type of scheme could facilitate centres of excellence and allow transport companies to access data as to which depot site is of high security and which is of low. This type of benchmark could work in two ways, drivers and companies will be encouraged to store their vehicles and goods on recognised sites – thus reducing the chance of criminal activity, and secondly, depot and port managers themselves will have an incentive to increase security in order to keep and encourage business at their particular site.

The advantage could be further extended for the industry with the help of insurance companies. If insurance companies recognised a quality mark given to secure depot sites, they could reduce premiums for companies using such sites, again reducing the cost for the company and individual drivers. The IRU-ECMT safe parking areas could develop in this sense.

Vehicle manufacturing industry

Legal requirements for security on goods vehicle are not particularly demanding. Vehicles are equipped with a VIN number. In practice, most are equipped with anti-theft devices which conform with EU Directive 95/56/EC or the equivalent UN/ECE Regulation Nos. 18 and 97 though it is not a legal requirement to fit such equipment. There does not seem to be competition among manufacturers on the basis of security features. Manufacturers believe that operators are the best judge of what is needed and they, therefore, oppose legal requirements for additional security.

Industry would prefer to see first more agreement from operators and insurance companies, for mutually recognised and harmonised systems. They could then be in a position to fit systems which would reduce costs and engineering efforts.

The police authorities have requested that some additional measures be adopted to improve security. Police believe that the VIN should be mounted in a fixed and clearly visible place and moreover have asked that major components be marked also. Industry has opposed these proposals because of the cost. But these costs are extremely small compared to the cost of the components and further discussion on this would seem to be justified.

Manufacturers believe that only minimum regulations are needed i.e. the extension of the scope of Directive 95/56/EC to commercial vehicles. The Directive will then provide for the mandatory application of immobilisation systems.

The recommendation along the lines set out in ECMT Resolution 97/2 has been implemented by vehicle manufacturers by already voluntary fitting immobilisers according to Directive 95/56/EC and to UN/ECE Regulations Nos. 18 and 97.

Insurance industry

All vehicles and goods need to be insured. Insurance is a key cost component for shippers and operators. Operators claim that there is often no benefit in fitting costly anti-theft devices since there is no reduction in the insurance premium. Insurance companies dispute this and argue that reductions are given but that there is a time lag which depends on achieving a reduction in theft. In any case, insurance companies have an important role and could contribute more actively in several ways, including providing more information on the subject and in giving advice to operators.

Annex 1. **Vehicle Identification Systems**

1. Source of Information

The German "Verband der Automobilindustrie" (VDA), in which all German car manufacturers are represented, has issued a common paper on Identification Systems (see Bibliography). The following passages are taken from that paper. Some items were adapted to the special requirements of HGV's.

2. Goal and Motivation

Electronic identification is one of the cheapest after-theft means for the recovery of stolen vehicles. We believe that every European car, truck and trailer as well as construction machinery should be capable of being identified by a secure identification device. In order to recognise stolen vehicles before crossing borders, vehicle-internal transponders in connection with reading equipment form a powerful means of detection.

3. Scope of application of the transponder

3.1. Main application: Identification of vehicles

Reading the VIN and other important identification parameters.

Read / write vehicle's status information ("stolen", "suspected to be stolen"...).

3.2. Optional applications

"Private" identification: (e.g. entrance and exit control on premises, haulage companies, vehicle rental organisations...).

3.3. Additional security measures

The transponder should preferably have a vehicle internal interface, connecting it to all relevant Electronic Control Units (ECU's). At time of manufacture, all ECU's are announced to each other. Consequently, other ECU's will rely on the existence of the transponder. In case of destruction or tampering, they will refuse to work correctly. Conversely, if such a transponder is demounted in one vehicle and afterwards installed into a different one, the transponder sets itself a "stolen status" bit, because it does not recognise the other "well-known" ECU's. From that time on, the vehicle is marked to be stolen or presumed to be stolen and can easily be "filtered out" at borders or other check points.

4. Transponder properties

4.1 Vehicle speed

Since this specification was developed with passenger cars in mind, the speed up to which the transponder must be capable of being read was specified at up to 250 km/h. This will of course cover HGV's requirements in any case.

4.2 Data lengths to be transferred

The whole protocol comprises four data transfers:

- 8 bytes from the reader to the vehicle (random number).
- 33 bytes from the vehicle to the reader (encrypted VIN, stolen byte, authentication value).
- 5 bytes from the reader to the vehicle (updated stolen byte, authentication value).
- 5 bytes from the vehicle to the reader (confirmation of action).

These are tentative minimum data which shall be demonstrated by a prototype. Some delays encountered both in the transponder and the reading device will be inevitable due to encryption.

4.3 Electrical power management

Vehicle in motion

When the vehicle is in motion, the vehicle battery may supply the transponder. Hence, an active operation (i.e. sending out data using a high power source) is the recommended operation mode. The covered distance and consequently the necessary transferable data length is reached at full speed.

Parked vehicle

When the vehicle is parked, the relative speed between the reading device (e.g. in the hands of a policeman) and the vehicle is next to zero and the distance to be covered will normally be less than 3 metres.

When the vehicle is parked, the transponder should have an extremely low (i.e. « 1 mA) power consumption ("sleep mode"), drawing power preferably only from its own internal battery. Only the receiver and the wake up circuitry are powered.

After having detected the external wake up request, the transponder switches from sleeping mode to the active mode (or a low power active mode), since it is only powered by its internal battery and the reading distance is limited.

The transponder internal battery may consist of a primary cell or preferably an accumulator which can be reloaded when the vehicle is in motion.

The transponder should be able to respond to a reader at least for the duration of three months when the vehicle is parked and receives no power supply from the vehicle battery, and when it is interrogated 100 times a day.

5. Frequencies to be used

Ideally, the frequencies must be legally usable in *all* European countries. This applies for the so-called Industrial, Scientific and Medical frequency bands (ISM).

- Wake up: This is under discussion: it may be advisable to use the 130 kHz band or the 6.78 or 13.56 MHz (or a higher ISM frequency) if an inductive or radio wake up principle for parked vehicles is used. (The permissive radiated power is highest in these bands). But, the normal operating frequency for data transmission (see below) may be specified as well, if a wake up receiver with very low power consumption can be realised.
- Taking into account the high vehicle speed together with a collision protocol (see section 6.5), a bandwidth of at least 100 kbit/s is necessary. Hence, the only ISM frequencies which fulfil this requirement are 2.45 and 5.8 GHz.

6. Miscellaneous Requirements

6.1 Operating range

When the vehicle is in motion, the operating range should be in the order of at least 10 meters. The real requirement is that on a multilane road, like on highways, different vehicles must be capable of being identified from roadside equipment.

When the vehicle is parked, the operating range should be in the order of at least 3 m.

6.2 Bandwidth and data transfer rate

Rough calculations taking into account the data lengths, transmission range, maximum vehicle speed, encryption/decryption times, and collision protocol capability resulted in data transfer rates of 100 kbit/s minimum.

6.3 Location of antenna

The envisaged location for the antenna is still under discussion. Since no directional characteristics are required, the antenna needs not to be located at the windshield. Hence, the antenna can be hidden in the vehicle.

6.4 Self destruction

The transponder should be constructed and fixed to the vehicle in such a way that removal leads to self destruction. In case of electronic tampering, the transponder should set a “tamper bit”, which is part of the stolen byte.

6.5 Collision protocol

Since it is inevitable that more than one vehicle is within the reading distance of a reader, a collision protocol (like the Aloha protocol or a derivative thereof) must be used to solve the collision problem.

6.6 After sales market

The transponders should be capable of being retrofitable to existing vehicles.

7. Readers

Readers may be stationary (at borders, harbours, other strategically chosen points) or hand held. Basically, they interrogate transponders and display the read data, like the VIN. But additionally, they may contain a data bank with a list of stolen vehicles. In that case, they will compare the transponder information with the data bank and make an alarm if a vehicle was detected which was reported to be stolen. Also, the readers must be able to write into the transponder the "stolen" information.

7.1 Stationary readers

Stationary readers will have a connection to a large police data bank containing information on all stolen vehicles in the EU and are periodically updated via a data net. This data bank may be an adapted version of "EUCARIS" as is demanded in the recommendations given in point 4 of the Bibliography.

7.2 Handheld readers

Handheld readers must be capable of reading the vehicle's VIN and the stolen status byte and display this information. They may or may not contain a "data bank" with VINs of stolen vehicles, depending on the type of reader.

Handheld reader without data bank

This presumably very cheap and small reader can read at least the transponder's stolen status byte and the VIN. At least these two items should be displayed on the reader.

Handheld reader with data bank

This type of reader contains a mass storage with all vehicles reported to be stolen within the EU, i.e. approx. 2 million entries of VINs of stolen vehicles.

The reader must be capable of reading both the VIN and the stolen byte from the transponder. The reader compares the read-in VIN with the contents of its data bank and display the VIN and the result ("stolen" or "not stolen").

Updating of its mass storage may be done via a wired connection to a computer which contains the whole data bank; or the hand held reader shall contain e.g. a pager receiver so the device may be continuously updated in the field.

8. Encryption

Encryption must be used throughout the system in order to prevent rebuilding of transponders and to make “eavesdropping” (tapping data transfers) useless, because the data are illegible.

9. In the case of wholesale application of the system

The bottom limit of the cost scale for the devices on vehicle for short range systems (*see conclusions of the Chapter 6.5, Table 88*) i.e. approximately 10 Euro should be achievable.

Annex 2. **Glossary**

CCTV	Closed Circuit TeleVision cameras
CEA	Comité Européen des Assurances/European insurance association
CEN	Comité Européen de Normalisation/European Standardisation Committee
ECMT/CEMT	European Conference of the Ministers of Transport/ Conférence Européenne des Ministres des Transports
ECU	Electronic Control Unit
EPCWG	European Police Co-operation Working Group
EU	European Union
Europol	European Police Office
GHz	Giga Hertz = (billion = 10^9 cycles per second)
GPS	Global Positioning System
GSM	Groupe Spécial Mobile (often also: Global Standard for Mobile [phones])
HGV's	Heavy Goods Vehicles
Interpol	International criminal police organisation
IRU	International Road transport Union
ISM	Industrial, Scientific and Medical (frequency bands)
kbit/s	Kilo bit per second
LEA	European Law enforcement Agencies
LEO	Low Earth Orbit (satellites)
mA	Milli Ampère (unit for electrical current)
MHz	Mega Hertz (million cycles per second)
UN/ECE	United Nations/Economic Commission for Europe
VAS	Vehicle Alarm System
VDA	Verband Der Automobilindustrie (German car manufacturers association)
VIN	Vehicle Identification Number

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Part III.

OTHER SUBJECTS

1. ILLEGAL IMMIGRATION

Illegal immigration has become an increasingly dramatic humanitarian problem. The discovery in June 2000 of 60 Chinese clandestine immigrants, of whom 58 died, in an airtight container at Dover has concentrated public and political attention on the topic.

Illegal immigration into the UK is a particular problem and has resulted in a number of actions. The UK Government introduced the new Immigration and Asylum Act (1999), imposing severe financial penalties on transport operators entering British territory with illegal immigrants on board. The measure, effective since 3 April 2000, applies to all modes of transport, and the fines amount to £2000 per clandestine.[10]

The Transport profession, mainly through the IRU and national road transport federations, have carried out a campaign among their members to enhance precautions, and have issued guidance (Renewed IRU information on the UK Law and its application, Geneva 24 January 2001). They have also strongly opposed the increased liability of carriers, as laid down in the act. In particular, they have been very concerned by the clause that states that it is immaterial whether an allegedly responsible person knew or suspected that the clandestine entrant was concealed in the transporter entering British soil (art. 35 subsection 7). Railways too have been protesting strongly about these automatic fines. The transport industry is also concerned about perverse effects of the law – e.g. the risk that an operator who finds an illegal immigrant will no longer hand the person over to the authorities.

The French Government commissioned a report from Conseil National des Transports (CNT), its transport advisory body, on the particular problem of illegal immigration to the UK from France, and specifically the clandestine traffic via Calais (Rapport sur la question des clandestins dans les transports, Paris 22 December 2000). As a result there has been a number of preventive measures put in place and the number of illegal entrants reaching the UK from France via Calais has declined.

The EU has set up a consultation procedure to examine whether there could be some co-ordination on the level of fines across the EU.

The situation in the UK is a particular focus of attention, but there are also problems in other Western and CEE countries, including Russia. Although the focus has been on road, it also involves rail and shipping, with air being less affected.

ECMT Resolution n° 99/3 made two main requests:

- To shippers and hauliers to do everything possible to ensure that their vehicles are secure when being loaded or while parked.
- To national authorities, where appropriate, to draw up regulations on the conduct of investigations.

10. Effective since 1st January 2001 for railway transport.

As regards the first point ECMT continues to work with the profession and other actors to improve security.

As regards the second point, it is clear that the transport sector cannot be held responsible for the problem of illegal immigration. Extremely desperate people are taking enormous risks to enter different transport modes and it is not possible for transport operators or authorities to eliminate this at an affordable cost. The request from the transport side is that, when illegal immigrants are found, national regulations for the conduct of inquiries are drawn up.

ECMT's role is to continue to urge transport operators to take all reasonable precautions to protect themselves from illegal use and also to try and ensure that no unnecessary burdens are placed on the sector.

2. FRAUD IN TRANSIT SYSTEMS

Transit is a customs procedure, which suspends all customs duties and taxes on goods, while they are being carried in the territory of a State or a number States belonging to a customs union.

In the case of transit in European countries, there are two different systems which comply with this general definition: the first, which applies to all transport modes, concerns countries in the European Community, EFTA and recently the Visegrad countries (Czech Republic, Hungary, Poland and the Slovak Republic) - the system is known as Common transit; the second, which has a wider geographical coverage but is limited to road transport or to multimodal transport that includes sections of the journey by road, is known as the System TIR (Transport International Routier).

In the early 1990's the International Transit Regimes (TIR and Community) were at risk of collapse due to fraud. In recent years, there has been an enormous effort to reduce this fraud and during the second half of the nineties customs control systems and legislation have been reinforced and procedures have been adapted and modernised.

2.1 System TIR

With a view to reducing fraudulent activities in the framework of the TIR Customs Transit Regime, the 64 contracting parties and the international road transport industry have, since 1995, taken a large number of measures trying to curb international customs fraud while at the same time continuing to provide the facilities of the TIR Convention, particularly for East West European road transport and trade. These measures included the establishment of an international EDI control system for TIR Carnets, operated in co-operation with national transport associations and the International Road Transport Union (SAFETIR). Today more than 80% of the nearly 2.8 Million TIR transport operations annually undertaken are centrally recorded and analysed by the system.

However, in order to stabilise the TIR system in the longer term, more profound modifications in its operation and in the Governmental co-operation and control mechanisms were necessary. A first package of amendments to the TIR Convention entered into force in early 1999 and included controlled access to the TIR regime, transparency in the functioning of the international guarantee system and the establishment of an inter-governmental supervisory organ, the TIR Executive

Board (TIRExB) in Geneva. A second package of a large number of amendments to the TIR Convention, stipulating clearly the legal and administrative responsibilities of Customs authorities, transport operators as well as all other actors in the TIR regime, has been completed by the UN/ECE and the TIR Administrative Committee in 2000 and is expected to come into force in all 64 Contracting States to the Convention by mid-2002.

Work is continuing within the UN/ECE with a view to introducing modern electronic data processing mechanisms into the TIR system without changing its basic philosophy as well as its legal and administrative structure. With the conclusion of this strategic TIR revision process, possibly in the year 2003, this only world-wide Customs transit system should be well positioned to cope with the future challenges faced by international transport and will no longer constitute an easy target for international organised crime.

While the TIR Customs transit system seems to be secured for the time being, attention must be given to other elements in the international transport chain which are increasingly targeted by organised crime, such as double invoicing, false declarations and the emergence of bogus or so-called "one day consignees".

With a view to improving risk management capabilities by customs authorities, private associations and the international guarantee providers of the TIR system, it is also indispensable in the future that Customs enforcement authorities, the TIRExB as well as the international TIR guarantee providers (insurers) pool their knowledge and data at the international level. Effective international risk management is at present not possible due to national data protection regulations and commercial secrets of insurers and other private actors.

2.2 Community/Common Transit

As mentioned in the introduction, the Community/Common Transit is used for the transport of goods within the European Community with suspension of the duties and taxes payable thereon. The same system is also used for the transport of goods between the Community and other countries that are contracting parties to the Common Transit Convention.

Community/common transit has many similarities to TIR and has had a similar history of large-scale fraud leading to substantial losses of revenue for national and Community budgets. To address the problems, a process of transit reform was launched by the European Commission's Action Plan for Transit in Europe in response to the recommendations of the European Parliament's Committee of Inquiry into the Community Transit System.

Major efforts have been made also to improve the Community Transit system. The reform falls into three areas:

Legislative reform. Community regulations and the Common Transit Convention have been revised to clarify and strengthen the transit rules for the benefit of both customs and the trade. In particular, they aim to prevent fraud by targeting the risks attached to the operators and the goods involved in transit operations. Operators are required to be authorised by the customs authorities and must meet reliability criteria when they carry high-risk goods and use simplified procedures. Most of the new legislative provisions will be applied with effect from 1 July 2001.

Operational measures. The legislative changes have been accompanied by operational measures to improve the management and control of transit operations and to improve co-ordination between the 22 customs administrations involved.

Computerisation. The current paper-based transit system is in the course of being replaced by a modern computerised system. Implementation of the new system started in 2000 with the participation of five countries and over the next three years will be gradually extended in geographical scope and operational coverage until complete.

While it is believed that these measures have been effective there is not concrete evidence of the extent of the improvement.

A priority issue for the ECMT Steering Group has concerned data on transit fraud. All customs administrations carry out their transit controls on the basis of risk assessment and targeted controls. For this, data on known and suspected risks must be available to operational customs staff, including for example data on the risks arising from the goods, their origin, the operators involved and the modes of transport used. Data will be collected and used at the level of local customs offices but it will also be collected, analysed and disseminated at national level. Data about cases of fraud will play an important part in this and will also be used to evaluate the success of measures taken to prevent fraud and to trigger any necessary further action. This approach can be extended to the international level and the European Commission collects information about transit fraud for these reasons.

The collection and use of transit data is primarily a role for customs administrations at local, national and international level but other authorities and trade sectors can play a useful part. All concerned should be encouraged to recognise the importance of the task and to ensure that is carried out.

2.3 Conclusions

There have been significant improvements in the operation of the Transit regimes and it is believed that there have been large reductions in fraud. But it is still not possible to quantify the extent of remaining fraud which is believed to be very large. There is a continuing need to improve the analysis and understanding of this issue.

As indicated, it is now believed that the mechanisms of fraud have changed and that the legal and organisational weaknesses of certain states have become the preferred field of activities for fraudsters.

Among these emerging problems are:

- Customs clearance procedures in licensed warehouses.
- Problems with the setting up of bogus or “one day” companies.
- Under-invoicing.
- Concealment of goods by false declaration.

The solutions to these problems require strengthened control in some countries on the setting up of companies and the registration of commercial operators, exporters taking more responsibility in the choice of business partners, restrictions on TIR operational procedures to a limited number of custom offices and better information flows between the public and private sector on the detection and prevention of fraud.

ECMT will continue to follow this issue based on information from UN/ECE and the European Commission.

Part IV.

MINISTERIAL CONCLUSIONS

CONCLUSIONS AGREED BY MINISTERS IN LISBON ON 29-30 MAY 2001

The above material shows that crime in transport is a wide ranging topic with many different aspects. It shows also that transport Ministries are one of the several actors with possibilities to contribute to reducing crime. In order to do so fully:

MINISTERS:

NOTED the Reports on Theft of Goods and Goods Vehicles [CEMT/CM(2001)19] and Improving Security for Road Freight Vehicles [CEMT/CM(2001)20].

NOTED the progress and problems in implementing previous Resolutions and in particular:

- with the Transit systems;
- with illegal immigration.

ENDORSED the recommendations in the reports completed (see Part I, Section 6 and Part III, Section 7 above).

AGREED to strengthen their efforts to reduce crime in transport by:

- accelerating the implementation the two resolutions adopted in ECMT;
- implementing the recommendations in the new reports;
- improving co-ordination and co-operation with the other concerned actors and authorities;
- nominating a point of contact to co-ordinate the Ministries activities on Combating Crime in Transport.

AGREED that ECMT continues to work on this topic, in particular by:

- following up the specific recommendations in the above reports;
- examining the issues and implications of the electronic tracking of goods,
- starting to examine passenger security.

RESOLUTION NO. 1999/3 ON CRIME IN TRANSPORT

[CEMT/CM(99)4/FINAL]

The ECMT Council of Ministers of Transport, meeting in Warsaw on 19 and 20 May, 1999:

NOTING the report [CEMT/CM(99)11], reviewing progress since the adoption of the comprehensive Resolution (Resolution No. 97/2) in Berlin in 1997.

NOTING ALSO THE PROGRESS MADE:

- to better understand the nature and extent of transport related crime;
- to improve information flows between the various bodies implicated in the fight against crime;
- to draw up a treaty concerning a European Vehicle and Driving Licence Information System (EUCARIS);
- to inform hauliers of the risks and to give them advice on *inter alia* safe parking places through, the publication of the joint IRU/ECMT booklet;
- to reform the transit systems within the context of the UN/ECE (in WP30) and the EU (Action Plan, including the New Computerised Transit System);
- by the haulage profession (through their national associations) and the IRU, notably through the development of the SAFETIR system.

CONCERNED:

- that crime is taking on new forms and using all modes;
- that data on the subject are still unreliable, making assessments of the extent and nature of crime difficult, as well as making international comparisons unreliable;
- that illegal immigration has become a new problem.

REITERATE the importance of continuing actively to implement the provisions of Resolution No. 97/2 adopted in Berlin.

IN ADDITION:

In relation to the Theft of Goods:

RECOMMENDS:

In general

- that further work to obtain and make available comparable information on transport crime (including harmonised definitions and concepts) should be undertaken;
- the examination of how anti-theft devices and communication systems which allow vehicles and wagons to be tracked can be brought quickly onto the market;
- that Member countries identify high-risk locations and situations, so that surveillance and checks can be targeted.

In relation to road transport

- that countries should consider joining the European Vehicle and Driving Licence Information system, known as 'EUCARIS';
- that ECMT and IRU should update the handbook on parking provisions, improving it where possible by the addition of information on the levels of security and services available.

In relation to Fraud in the Transit Systems:

URGES:

- UN/ECE, in particular WP30, to complete stage two of the reform of the TIR convention as rapidly as possible;
- the European Community and the national customs administrations concerned, to complete in the short term the current reform process of the Community and common transit systems and to allocate the necessary resources for their computerisation and proper functioning;
- customs authorities to give full attention to the possibility of shortening significantly the notification period for non-discharged operations;
- national associations, in collaboration with competent authorities, to seek solutions to the problem of the outstanding debts.

In relation to Illegal Immigrants:

REQUESTS:

- national authorities, where appropriate, to draw up regulations on the conduct of investigations;
- shippers and hauliers to do everything possible to ensure that their vehicles are secure when being loaded or while parked.

REQUESTS THE COMMITTEE OF DEPUTIES:

- to set up appropriate methods and structures so that ECMT can contribute to the fight against crime through focussed actions on the particular issues identified above;
- to report back again on the progress in implementing these recommendations and those in Resolution No. 97/2 and on any further actions that need to be taken.

RESOLUTION No. 1997/2 ON CRIME IN INTERNATIONAL TRANSPORT

[CEMT/CM(97)6/FINAL]

The ECMT Council of Ministers' meeting in Berlin on April 21-22, 1997,

EXPRESSING great concern about the sharp increase in criminal acts affecting international transport, especially fraud in the transit systems as well as the theft of vehicles and goods and attacks on drivers.

EMPHASISING:

- the necessity to ensure that transport operations by all modes of transport are carried out safely and that goods, equipment, personnel and public financial interests are protected from criminal acts at all stages during their journey;
- the importance to international trade of efficient administrative procedures including those at border crossings;
- the contribution that the transit regimes TIR and T have made to facilitating trade and transport and the vital importance of maintaining these regimes;
- that the transit regimes, independent of the financial guarantees on which they are based, can function only if the procedural arrangements are precisely applied at all levels by the competent authorities, as well as by the users of these regimes (freight forwarders, shippers, operators, etc.).

REALISING that the fight against crime and fraud requires concerted and co-ordinated actions from all those with an interest.

WELCOMES in this regard:

- the European Commission Interim Report on Transit and the European Parliament inquiry on the same subject;
- the initiatives that have been taken by the International Chamber of Commerce to provide, via the ICC Commercial Crime Bureau, advisory, preventive and responsive services related to commercial crime and, in particular, to combat and prevent maritime fraud through the ICC International Maritime Bureau;
- the measures already taken by the national Customs Authorities, the European Community, the UN/ECE Working Party on Customs Questions Affecting Transport (WP30), the TIR Administrative Committee and the IRU.

DETERMINED to do everything possible to protect the safety and efficiency of international and national transport.

NOTES the contents of report CEMT/CM(97)7 and its analysis of the problems.

RECOMMENDS:

In relation to the theft of goods and vehicles and attacks on drivers

Ministries of Transport:

- to set up improved contacts with the police and customs authorities as well as trade organisations to ensure that information on crime, crime trends and criminals is exchanged wherever appropriate;
- to check that operators given licences and permits are *bone fide* operators without criminal records pertinent to vehicle/freight crime;
- to maintain information on persistent offenders and withdraw licences or refuse to grant permits to them;
- to provide information and advice to operators on theft avoidance, safe practices, recommended routes, protected parking areas and appropriate precautions;
- to encourage the setting up of secure and safe parking areas and freight traffic centres for trucks and loads (containers, trailers, swap bodies). Standards of protection for such areas must be defined to commonly agreed levels or criteria;
- to work together with the profession and other Ministries to ensure that information on these locations is available and regularly disseminated.

Authorities responsible for vehicle regulations:

- to examine forms of vehicle identification which would make removal or falsification as difficult as possible;
- to examine security procedures that can prevent stolen vehicles being given new identities under their existing Vehicle Identification Number;
- to take initiatives to make the alteration or removal of a Vehicle Identification Number a crime;
- to take initiatives to make the current voluntary practice of applying Vehicle Identification Numbers to trailers over 750 kg compulsory (based on the EU Directive 76/114 on Statutory Plates);
- to encourage the voluntary marking of major components and the definition of a common European specification for making the Vehicle Identification Number more visible;
- to encourage the development of European requirements for security features such as effective door and luggage compartment locks;
- to take measures for exchange of computerised information among Registration authorities with a view to preventing registration of stolen vehicles and other vehicle-related fraud.

Road Transport Operators, through their national and international organisations:

- to take all possible precautions to avoid exposure to theft or attack;
- to exchange experience and compile and disseminate information on good practice, on effective deterrents and technical equipment;
- to work on introducing modern communication systems from vehicles and for tracking vehicles in international transport;
- to draw up a code of conduct whereby those actively participating in criminal actions are excluded from membership of associations.

Vehicle Manufacturers and Equipment Suppliers:

- to provide improved antitheft systems on vehicles as indicated by EU Directive 95/56 of 8 November 1995 and ECE Regulations 18 and 97;
- to examine the possibilities for improving the security of vehicle identification systems;
- to test, for example in the context of the EU technological programmes, devices and equipment that can reduce the possibilities of theft or falsification.

Police Authorities dealing with transport related crime:

- to intensify investigation activities in order to identify and prosecute those responsible for crime and fraud;
- to exchange intelligence and data and generally improve national and international contacts;
- to work together with transport and other Ministries, as well as professional organisations, to gather and exchange information (especially about suspect operators);
- to provide information on good practice to operators.

Insurance Companies:

- to encourage and provide incentives to operators to use effective anti-theft devices and systems;
- to provide information to operators on these systems and on good practice.

In relation to fraud in the transit systems

Ministries of Transport:

- to deepen co-operation with national organisations for International Transport and their international body (IRU);
- to consider the Community/Common transit and TIR regimes as key regimes in the facilitation of the international carriage of goods, and to support their uniform application and rapid revision.

Customs Authorities:

Generally:

- to apply fully and in an harmonised way the provisions set out in the Community/Common Transit Legislation and the TIR Convention;
- to streamline all documentation procedures and to use modern Electronic Data Interchange methods;
- where appropriate, to give clearer instructions to ensure a better control of goods circulating under the transit regimes;
- to strengthen training and information so that officials can better appreciate the importance of their work and better master the procedures they have to put in place;
- to take actions to control the discharge of TIR carnets more effectively and allow the international guarantee chain to be aware of operations underway;
- to have recourse to guarantees only when they have taken all reasonable steps themselves;
- to review the deadlines for the notification of non-discharged operations with a view to reducing them significantly.

In relation to the TIR Convention:

- to accept and implement urgently Resolution 49, adopted by the UN/ECE Working Party on Customs Questions Affecting Transport;
- to complete as a first step the revision of the Convention as a matter of priority;
- to move as soon as possible towards a more fundamental revision of the Convention;

Shippers, forwarders, hauliers:

- to verify the authenticity of their agents and clients, using existing sources including the ICC;
- to use the safe areas designated by local or national authorities.

Insurance companies, guaranteeing associations:

- to implement strict rules of access to the transit systems;
- to investigate exchange of information between themselves and other parties involved in international transit better to identify incidences of crime and fraud.

In relation to the Community/Common Transit

- to support the reform of the regimes;
- to support transit computerisation projects (NCTS).

In relation to the legal framework

Competent authorities:

- to examine in which cases the differences and anomalies at international level in legal liability between modes might be a factor in crime, and to propose appropriate changes.

In relation to information and statistics on the extent of crime

Competent bodies:

- to examine available national and international data sources with a view to having more reliable information on the extent of the problem.

COMMITS ITSELF:

- to make further efforts to improve the enforcement of existing rules and regulations and achieve convergence in the practices involved;
- to examine the relationship between transporters and shippers with a view to defining measures which would avoid unjustifiable pressure to illicit behaviour by transporters;
- to make continuous efforts to ensure that strict qualitative criteria for access to the transport profession are applied and that training of operators is given a high priority.

REQUESTS the Committee of Deputies:

- to send this Resolution to all those concerned in the fight against crime in transport;
- to report back at the next session on progress in implementing these recommendations.

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