

# Cross Alpine Freight Transport (CAFT) survey – SDDS

This document contains a filled-out SDDS template for the Cross Alpine Freight Transport (CAFT) survey. Explanatory notes from the template were kept formatted in green with angle brackets. The document contains a “base page” with general and minute information of the survey. More detail is given in the second section “summary methodology”.

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## Base Page

<b>Geographical area</b>	Survey of total heavy goods vehicles traversing the alps at crossings (passes) accessible for vehicles with admissible weight of more than 7.5 tons.
<b>Data category</b>	Road freight transport; origin/destination data, transport volumes.

Last update of this document: 4 January 2007

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<b>The Data: Coverage, Periodicity and Timeliness</b>	
<p><b>Coverage (data characteristics)</b>            &lt;This section provides a summary description of the key characteristics of data. These include the points listed in the box opposite. More detailed information should be entered in the "summary methodology" &gt;</p>	<p><b>Short description</b></p> <ul style="list-style-type: none"> <li>▪ &lt;Purpose of statistics with summary description of main components disseminated (in addition, link to external file targeted to general public, if available)&gt;              CAFT was designed to complement available statistical sources on road transport in the alpine region with data on commodities carried by vehicles, their weight as well as origin and destinations of their trips. CAFT provides microdata to serve as a basis for suitable aggregates. For an overview of its components see "summary methodology" and the table in the appendix to this document.</li> <li>▪ &lt;Unit of measure used (unit in which the associated values are measured)&gt;              CAFT collects data on a single trip of a truck with admissible weight greater than 7.5 tons. Measures refer basically to vehicle and load weights in kilograms and tons, respectively. Variables with geographic reference use the NUTS coding. For an overview of variables see the table in the appendix to this document.</li> <li>▪ &lt;Geographic coverage (the extent or area covered by the data):&gt;              CAFT covers origin and destination of goods vehicles above 7.5 tons of admissible weight as well as rail and combined transport traversing the alps at sixteen major crossings (passes).</li> <li>▪ &lt;Existence of statistical adjustments (e.g. seasonal adjustment):&gt;              In the sampling procedure the sampling periods are determined such that vehicles are sampled in representative hours of the day, days of the week and seasons of the year. Finally, global population estimates are grossed up to the annual totals ensuring a correct distribution of types of hours, days, seasons, axle configurations and type of vehicles.</li> <li>▪ &lt;Classification system adopted (short mention):&gt; Generally the design of the survey is oriented towards European Council Regulation 1172/98 on statistics on the carriage of goods by road. Classifications for variables of statistical units are given in the appendix to this document.</li> <li>▪ &lt;Short statement on the main sources, or the variety of sources on which statistics are based, such as administrative, survey, institutional data, or other statistics&gt;              Primary data sources are interviews (data collection for road traffic) and databases of intermodal as well as rail operators (unaccompanied and accompanied combined transport) for rail transport data collection. Automatic and manual traffic counts as well as toll statistics are used to inflate results to annual estimates.</li> </ul> <p><b>Time coverage</b></p> <ul style="list-style-type: none"> <li>▪ 1994 to 2004</li> </ul>
<b>Periodicity</b>	<ul style="list-style-type: none"> <li>▪ 5 years</li> </ul>
<b>Timeliness</b>	<ul style="list-style-type: none"> <li>▪ 1 year</li> </ul>

<b>Access by the Public</b>	
<b>Advance dissemination of release calendar</b>	Apart from a general and informal release schedule (every five years starting from 1994) there is no advance dissemination of release calendars.
<b>Simultaneous release to all interested parties</b>	<ul style="list-style-type: none"> <li>▪ &lt;Dissemination to interested parties, special groups etc.&gt; Data are disseminated to all interested parties for non-commercial use upon request.</li> <li>▪ &lt;Additional information (e.g. news releases for "flash estimates")&gt;              Additional information is given by summaries of the respective CAFT survey at  <a href="http://www.bmvit.gv.at/verkehr/gesamtverkehr/statistik/downloads">http://www.bmvit.gv.at/verkehr/gesamtverkehr/statistik/downloads</a></li> </ul>

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<b>Integrity</b> <b>(transparency of practices and procedures)</b>	
<b>Dissemination of terms and conditions under which official statistics are produced, including those relating to the confidentiality of individually identifiable information</b>	<p><b>Rules on statistical compilation</b></p> <ul style="list-style-type: none"> <li>▪ &lt;Principal legislation on statistical compilation (legal acts) or gentleman's agreement specific to the domain:&gt; Statistical compilation is based on a gentlemen's agreement between the ministries of transport in France, Switzerland and Austria.</li> <li>▪ &lt;Methodological requirements (summary, if necessary links to the source publication)&gt; Survey has to follow the sampling framework described in "Summary Methodology". Apart from the orientation towards certain methodological standards (EC regulation 1172/98) and classifications there are no requirements.</li> </ul> <p><b>Regulation on statistical confidentiality</b></p> <ul style="list-style-type: none"> <li>▪ There are no confidentiality issues identified.</li> </ul>
<b>Provision of information about revision and advance notice of major changes in methodology</b>	<ul style="list-style-type: none"> <li>▪ &lt;Status of data upon release: final, provisional (e.g. "monthly releases may include provisional data that is confirmed the following month")&gt; As soon as data are authorized, they are considered final and ready for release.</li> <li>▪ &lt;Practices according to which data are revised (major causes of revisions): the detailed description can be included in the summary methodology or linked to as an external file&gt; There is no revision policy defined for CAFT. See summary methodology.</li> <li>▪ &lt;How major changes in methodology are notified (e.g. "major changes in methodology are the result of legislation, and therefore announced in the Official Journal of the European Communities" or "substantial changes in methodology are also explained with the first release of data affected by such changes")&gt; Substantial changes in methodology are published with the first release of data affected by such changes.</li> </ul>

<b>Quality</b> <b>(information the user needs to assess data quality)</b>	
<b>Dissemination of documentation on methodology and types of data sources used in preparing statistics</b>	<ul style="list-style-type: none"> <li>▪ &lt;References to detailed methodology: methodological papers, summary notes or papers available on request from the producer (direct link if possible, or bibliographical references for paper publications)&gt;</li> <li>▪ Schmidt, M. and Spiegel, T.: The CAFT Initiative for the Alpine Region, In: Towards a European Transport Policy Information System, Nakladatelstvi a vydavatelstvi litomysleskeho seminare, Prague, 2005.</li> <li>▪ European Commission DG TREN: Thematic Network on Trans-Alpine Crossing (Alpnet) - Cross Alpine Freight Transport Survey - CAFT 1999, Common Report for France, Switzerland and Austria, 2000.</li> <li>▪ Additional information is given by summaries of the respective CAFT survey at <a href="http://www.bmvit.gv.at/verkehr/gesamtverkehr/statistik/downloads/">http://www.bmvit.gv.at/verkehr/gesamtverkehr/statistik/downloads/</a>.</li> </ul>
<b>Dissemination of component detail, reconciliations with related data, and statistical frameworks that support cross-checks and provide</b>	<ul style="list-style-type: none"> <li>▪ &lt;Component detail below the aggregate level (published, i.e. not in conflict with confidentiality)&gt; CAFT is designed to provide microdata as a basis for aggregates. For a detailed list of variables see the table in the appendix to this document.</li> <li>▪ &lt;References to related domains and data bases (for instance, to other data collections) or to specific analyses&gt; CAFT results (modal splits etc.) for annual traffic counts in the CAFT</li> </ul>

assurance of reasonableness	<p>area (Alpinfo).</p> <ul style="list-style-type: none"> <li>▪ &lt;Links to other information sources and publications, if possible (including, if relevant, other national or international sources)&gt; n.a.</li> <li>▪ &lt;Comparisons and reconciliation with related data that are available to assist users in checking the data&gt; n.a.</li> <li>▪ &lt;Breaks in time series (if applicable)&gt; n.a.</li> <li>▪ &lt;Quality framework (link to external documentation on quality assessment and, if available, to quality reports)&gt; n.a.</li> </ul>
<b>Notes:</b>	<ul style="list-style-type: none"> <li>▪ See section "Reference period" in summary methodology. Apart from this warning no issues are known.</li> </ul>

<b>Dissemination Formats</b>		
<b>Hardcopy</b>		
	<b>News releases:</b>	n.a.
	<b>Publications:</b>	n.a.
	<b>More information on publications:</b>	Publications concerning CAFT are provided on <a href="http://www.bmvit.gv.at/verkehr/gesamtverkehr/statistik/downloads/">http://www.bmvit.gv.at/verkehr/gesamtverkehr/statistik/downloads/</a>
	<b>Other:</b>	n.a.
<b>Electronic</b>		
	<b>On-line or database.</b>	None
	<b>Internet address:</b>	None
	<b>CD ROM:</b>	SPSS or DBase files with vehicle and commodity records
	<b>Other:</b>	SPSS or DBase files with vehicle and commodity records

## Summary Methodology

Geographical area	Survey of total heavy goods vehicles traversing the alps at crossings (passes) accessible for vehicles with admissible weight of more than 7.5 tons.
Data category	Road freight transport; origin/destination data, transport volumes.

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### Concepts, definitions and classifications

- **Statistical concept**

<This section should define the statistical concept under measure and the organisation of data according to European guidelines, i.e. the type of variables included in the domain of study>

Road transport through and within the alps is permanently monitored through automatic road counts and toll statistics. Information on rail flows is available in databases of rail and combined transport operators. However, general statistics are restricted to global figures of transport volumes broken down by country of survey. CAFT aims to complement information this information by data on the commodities carried by trucks, their weight, origin/destination of trips. Furthermore, data are collected concerning the type of vehicle, empty and maximum admissible weights, axle configuration and country of registration.

Information is gathered through interviews with truck drivers at major alpine crossings and intermodal terminals. For data on unaccompanied combined and rail transport CAFT relies on information provided by operators of railways and intermodal services.

- **Definition of indicators**

<These definitions should make clear the types of indicators provided (raw figures, annual growth rates, index type with base period, flow or stock data,...)>

CAFT provides microdata to serve as a basis for suitable aggregates. As such measures refer basically to vehicle and load weights in kilograms and tons, respectively. Variables with geographic reference use the NUTS coding. For an overview of variables see the table in the appendix to this document.

- **Classification system and conformity with official standards**

<If a European or international standard is used, this section should contain a clear reference. Any peculiarity should be noted, together with the reasons and plans for implementing the existing guidelines. For data categories where no guidelines exist, national or international practices should be briefly presented>

The questionnaire for the study is harmonized across the three countries of survey and designed with reference to EC regulation 1172/98 concerning the classification of road carriers and types of transport. For detailed reference to

classifications used see the table in the appendix to this document.

### **Scope / coverage of the data**

- **Geographical coverage**

<Detailed coverage of aggregates provided, for the indicators the metadata file refers to (e.g. EU-15, EU-25, Euro zone)>

CAFT surveys all flows of heavy goods vehicles (total weight greater than 7.5 tons) traversing the alpine arcs at defined crossings in France, Switzerland and Austria. There is no restriction on the data collected for origin and destination of trips as well as registration of vehicles (i.e., world-wide).

- **Statistical units**

<Entities for which information is sought and for which statistics are ultimately compiled; reporting unit (the unit that supplies data for a given survey instance)>

Statistical units are freight transport trips traversing the alps at sixteen defined crossings. For road transport this includes vehicles above 7.5 tons used to execute these trips.

- **Statistical population**

<Target population (the statistical universe about which information is sought) as defined by the relevant legislation - and actual coverage achieved with respect to the target population>

The statistical population consists all road vehicles traversing the alps at sixteen defined crossings (passes). It covers only vehicles with an admissible weight of more than 7.5 tons. Additionally, it covers combined transport on the routes

### **Accounting conventions**

- **Reference period**

<Period of time the data refer to (including any particular arrangement, for instance, possible differences between reference period and data collection period)>

Data refer to the years of survey. In 1999, data were collected between March 1999 and March 2000 in Austria. Figures were grossed up to remain comparable to results from Switzerland and France. No further deviations are known.

- **Base period**

<Period of time for which data used as the base of an index number, constant prices data or other ratio, have been collected>

There are not any specific indices calculated in CAFT. Thus, there is no need to define a base period. Ratios of volume changes may be calculated on a year-to-year basis. CAFT provides data for comparison with the previous reference period.

- **Recording of transactions**

<Types of valuation (accrual, cash, volumes, values, prices, conversion rates, stock or flow data, etc.)>

## Nature of the basic data

<Cross-national data are mostly compiled on the basis of national figures. As far as a statistic has achieved some input harmonisation, this is worth to be reported in a very synthetic way. If diversity prevails, users should be informed too>

CAFT uses a common methodology in all participating countries (currently France, Switzerland and Austria). This makes data comparable and leads to consistent results for the entire alpine region. Therefore the CAFT survey represents a best-practice example for the multi-lateral cooperation towards the establishment of a comprehensive statistical programme.

- **Data sources used**

<(e.g. survey, administrative, institutionally provided by member States or derived from other statistics)>

Primary data sources are interviews (data collection for road traffic) and databases of intermodal as well as rail operators (unaccompanied and accompanied combined transport) for rail transport data collection. Automatic and manual traffic counts as well as toll statistics are used to inflate the sample results to total annual volume estimates.

- **Type of survey**

<Statement summarising the main characteristics of survey procedures (census, random sampling, purposive sampling, possible use of cut-off - including information on the sampling size): provide link to any relevant information available on the Internet>

Concerning the sampling for road traffic the CAFT survey is implemented following a two-step approach: first, the survey period is determined; secondly, the number of vehicles to be surveyed is specified. For the selection of the survey period several days spread over the entire year are chosen. The sampling aims to give a representative distribution of hourly periods within the day, type of days within the week and different seasons of the year. For each sampling period, interviews are carried out on a continuous and consecutive basis: road vehicles are stopped by police or customs who are instructed to stop the next lorry once an interview is completed. As this sampling procedure is not based on any specific characteristics of the next vehicle stopped, it can be considered nearly random within each given sampling period. The approach for rolling road (accompanied combined transport) is in principle comparable to the one for road, but simplified. The extraction of information from the databases of the railway operators, which contains the information of the place of loading, unloading and - in the case of wagon load transport - the type of goods, is self-explanatory. For unaccompanied transport there is no information on the type of commodity, the origin and the destination.

- **Techniques of data collection**

<Statement summarising the main characteristic of data collection techniques: self completion or interview, and electronic or paper (examples: self administered paper mail questionnaire, self administered electronic e-mail questionnaire, computer assisted personal interview, computer assisted telephone interview, web questionnaire, etc.): provide link to any relevant information available on the Internet>

The interviews are carried out in parking areas or (in Switzerland) at the roadside, where the lorries were diverted to. The interviewers are asked to make as many interviews as possible.

The interviews are supported by pocket computers enabling a standardised interviewing procedure and a coding on site as well as an instant check for the plausibility and the storage of the data.

The content of the interview is oriented towards the common demands of the monitoring of transalpine transit flows. It also takes into account specific demands from the European level. Thus it is harmonised as far as possible with the definition of the EU-regulation (1172/98) concerning the statistics on road freight transport.

The following items are directly observed by the interviewer:

- Type of vehicle (lorry without trailer, lorry with trailer, tractor with semi-trailer)
- Axle configuration
- Vehicle's relevance for combined transport
- Type of dangerous goods (not in Switzerland)
- Nationality of registration of vehicle

The interview with the driver consists of a harmonised set of questions in all three countries:

- Place of loading (of the biggest unit of goods carried) or origin of the trip
- Place of unloading (of the biggest unit of goods carried) or destination of the trip
- Total weight of load
- Type of commodity (of the biggest unit of goods carried) according to Eurostat classification
- Information on the route choice: points of border crossing of the alpine country other than the survey point if at border (if relevant).
- Information on detour trips from the closed alpine crossings (cf. Accidents at Mt. Blanc and Tauern)

Additionally, there are questions only asked in only some of the countries:

France only:

- Information on the route choice, indicated by drawing on a map, for transit traffic
- Indication about the modal type of the platform at the loading and/or unloading point, if any
- Indication about the initial origin / final destination in those cases where road is only a part of the total transport chain of the goods
- Mileage of vehicle
- Number of litres of fuel bought in the country of survey

Austria and Switzerland only:

- Type of transport (hired / on own award / other)
- Vehicle empty weight (lorry, trailer)
- Maximum admissible total weight

Austria only:

- Onboard unit for Ecopoint system (observed by interviewer)
- Toll vignette (observed by interviewer)

The software supporting the interview offers possible answers for all questions ("multiple choice style"). Locations for the origins and destinations of the lorries are assigned to a specific zoning system. The interviewing software therefore includes a database containing the capital and main communities of every zone.

### **Compilation practices (data processing)**

#### **▪ Adjustments**

<The set of procedures employed to improve coverage and valuation of the data, or to conform to a recording convention, or to address data quality in compiling specific data sets (seasonal adjustment, working day adjustment, data reconciliation, rebasement, outliers correction, treatment of statistical discrepancies, etc.): provide link to relevant external files for more information>

In order to eliminate or reduce sampling error and sample bias as well as to infer the annual total traffic volume, data were corrected concerning nationality and type of vehicle, distribution of vehicles' axle configuration and distribution of vehicles with respect to the time of survey (by day, month and season). This stratified projections are based on data from permanent automatic counting installations, toll data and manual counts.

#### **▪ Data validation of statistical data**

<Controls made in terms of quality of the data. In this process, several dimensions can be distinguished: (i) validation before and after publication and (ii) validation of input national data and validation of EU data (including micro-editing and imputation)>

Interviews are carried out using a computer-assisted interviewing technique (CAPI) which provides considerable support for ex-ante validation of microdata. There are validation steps for collected data (see section "Adjustments" above). Since national data are collected with a common methodology in all three countries there is no validation necessary.

#### **▪ Revision policy**

<Policy - or set of policies - aimed at ensuring the transparency of disseminated data, whereby preliminary data are later revised when more and better source data become available (frequency of revisions, reason and type of revision - regular or occasional)>

There are unofficial preliminary releases of data on a more aggregated level (e.g., O/D data on NUTS0 before they are split into lower NUTS levels). However, this information is preliminary before data are officially considered final. After data are seen as final, there is no specific policy for revision.

**Other aspects**

- **Special warnings**

See section "Reference period". Apart from this warning no issues are known.

## Appendix

**Table of variables and classifications in CAFT**

<b>Variable</b>	<b>Domain [units]</b>	<b>Classification type</b>
Record type	Vehicle or commodity record	survey specific
Version	Integer number	survey specific
Year of survey	Integer number (year)	survey specific
Country of survey	Country codes	NUTS0/ISO Alpha 2
Alpine crossing of survey	Codes for major alpine crossings	survey specific
Further Alpine crossings	Code list (no, 1, more than one)	survey specific
Traffic direction	Code list (north-, southbound)	survey specific
Mode of transport at Alpine crossing	Code list (road, rail: wagonload, accompanied, unaccompanied combined transport)	survey specific
Country of registration (vehicle)	Country codes	NUTS0/ISO Alpha 2
Type of vehicle	Code list (lorry/tractor with or without one or two trailers)	survey specific
Axle configuration (EC)	Code list	EC regulation 1172/98
Axle configuration (FR)	Code list	FR national code list
Dead weight of tractor or truck	Integer number [kilograms]	survey specific
Dead weight of trailer	Integer number [kilograms]	survey specific
Admissible weight of tractor and truck	Integer number [kilograms]	survey specific
Admissible weight of trailer	Integer number [kilograms]	survey specific
Type of vehicle body	Code list (tanker, reefer, canvas top, etc.)	
Year of first vehicle registration	Integer number (year)	survey specific
Traffic relation	Code list (import, export, transit, internal)	survey specific
Point of departure (road)	Country/area codes	NUTS classification (NUTS0, 1, 2 and 3, LAU2)
Point of arrival (road)	Country/area codes	NUTS classification (NUTS0, 1, 2 and 3, LAU2)
Most remote origin	Country codes	NUTS0/ISO Alpha 2
Most remote destination	Country codes	NUTS0/ISO Alpha 2
Origin on the network	Country/area codes	NUTS classification (NUTS0, 1, 2 and 3)
Destination on the network	Country/area codes	NUTS classification (NUTS0, 1, 2 and 3)
Point of border crossing (entering)	Country/area codes	LAU2 codes; border codes for FR
Point of border crossing (leaving)	Country/area codes	LAU2 codes; border codes for FR
Point of mode change (loading intermodal platform)	Area codes	LAU2 classification
Point of mode change (unloading intermodal platform)	Area codes	LAU2 classification

<b>Mode of transport (initial haulage)</b>	Code list (road, rail, water: inland/sea, air)	survey specific
<b>Mode of transport (terminal haulage)</b>	Code list (road, rail, water: inland/sea, air)	survey specific
<b>Load (commodity)</b>	Goods codes	NST/R classification (chapters 0 to 9)
<b>Dangerous goods loaded</b>	Yes/no	survey specific
<b>Type of dangerous goods</b>	Dangerous goods codes	UN number (ADR)
<b>Goods weight</b>	Integer number [tons]	survey specific
<b>Expansion factors</b>	Decimal number	survey specific