SUTRANET

A project within the Interreg IIIB North Sea Programme

STATISTICS REPORT SWEDEN –

Unitised Goods Flows via Ports in Western Sweden

Annex 1.3.3.3 to the Final Report

May 2007

AALBORG UNIVERSITY
Department of Development and Planning

PREFACE

This technical paper – including databases for unitised goods flows via ports on the Swedish west coast – has been elaborated as part of the SUTRANET project (Work Package 1: Transport Research and Development Network). SUTRANET ('**Su**stainable **Tra**nsport Research & Development **Net**work in the North Sea Region') is a project within the framework of the European Commission's (EC's) Interreg IIIB North Sea Programme.

The aim of the paper is to provide a basis for the analysis of available statistics as regards unitised goods flows via ports in western Sweden with a view to international freight traffic in the North Sea Region. They include ports along the coast of Kattegat, Oeresund ('The Sound') and the south coast of Scania. The paper gives a short presentation of the available data sources and relevant statistics. It is assumed that all ports on the west coast of Sweden, which handle unitised goods flows in international traffic, to a varying degree represent transport links related with the North Sea Region (NSR).

The SUTRANET databases for ports on the Swedish west coast are presented separately as Excel files and structured in a way so that they are consistent with the similar SUTRANET databases elaborated on unitised goods flows for other countries in the NSR. This enables a comparison and analysis of data across the countries.

The paper finally presents some findings and recommendations with the aim to improve and harmonise the statistical reporting on unitised goods traffic in between the countries bordering the North Sea.

The paper and the SUTRANET databases have been elaborated by a team of researchers at Aalborg University, Department of Development and Planning. Valuable additional information has been provided by Statistics Sweden (SIKA) and the Port of Göteborg AB (Gothenburg).

Aalborg University, May 2007

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A few editorial modifications have been added in June/July 2007.

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Abbreviations and Acronyms Used

EEA
European Economic Area.

EC
European Commission.

LoLo
Lift-on lift-off. This way of cargo handling mainly applies to container ships.

NSR
North Sea Region.

NUTS
Nomenclature of Territorial Units for Statistics. The NUTS nomenclature is a standardised and hierarchical zoning and classification system applied by Eurostat (EC's statistical office).

RoPax
RoPax vessels are ferries for combined transport of RoRo handled goods, passenger cars and passengers (Pax).

RoRo
Roll-on roll-off. RoRo vessels are freight ferries for transport of RoRo handled goods only.

SUTRANET
Sustainable **tra**nsport research **net**work in the North Sea Region.

TEU
Twenty-foot Equivalent Unit. TEU is a unit indication for the equivalent number of twenty-foot containers.

Overview of the SUTRANET Databases for Swedish West Coast Ports

The SUTRANET databases consist of information about:

- Unitised goods via Swedish West Coast Ports –
  Comparative Tables for the years 2003-2005 (ref. Annex 1).
- RoRo Traffic via Swedish West Coast Ports –
  Distribution on Swedish ports, selected North Sea countries, and on RoPax and RoRo routes (ref. Annex 2A and Annex 2B).

The SUTRANET databases for Swedish ports present the total annual throughput figures for each port. The tables in the SUTRANET database Annex 1 for 2003 and 2005 are less detailed than for 2004.

To some extent Statistics Sweden also provides a breakdown into inbound and outbound traffic (ref. the SUTRANET database Annex 2B).

The present paper provides the method of extending the databases to include additional years before 2003 and to update with year 2006.

Similar database structures have been elaborated for ports handling unitised goods in Norway, Denmark, UK, Germany, and partly the Netherlands/Belgium.

Location of Ports in Western Sweden Handling Unitised Goods

The databases include the following ports in western and southern Sweden that have been identified as handling unitised goods in 2003-2005:

1. Stroemstad
2. Lysekil
3. Uddevalla
4. Wallhamn
5. Gothenburg
6. Varberg
7. Halmstad
8. Helsingborg
9. Malmoe
10. Trelleborg
11. Ystad
12. Karlskrona.

The following overview map indicates the location of these Swedish west coast ports (except for Karlskrona). The ports handling unitised goods - which are located in southern Norway, in

Denmark, and on the Baltic Sea and North Sea coasts of Germany - are also marked on the map.

It should be noted that Karlskrona is located just outside the NSR eligible area for the Interreg IIIB North Sea Programme.

Sources of Data

The main sources of information for this paper, i.e. statistics covering unitised goods traffic via Swedish ports, are:

1) Statistics Sweden and SIKA: Statistiska Meddelanden: Foreign and Domestic Shipping Goods 2003, 2004 and 2005. These annual publications can be downloaded as a pdf-file from www.scb.se / www.sika-institute.se, and for the year 2005 the tables are also available in Excel format.
2) The Ports of Sweden database. These data (for the years 2003-2005) can be downloaded from www.transportgruppen.se.

Additional data about unitised goods traffic via Gothenburg (years 2003-2005) have been kindly provided by the Port of Gothenburg.

The annual SIKA publications in most cases apply "port areas" (and not the individual port) as statistics units. The port areas, except for Gothenburg defined as one area, include more than one port, e.g. Malmoe-Helsingborg and Stenungsund-Stroemstad. For these port areas, the SIKA publications provide relatively detailed information including a breakdown in loaded and unloaded goods, and to some extent the distribution on ferry (RoPax) routes (ref. the presentation of Tables 10A and 10B below).

In the case of the Ports of Sweden database, data are presented at a more aggregated level, but this database presents the figures for each particular port, which makes the database more accessible and useful for overview data on the handling of unitised goods.

The statistics for the two above mentioned sources is based on the same reporting from individual ports and operators in Sweden.

The website www.freightferries.co.ik/routes could be consulted concerning existing RoPax and RoRo routes.

ShipPax Information, Sweden presents some data on route lengths and frequencies (ref. 'Statistics 05. The Yearbook for Passenger Shipping Traffic Figures'; and 'Statistics & Outlook 06. The Yearbook for Passenger & RoRo Shipping').

The collection of **foreign trade statistics** (according to EU's Intrastat and Extrastat procedures) has not been possible within the limited scope of the SUTRANET project. However, the SUTRANET reports on modelling guidelines and scenario description provide some time series and findings regarding the comparison of trade and transport statistics.

Availability of port data from Statistics Sweden and SIKA:

The present paper has mainly been analysing compiled statistics covering the year 2004, because a main part of the SUTRANET data compilation was carried out during the first half

of 2006, and the SUTRANET database figures for 2004 were extracted from the SIKA publication SSM 021:0503 for year 2004.

The foreign and domestic shipping goods statistics covering year 2005 became available on the website (www.sika-institute.se) as from mid-2006, and this year and year 2003 are included in the SUTRANET databases as well. Annual statistics (in the form of pdf-files, and from year 2005 also in Excel format) - following the same structure as presented in the publication covering year 2004 – are available as from year 2000.

A breakdown on quarterly traffic is available on the website also as from year 2000. Time series for container traffic is available for the period 1996-2005.

As it is the case for other EU Member States and Norway, the statistical reporting system has to meet the requirements of the EC maritime statistics Directive (Council Directive 95/64/EC). The Council Directive has been followed up by four Commission Decisions specifying the rules and arrangements for implementing the Directive.

Comments on Relevant Tables in the SIKA Publications

This section presents a short commenting of relevant tables in the SIKA publication SSM 021:0503 that presents annual throughputs in port areas and on RoPax routes for the year 2004. The statistics published for year 2005 and previous years is structure and presented using the same types of tables, and thus the general comments below are valid also for these years.

Assumptions

The weight of goods figures in the tables includes the immediate packaging. The weights of the transport unit, and the tare weight of the container or RoRo unit, are not included in the tonnes figures presented in these tables.

Summary Table for 2004:

This table includes the total figures for Sweden (years 2003 and 2004) in 1000 tonnes for foreign traffic by lorries (32.525 million tonnes in 2004) and by rail wagons (3.599 million tonnes in 2004). The table provides a breakdown of these figures on loaded and unloaded goods.

Table 2A:

Share of types of cargo handled in Swedish ports, foreign and domestic traffic

This table provides the total figures (quantity in 1000 tonnes) for Sweden, i.e. foreign plus domestic traffic, and covering the years 2000-2004.

The table presents a breakdown on unloaded and loaded goods, and into categories of goods. The breakdown into categories of goods includes:

- containers;
- RoRo units.

For RoRo units the table provides a further breakdown into the following categories:

1) lorries, trailers and semi-trailers (accompanied and unaccompanied) as one group;
2) rail wagons;
3) other RoRo units.

Within the category 'lorries, trailers and semi-trailers' there is no specification provided of the share of accompanied trailers and unaccompanied trailers (semi-trailers) respectively.

Table 2A presents no breakdown on foreign and domestic traffic. However, according to Table 5A and Table 5B the share of unitised domestic goods is nil as regards containers and rail wagons. Relatively low figures can be derived from Tables 5A and 5B for domestic traffic by lorry and semi-trailer. When these domestic figures are subtracted from the figures in Table 2A, it results in total figures in accordance with the Summary Table mentioned above. It could be assumed that the domestic share for 'other RoRo units' is negligible as well.

Table 3A and Table 3B:

Shipping of goods between Sweden and foreign countries in 2004. Goods to/from Sweden divided into commodity groups within NST/R and geographical areas

Figures are indicated in 1000 tonnes. Table 3A presents the quantities for unloaded goods, and Table 3B the quantities for loaded goods. In addition to the breakdown into the 24 NST/R commodity groups[1], the following three types of goods are added to the tables:

1) goods on lorries and semi-trailers;
2) goods on rail wagons;
3) goods by containers.

The SIKA publication indicates that parts of the goods by lorries/semi-trailers and containers that can be identified among the 24 NST/R commodity groups are included under the respective commodity groups. However, these contributions are apparently small compared with the figures presented in the three additional groups mentioned above. This is reflected by

[1] NST/R is a revised standard goods classification for transport statistics applied by the European Commission (EC).

the figures for domestic plus foreign traffic handled in Swedish ports in total that are presented in Tables 2A and 2B. See also the commenting on Tables 8A and 8B.

The Tables 3A and 3B present a further breakdown into the "port areas" or port groups (indicated e.g. in the table about container traffic presented in the following sub-section commenting on Table 8A and Table 8B), but no specification is provided on each particular port except for Gothenburg.

As indicated above, it is assumed that the unitised goods figures for the individual port areas are very close to the total figures including parts of NST/R commodity groups.

Table 4A and Table 4B:

Shipping of goods between Sweden and foreign countries in 2004. Goods to/from Sweden divided according to dispatching/receiving country and commodity groups

Figures are indicated in 1000 tonnes. Table 4A presents the quantities for unloaded goods, and Table 4B presents the quantities for loaded goods.

These tables provide the same detail of breakdown on commodity groups and unitised goods as included in Table 3A and Table 3B. This is done in combination with a geographical breakdown including Denmark, Norway, 'Great Britain' (in this case synonymous with UK as it includes Northern Ireland), Germany and other countries. There is no breakdown on individual port areas and ports.

A summary of import figures is presented in the following Table 1 as follows.

Table 1: Import figures for unitised goods via Swedish ports 2004
(figures in 1000 tonnes)

Area of Origin/Destination	Country	Goods on lorry and semi-trailer	Goods on rail-wagon	Goods in containers
North Sea	Norway	8	-	10
	Denmark	3,710	0	94
	UK	828	-	529
	Ireland	-	-	12
	Germany (incl. Baltic Sea)	6,542	1,186	1,333
	The Netherlands	26	-	429
	Belgium	752	-	320
	Total North Sea (including Baltic Sea Germany)	11,866	1,186	2,727
Baltic Sea	Poland	1,190	210	23
	Lithuania	302	-	1
	Latvia	325	-	17
	Estonia	297	-	0
	Finland	2,175	248	16
	Russia	-	-	1
	Total Baltic Sea (excluding Germany)	4,289	458	58
Via the Channel	Ireland	-	-	12
	France	-	-	6
	Portugal	-	-	24
	Spain	-	-	79
	Italy	-	-	20
	Greece	-	-	3
	Other EC countries	-	-	0
	Total Continent via the Channel	-	-	144
Others	Island	-	-	2
	Other non-EEA countries	18	-	370
	Country not specified	1	-	190
	Total Others	19	-	562
Grand Total		16,175	1,644	3,480

A summary of export figures is presented in Table 2 as follows.

Table 2: Export figures for unitised goods via Swedish ports 2004
(figures in 1000 tonnes)

Area of Origin/ Destination	Country	Goods on lorry and semi-trailer	Goods on Rail-wagon	Goods in containers
North Sea	Norway	21	-	19
	Denmark	3,527	-	313
	UK	981	-	751
	Ireland	-	-	22
	Germany (incl. Baltic Sea)	6,301	1,525	2,825
	The Netherlands	3	-	55
	Belgium	873	-	366
	Total North Sea (incl. Baltic Sea Germany)	11,706	1,525	4,351
Baltic Sea	Poland	1,247	196	1
	Lithuania	298	-	0
	Latvia	310	-	0
	Estonia	303	-	0
	Finland	2,072	234	6
	Russia	-	-	5
	Total Baltic Sea (excluding Germany)	4,230	430	12
Via the Channel	Ireland	-	-	22
	France	0	-	2
	Portugal	-	-	15
	Spain	0	-	95
	Italy	-	-	44
	Greece	-	-	3
	Other EC countries	-	-	-
	Total Continent via the Channel	0	-	181
Others	Island	-	-	78
	Other non-EEA countries	23	-	757
	Country not specified	1	-	20
	Total Others	24	-	855
Grand Total		15,960	1,955	5,377

A summary of import plus export figures is presented in Table 3 as follows.

Table 3: Import plus export figures for unitised goods via Swedish ports 2004
(figures in 1000 tonnes)

Area of Origin/ Destination	Country	Goods on lorry and semi-trailer	Goods on Rail-wagon	Goods in containers
North Sea	Norway	29	-	29
	Denmark	7,237	-	407
	UK	1,809	-	1,280
	Ireland	-	-	34
	Germany (incl. Baltic Sea)	12,843	2,711	4,158
	The Netherlands	29	-	484
	Belgium	1,625	-	686
	Total North Sea (incl. Baltic Sea Germany)	23,572	2,711	7,078
Baltic Sea	Poland	2,437	406	24
	Lithuania	600	-	1
	Latvia	635	-	17
	Estonia	600	-	0
	Finland	4,247	482	22
	Russia	-	-	6
	Total Baltic Sea (excluding Germany)	8,519	888	70
Via the Channel	Ireland	-	-	34
	France	0	-	8
	Portugal	-	-	39
	Spain	0	-	174
	Italy	-	-	64
	Greece	-	-	6
	Other EC countries	-	-	-
	Total Continent via the Channel	0	-	325
Others	Island	-	-	80
	Other non-EEA countries	41	-	1,127
	Country not specified	2	-	210
	Total Others	43	-	1,417
Grand Total		32,135	3,599	8,857

As to Germany there is no breakdown provided on Baltic Sea ports and North Sea ports. The figures indicated in the North Sea country group in Tables 1-3 above are totals for German ports (including Baltic Sea ports). A first estimate could be that goods on lorry, semi-trailer and rail-wagon are mainly shipped via Baltic seaports, and containers are mainly shipped as feeder traffic via North Sea ports (such as Hamburg and Bremerhaven).

In the above Tables 1-3 only some minor deviations occur between the total sum figures and the 'Grand total' figures that are indicated in the SIKA Tables 4A and 4B.

Table 4C:

Goods loaded and unloaded in foreign traffic by ships, transport performance and average distance worked, divided in commodity groups within NST/R 2004

Table 4C presents the same breakdown on commodity groups as Tables 4A and 4B, but it only includes the total production figures for the sum of all Swedish ports and indicated in 1000 tonnes. In addition, Table 4C presents an estimate for each commodity group of the total transport performance figures in million tonne-kilometres and the derived average distance in kilometres.

As a consequence, the total figures for the three types of unitised goods traffic are the same as for Tables 4A+4B (total of unloaded and loaded goods):

Table 4: Comparative figures in 1000 tonnes (2004)

	Table 4C	Tables 3A + 3B	Table 2A
Goods on lorries/semi-trailers	32,135	32,135	33,605
Goods on rail wagons	3,598	3,599	3,598
Other RoRo units	-	-	2,991
Container goods	8,857	8,857	9,216

The figures in Table 2A includes a small share of domestic traffic which explains the difference compared with the other tables.

The category 'Other RoRo units' in the SIKA publication in Table 2A includes various mobile units and import/export of passenger cars. This category may also include the increasing number of containers carried on RoRo vessels (ref. the commenting below on Table 8A and Table 8B).

Table 8A and Table 8B:

Number of unloaded/loaded containers with cargo and without cargo 2004

Tables 8A and 8B provide a breakdown on foreign and domestic traffic. Domestic traffic is negligible in this case. The tables also provide a breakdown on the port areas that are specified in e.g. Tables 3A and 3B. The goods figures are indicated in TEU[2] and in tonnes.

Table 8A presents the figures for unloaded goods, and Table 8B the figures for loaded goods.

As for the total shipping of goods by containers, the tables indicate a grand total of 9,216 million tonnes (unloaded plus loaded). This figure represents a deviation from the total figure of 8,857 million tonnes that can be derived from Table 3A and Table 3B (ref. the above table presenting comparative figures). The reason for this deviation could be that a small part of the unit loads are included in the figures for the NST/R commodity groups, ref. Tables 3A and

[2] TEU is the unit for the equivalent number of twenty-foot containers (TEU = 'Twenty-foot Equivalent Unit').

3B, and/or that containers handled by RoRo equipment (e.g. mafi trailers) are included in Tables 8A and 8B, although it is indicated that "*Containers which are loaded on vehicles…are not included*".

There are also deviations between Tables 3A+B and Tables 8A+8B as regards the tonnes figures for the port areas Stenungsund – Stroemstad (224,000 tonnes versus 55,000 tonnes) and Halmstad – Varberg (163,000 tonnes versus 158,000 tonnes).

The following aggregated figures for unloaded plus loaded international container traffic via Swedish ports can be derived from Tables 8A and 8B:

Table 5: Containers in international traffic 2004 (sum of unloaded and loaded)

Port area	With cargo TEU	Without cargo TEU	Total TEU	Total tonnes	Percen-tage (tonnes)
Karlskrona - Trelleborg	20,099	7,004	27,103	206,176	
Malmoe - Helsingborg	110,412	17,660	128,072	1,189,456	
Halmstad – Varberg	15,274	7,624	22,898	162,876	
Gothenburg	567,654	154,906	722,560	5,996,885	65.1
Stenungsund - Stroemstad	18,807	7,235	26,042	223,516	
Trollhaettan - Kristinehamn	1,232	1,133	2,365	22,643	
West Total, excluding Karlskrona - Trelleborg	713,379	188,558	901,937	7,595,376	82.4
West Total, including Karlskrona - Trelleborg	733,478	195,562	929,040	7,801,552	84.7
Sweden Total	853,048	250,176	1,103,224	9,215,909	100.0

It should be noted that Gothenburg represents 65% of the total international container traffic via ports in Sweden. Ports on the west coast of Sweden, including Scania, cover more than 80% of the Swedish international container traffic.

Table 10A and Table 10B:

Passenger vessels and ferries between Sweden and foreign ports 2004.

The Tables 10A and 10B provide statistics for specific RoPax routes, and including a breakdown of tonnes and number of units on lorries/semi-trailers and rail wagons. The quantities are indicated in TEU and 1000 tonnes. The totals also include a few not specified RoRo routes, e.g. between Gothenburg and UK (indicated as 'Other routes' to/from Sweden in Tables 10A+10B).

Table 10A presents the figures for traffic entered into Sweden; Table 10B presents the figures for traffic cleared in Sweden.

The specification on routes includes:

- Gothenburg – Frederikshavn

- Varberg – Grenaa
- Helsingborg – Elsinore
- Sweden – UK (not specified on routes except for Gothenburg – Newcastle where the goods transport quantity is insignificant)
- Gothenburg – Kiel
- Malmoe – Travemünde
- Trelleborg – Rostock/Sassnitz/Travemünde
- Gothenburg – Kristiansand
- Helsingborg – Kristiansand
- Stroemstad – Sandefjord
- Ystad – Swinnoujscie
- Karlskrona – Gdynia.

For each of these routes is presented a breakdown into the following cargo handling categories:

- goods on lorries;
- goods on rail wagons;
- other goods.

The Tables 10A and 10B also present figures for traffic with Finland and the three Baltic States. The figures for Finland and Estonia, Latvia and Lithuania are not included in the SUTRANET database Annex 2.

In 2004, ferry goods carried on rail wagons was confined to the Baltic Sea routes between southern Sweden and the Baltic Sea coast of Germany and Poland as indicated in the following Table 6:

Table 6: Goods on rail wagons (2004)

To/from country	Route	Goods on rail-wagon					
		Import		Export		Total	
		1000 units	1000 tonnes	1000 units	1000 tonnes	1000 units	1000 tonnes
Germany	Trelleborg-Rostock	11.4	305.7	15.6	418.9	27.0	724.6
	Trelleborg-Sassnitz	34.9	879.9	32.2	1,105.7	67.1	1,985.6
	Total	46.3	1,185.6	47.8	1,524.6	94.1	2,710.2
Poland	Ystad-Swinoujscie	8.1	210.0	7.3	195.8	15.4	405.8
	Total	8.1	210.0	7.3	195.8	15.4	405.8
Sum for Germany and Poland		54.4	1,395.6	55.1	1,720.4	109.5	3,116.0
Sweden Grand total		60.6	1,643.6	61.3	1,954.5	121.9	3,598.1

The figures of ferry goods carried on rail wagons are included in the SUTRANET database Annex 2A table.

The category 'other goods' may include both some unitised and non-unitised goods, and is included in the SUTRANET database 2B table.

Table 11:

Share of type of cargo loaded and unloaded in Swedish ports divided in NUTS II regions 2004

This table presents the total quantities in 1000 tonnes of loaded and unloaded goods in Swedish ports divided into the eight NUTS[3] II regions in Sweden. For each NUTS II region, the table provides a further breakdown that includes the three unitised goods categories used in other tables:

1) lorries, trailers and semi-trailers (accompanied and unaccompanied) as one group;
2) rail wagons;
3) other RoRo units (that include both some unitised goods and non-unitised goods).

Other Tables

Table 1:
This table of goods handling figures for the 25 largest Swedish ports does not specify information of relevance to unitised goods.

Table 2B and Table 2C:
These tables are not relevant for information on unitised goods.

Table 4D:
This table is not relevant for information on unitised goods.

Table 5A and Table 5B:
These tables concern domestic traffic only. Table 5A and Table 5B are equivalent to Table 3A and Table 3B for foreign traffic, and they indicate zero domestic container traffic in 2004. However, according to Table 2A, the total container traffic in 2004 was 9.216 million tonnes, which exceeds the 8.857 million tonnes for foreign traffic.

Table 6:
This table concerns domestic traffic only. The table is equivalent to Table 4C for foreign traffic.

Table 7A and Table 7B:
These tables present the geographical distribution of domestic goods traffic.

[3] NUTS indicates a territorial zone classification system applied by Eurostat for presenting European regional statistics.

Table 9:
Passenger-vessels and ferries entered into and cleared from Sweden 2004.
This table presents figures for vessel traffic, including ferries, between Sweden and other countries. The table includes figures for number of vessels, number of passengers and gross-tonnage but no goods tonnes figures.

The Ports of Sweden Database

As mentioned previously, this source presents some aggregated figures on unit loads handled in each individual port. Thus the comparative summary tables presented in the SUTRANET database **Annex 1** has mainly been based on this database source.

The data available on the Ports of Sweden's website (www.transportgruppen.se) includes annual throughputs since 1999 for the following main groups:

- container traffic (1000 tonnes, number of units and TEU);
- trailers, semi-trailers, lorries etc. (tonnes and number of units);
- other RoRo cargo (1000 tonnes and number of units);
- railway wagons (1000 tonnes and number of units).

All of these figures for unitised goods include domestic traffic. However in the case of the ports on the Swedish west coast, the domestic share of the annual throughput is considered modest or even negligible. As it is the case for the SIKA publications, there is no breakdown provided of 'trailers, semi-trailers, lorries etc.' on accompanied (self-propelled) and unaccompanied (non-self-propelled) trailers. This group of figures is generally termed 'goods by lorry' in the SIKA publications.

Statistics Received from the Port of Gothenburg

The following table indicates some overall performance figures - covering the years 2003, 2004 and 2005 - for unitised goods handled via the Port of Gothenburg. The figures are include as a separate table in the SUTRANET database Annex 1. There is no breakdown on domestic and international traffic. However as mentioned in relation to the tables in the SIKA publications, the domestic share of unitised goods transport is minor.

Table 7: Gothenburg port figures – comparison of different sources

Year	Ferry goods on lorry		Other RoRo goods (excl. SECU[4]-boxes)		Total RoRo		Goods in containers		
	1000 tonnes	units	1000 tonnes	units	1000 tonnes	units	1000 tonnes	units	TEU
2003	3,849	256,978	4,735	211,825	8,584	468,803	5,251	401,989	666,000
2004	4,099	278,849	4,752	225,391	8,851	504,240	5,932	440,884	736,000
2005	3,939	278,289	4,943	235,559	8,882	513,848	6,236	473,043	788,000
2004 (SIKA)	7,166						5,997		722,560
2004 (Port database)	7,166	462,289	1,570	48,322	8,736	510,611	5,997	433,434	722,205

In all cases the SIKA figures and the Ports of Sweden database figures are mostly identical as they are based on the same reporting.

The deviation between SIKA figures and the Gothenburg Port figures is modest, both as regards the total RoRo figures and container figures. However, there is a difference in terminology and cargo grouping. Gothenburg Ports only includes RoPax vessels and routes in the category 'ferry goods'. The goods in SECU-boxes are identified as RoRo goods by the Port of Gothenburg's statistics, whilst it is classified as 'Other goods' (both including unitised and non-unitised goods) in the SIKA Tables 10A and 10B.

Presentation of the SUTRANET Databases

The following general assumptions apply to the statistical figures in the SUTRANET databases (Annexes 1-2):

1) Domestic goods transport between Swedish ports is included in the figures derived from the Ports of Sweden database, whilst figures from the SIKA source indicate foreign (international) traffic only.
2) The weight of goods figures includes the immediate packaging. The weights of the transport unit, and the tare weight of the container or the RoRo unit, are excluded. This is also the case for statistics of ports in Denmark, Norway and UK, but not generally for port statistics covering Germany and the Netherlands/Belgium where some of the data sets for unitised goods may include the tare weight and/or the weight of trucks etc.

[4] SECU = 'Stora Enso Cargo Unit' (special unit developed for the 'Stora Enso' company's storage and transport of paper pulp etc.). This type of cargo handling accounted for 1,582x1000 tonnes and 48,760 units in 2004.

Annex 1

Annex 1 presents an overall comparative table for the years 2003, 2004 and 2005, including the annual throughput figures for the different types of unitised goods for each of all the Swedish west coast ports handling unitised goods in international traffic.

To ensure comparability of the tables and statistics for different countries, Annex 1 applies the following terminology:

- **A1 tonnes and units figures** include ferry goods quantities carried on road goods vehicles with or without accompanying trailers ('self-propelled').

- **A2 tonnes and units figures** are ferry goods quantities carried on unaccompanied road goods trailers (semi-trailers or 'non self-propelled'), including goods carried by "normal" RoPax ferries and by RoRo freight vessels.

  The SIKA publications (Statistics Sweden) and the Ports of Sweden's database do not provide a systematic reporting and breakdown in accompanied and unaccompanied trailers (semi-trailers) on the RoPax ferry routes.

  Statistics Sweden does not provide a separate indication of routes served by RoRo vessels (freight ferries).

- **B tonnes and units figures** are goods quantities carried on vessels by other equipment than road goods units and containers. Other equipment includes 'Ship-borne port-to-port trailers and barges', 'Other mobile self-propelled units', and 'Other mobile non self-propelled units' according to the specification in Council Directive 95/64/EC. The Statistics Sweden does presently not apply the cargo handling types 'Ship-born port-to-port trailer etc.', 'Other mobile self-propelled units' and 'Other mobile non self-propelled units', such as it is the case for e.g. Statistics Norway and UK statistics. However, figures for this cargo handling type can be retrieved from the Ports of Sweden's database, and some of this cargo handling group is included in the SIKA tables as 'Other goods'.

  Goods carried on rail wagons are not included in the SUTRANET Annex 1 tables. It is mainly reported via Trelleborg to Germany and via Ystad to Poland.

  Statistics Sweden provides no separate presentation of figures for containers handled by RoRo equipment (e.g. mafi-trailers) and carried by RoRo vessels, such as it is the case for e.g. Statistics Norway. There is no breakdown in the categories self-propelled (B1) and non self-propelled (B2).

- **C tonnes and TEU figures** cover quantities of goods in containers carried on LoLo vessels, i.e. mainly on feeder ships to/from countries in Northern Europe and the Baltic Sea Region, and between Swedish ports and the deep sea container ports in north-western Europe notably Hamburg and Bremerhaven. Gothenburg also serves some

deep sea (intercontinental) container lines. The number of TEU includes empty containers.

For the individual ports, these figures are derived from the Ports of Sweden's database, and they are in accordance with the SIKA Tables 3A and 3B (figures for port groups). The figures for port groups presented in Table 8A and 8B in the SIKA publication are also included.

Some comments regarding the individual ports:

The RoPax figures for Stroemstad, Gothenburg, Varberg, Helsingborg, Malmoe, Trelleborg, Ystad and Karlskrona are the sum of the routes indicated in Tables 10A+10B (presented for year 2004 only in the SUTRANET database Annex 2). As an example figures for Trelleborg are the sum of the routes to Travemünde, Rostock and Sassnitz.

Gothenburg:
The A1+A2 figures of 4,170x1000 tonnes and 278x1000 units (year 2004) includes 2,861x1000 tonnes and 203x1000 units derived from Table 10A+B as the sum of ferry routes to/from Frederikshavn, Kristiansand and Newcastle, and added by 1,309x1000 tonnes reported for other routes between Sweden and UK, assuming that these are served via Gothenburg. Similar statistics for RoRo traffic via UK east coast ports confirms this assumption; however, UK statistics report an even larger figure for year 2004, i.e. 1,647x1000 tonnes between Immingham and Gothenburg.

The figure of 7,166x1000 tonnes (Ports of Sweden database) is in accordance with the SIKA Tables 3A and 3B (goods on lorry). As regards some differences in cargo categorisation, see comments to Table 7 above.

Stroemstad:
The A1+A2 figure of 295x1000 tonnes (year 2004) is derived from the SIKA Tables 10A and 10B. This figure for Stroemstad is in accordance with the Statistics Norway's figure for Sandefjord. A RoRo figure of 5x1000 tonnes (Stenungsund-Stroemstad) is derived from Tables 3A and 3B, which ostensibly represents some inconsistency within the statistics.

Other ports:
The (A1+A2) figures for Helsingborg (4,420x1000 tonnes excluding Helsingborg-Oslo) and Varberg (345x1000 tonnes) are in accordance with Statistics Denmark's figures for Elsinore and Grenaa respectively.

As to Stenungsund-Stroemstad and Halmstad-Varberg, there are also some differences or inconsistencies between container traffic figures derived from Tables 3A and 3B and Tables 8A and 8B respectively. As an example, Tables 3A and 3B derive at a figure of 55x1000 tonnes for the Stenungsund-Stroemstad port group, whilst Tables 8A and 8B indicate 224x1000 tonnes.

Trollhaettan that covers the Vaenern ports (Lidkoeping, Karlstad, Kristinehamn) is not included, although some container handling occurs, as these ports are not considered as North Sea related ports.

Falkenberg and Landskrona are not included. There has been no unit load handling in Falkenberg since 1999 and no unit load handling in Landskrona since before 1999.

The ports Nos 1-7 cover the NUTS II region 'West Sweden' (Kattegat ports). The ports Nos 8-12 (including Helsingborg and Malmoe) cover the NUTS II region 'South Sweden' (Baltic Sea ports), except for some deviations from the figures in the SIKA Table 11 as regards lorries and semi-trailers by ferry.

Annex 2

Annexes 2A and 2B present - for each Swedish west coast port and the year 2004 - the distribution on selected countries, and on RoPax and other ferry/RoRo routes, to the extent possible based on available SIKA (Statistics Sweden) statistics, notably the SIKA Tables 10A and 10B as to RoPax figures and distribution on routes. The table of Annex 2A is supplemented by the Ports of Sweden database as to RoRo figures.

It has not been possible – based on the SIKA publications - to identify which part of 'Other routes' that is performed via ports located on the west coast of Sweden, and which part of the 'Other goods' category that is unitised goods.

As mention elsewhere, other routes to UK are included as traffic via Gothenburg, whilst other routes to Germany are not included.

According to Annex 2B, the ports on the west coast of Sweden, including Scania, perform more than 75% of the ferry traffic (in terms of number of units) to/from Sweden.

The traffic on the route Ystad-Roenne is local (i.e. mainly transit between Copenhagen and Bornholm) and of no interest to the NSR traffic flows. In principle the same applies to the traffic on the very short ferry route Helsingborg-Elsinore that serves as a "bridge substitution" link. Part of this traffic might be transit between Sweden and Germany and that part reappears on the ferry routes Roedby-Puttgarden and Gedser-Warnemünde.

The Ystad - Swinoujscie route serves all of the rail traffic to/from Poland and more than 60% of the ferry goods traffic by lorry etc. between Sweden and Poland. Most of the remaining goods traffic (by lorry etc.) is carried out on the two routes: Karlskrona –Gdynia, and Nynaeshamn (near Stockholm) – Gdansk. The latter route is not NSR related.

Transport of goods on lorry etc. includes 'non self-propelled' RoRo units i.e. mainly unaccompanied semi-trailers, which can be seen when comparing the 'grand total' country figures in Annex 2B with the 'Grand total' country figures in the above summary Table 3 that are extracted from the SIKA Tables 4A and 4B.

The question remains as to which share of the figures for ‘Other goods’ by ferries (total for Sweden: 8.5 million tonnes) that is unitised.

The full databases (Annexes 1-2) can be provided as Excel files on request to the SUTRANET secretary, ref. the website www.sutranet.org.

Findings and Recommendations

In order to improve the statistics reporting concerning unitised goods flows via Swedish west coast ports, and harmonise it with the similar statistics for other NSR countries, some findings and recommendations have been identified as follows.

Findings

The statistics presented in the SIKA Tables 10A and 10B is confined to RoPax and passenger ferry routes only and some not specified RoRo routes e.g. to UK. Regarding RoRo (freight ferries) there is no specification of the distribution of goods flows on particular routes. As an example, information on route location of the main part of RoPax plus RoRo traffic between Sweden and UK is not available from the two sources used, except for the RoPax route Gothenburg - Newcastle.

There is no separate account of goods by semi-trailer (unaccompanied or non self propelled units). A breakdown in separate units and tonnes figures for unaccompanied trailers (semi-trailers) are not provided, probably because the quarterly reporting by ferry operators to Statistics Sweden does not make a systematic specification for all ferry routes of the number of semi-trailers and tonnes carried by semi-trailers.

As to the port statistics of container traffic, it is not possible to identify the complete picture concerning the distribution on feeder ships and deep-sea ships, considering to which extent short sea traffic includes feeder traffic.

The share of transhipment is not reported/counted, i.e. container traffic that flows from a Swedish port (notably Gothenburg) to a deep-sea container ports - such as Hamburg and Bremerhaven - for further transhipment to overseas countries. Thus the share of this container transhipment cannot be identified based on available statistics.

There is no separate presentation of figures for containers handled by RoRo equipment (e.g. mafi-trailers) and carried by RoPax/RoRo vessels.

Is it not possible to specify the quantities of unitised goods that are included in some of the NST/R commodity groups. This is a generic problem also applying to other EU countries. A clarification would eventually be needed of the relations and usefulness of the trade statistics' breakdown in NST/R (or the new NST 2000) commodity groups vis-à-vis the goods carried in containers and by RoRo equipment.

Recommendations

SIKA could consider introducing an interactive database presentation such as applied by Statistics Norway and Statistics Denmark.

It would be useful, if the terminology applied to cargo handling categories is being fully harmonised in between the SIKA database, Ports of Sweden database and Port of Gothenburg's statistics. Furthermore, it could be considered to specify the share of the 'Other goods' category that is unitised.

With a view to an analysis of the development of unitised goods flows on specific ports and routes, it would be useful if the SIKA Tables 3A+3B, 5A+5B, 8A+8B, and 10A+10B could present a breakdown of annual throughputs on each particular port and not only by using the more aggregated "port area" level.

A separate presentation of the share of unaccompanied trailers (semi-trailers) could be included in the standard reporting procedures requested by Statistics Sweden ('Statistiska centralbyrån' – SCB/SIKA). The introduction of such harmonised reporting involving all ferry operators is highly recommended, in order to monitor the development trend for the share of semi-trailers by RoPax ferry routes, and for the statistics to be consistent with other NSR countries. The flow volume of semi-trailers via the ferry routes is an important indicator of intermodal transport.

It is recommended to make a distinction between RoPax and RoRo vessels in the relevant tables, so that unitised goods flows could be specified also on other than RoPax routes. RoRo routes (served by freight ferries) statistics can only be provided by the line operators. Thus it should be considered including this information in the standard reporting procedures of ferry and RoRo operators in order to make these data available in the port statistics. The SIKA Tables 10A+B could provide the information required to aggregate the tonnes and units figures for goods carried by RoRo (freight ferry) vessels and RoPax ferries respectively.

It could be considered publishing the reported geographical distribution of container traffic via major Swedish ports. Statistics Norway and Statistics Denmark distinguishes between 'Sweden North Sea' and 'Sweden Baltic Sea'. This could be applied by Statistics Sweden/SIKA as well, particularly as regards the geographical distribution of container traffic. There is also a need to enable the identification of some data on the share of feeder and transhipment traffic, e.g. based on periodic surveys.

In order to be able to assess whether containers handled by RoRo equipment is a growing market, it could be identified which type of equipment that is applied in the RoRo handling process, and to include tonnes and units figures for this type of cargo handling in the statistical reporting.

A specification of 'Other goods' in Tables 10A and 10B would be useful. The question remains whether which part of this category (8.504 million tonnes in total in 2004) that could be characterised as unitised goods.