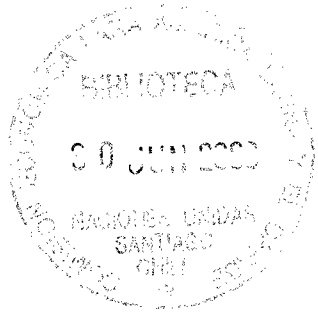
GENERAL
LC/CAR/G.678
13 December 2001
ORIGINAL: ENGLISH



REPORT ON THE PRODUCTION OF TRADE STATISTICS IN THE CARIBBEAN REGION

Acknowledgement

The Economic Commission for Latin America and the Caribbean (ECLAC) Subregional Headquarters for the Caribbean wishes to acknowledge the assistance of Mr. Joe Babooram, ASYCUDA Computer Consultant, in the preparation of this document.

CONTENTS

APPENDICES

Summary

1. The statistics offices in the region utilize state of the art technology for processing their trade data, and report producing statistics on a regular basis. The periods of publications are monthly, bi-monthly, quarterly, annually, and semi-annually, but vary amongst countries.
2. The warrants presented by importers and exporters to the customs departments for the clearance of goods is the main source of trade data in each country. After checking and processing, a copy of the warrants is placed in batches and forwarded to the statistics office, usually on a monthly basis. In some countries, the data is also forwarded on electronic medium.
3. At the statistics offices, the data is verified and input to their computerized systems. The systems carry out several validity checks on the data, prior to addition to the databases.
4. The nomenclature used by almost all the customs departments is the 1996 Harmonized System (HS). At the statistics offices, the HS codes are mapped to their equivalent SITC Rev. 3 codes for the production of trade reports.
5. Two systems, currently implemented by many countries in the region, can make valuable contributions to this project. These are the ASYCUDA customs system (used by fourteen member states) and the Eurotrace National statistics system (used by eight).
6. There are approximately One Hundred and Forty One (141) Officers working on trade statistics. Of these, One Hundred and Two (102) are occupied in the capturing of trade data and Thirty-Nine (39) in the production of trade statistics.
7. All countries analyze their trade data by country of origin and country of destination.
8. Most countries record transport data in their databases such as country of origin/consignment/destination, net weight, means of transport (air, ship etc.), and country of registration of the carrier. The name of the carrier is not stored but is available on the customs warrant.
9. All countries use in-house computers for the processing of their trade statistics. In most cases, the computer/s is/are dedicated to this application. Except for two (2) countries, no additional hardware should be required to meet the additional need for providing trade data to this project.
10. Provided the additional tasks to be carried out for the extraction of data at the national statistical offices are kept to a minimum, it is likely that no additional staff would be required for the purpose of extracting and forwarding data to ECLAC for the proposed system.
11. Except for the Country and Currency codes, the many codes used in the countries are not standardized. This is a drawback which the project will have to address. It is recommended that the UN international codes should be adopted, and that data from the national statistics offices be mapped to these codes.
12. The study suggests that the best source for obtaining trade data for the regional databases is the national statistics office in each country. The statistics offices

collect data for the entire country's trade and carries out extensive checking on the accuracy of the data.

13. Tables which would be needed in the proposed system such as Correlation tables (HS-SITC Rev. 3), Currency codes, and Country codes can be taken from the Eurotrace system, instead of repeating the lengthy and costly tasks of re-keying and checking.
14. Member States provide their trade statistics to international and regional organizations such as the UN Statistics Division, ECLAC, International Monetary Fund, CARICOM, Eastern Caribbean Central Bank, and the Organization for Eastern Caribbean States.
15. A risk factor to the sustenance of this system would be the failure of countries to forward their trade data on a timely basis to ECLAC for updating its databases and preparing statistical reports.
16. The Common Market of Eastern and Southern Africa (COMESA) and the Economic Committee of West African States (ECOWAS) communities have developed regional databases and produce regional trade data, accessible on the Internet. The project is urged to research these developments.

Introduction

The Economic Commission for Latin America and the Caribbean (ECLAC) has embarked on a project for making regional trade data available to researchers and policy makers, locally and internationally. Such a project is not only worthwhile, but also long overdue. It is acknowledged that over the years many attempts have been made to provide information at a national level with varying degrees of success. However, to date no comprehensive and normalized databases exist at the regional level which can serve the needs of the research community and policy makers intra and extra regionally.

The project is being approached in two phases. The first phase, the subject of the present Consultancy, is a data gathering exercise and seeks to determine the status of the trade statistics production in the following eighteen countries which are to be included in the exercise:

Anguilla	Antigua & Barbuda	Aruba
The Bahamas	Barbados	Belize
British Virgin Is.	Dominica	Grenada
Guyana	Jamaica	Montserrat
Netherlands Antilles	St. Kitts & Nevis	St. Lucia
St. Vincent & the Grenadines	Suriname	Trinidad & Tobago

This phase would identify, among other things, the collection and transcription systems used in the various countries, the equipment and personnel available, the timeliness of the publications, the source of their trade data, and the systems applied in the transformation to trade statistics. The state of the art in the production of trade statistics in the individual countries would therefore be ascertained.

In the second phase, a computerized system would be designed and developed, data from the countries will be collected and loaded into databases, and trade reports will be produced. A web-site will be created and the system placed on the Internet. A User Manual will be prepared, and staff at the national level will be trained in using the system.

In the course of this study, the Consultant was guided by the Terms of Reference provided by ECLAC, a copy of which is included in Appendix I. A questionnaire was designed and sent to all eighteen countries. The replies to this questionnaire, together with the Consultant's familiarity with operations at the customs and statistics offices in the region, provided the information for this report. The questionnaire and a summary of the replies are contained in Appendices II and III respectively.

The body of the report addresses the Terms of Reference and other relevant/supporting information is included as Appendices. Before addressing the Terms of Reference however, a summary is given of two relevant computerized systems used in the region,

ASYCUDA and Eurotrace. This is necessary, as these systems will be referred to in several places of the report.

Relevant Systems

ASYCUDA

ASYCUDA (acronym for Automated SYstem for Customs Data) is a computerized system for the processing of customs entries of all types: imports, exports, warehousing, and transshipments. It was developed by the United Nations Conference on Trade and Development (UNCTAD) and is made available to developing countries. The system runs on personal computers operating in stand-alone, local area network, or wide area network modes.

The implementation of ASYCUDA began in the region in 1989 and became operational firstly in Montserrat in 1991. Other countries followed and today the system is implemented in the following fourteen Caribbean countries: Anguilla, Aruba, Barbados, Belize, Dominica, Grenada, Guyana, Montserrat, Netherlands Antilles, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago. It therefore includes fourteen of the eighteen countries to be covered in the project. The four countries not currently running ASYCUDA are Antigua and Barbuda, Bahamas, British Virgin Is., and Jamaica. Antigua and Barbuda is however expected to come on-stream in the current year. The system has been installed in the British Virgin Islands but has not been brought into operation.

The source of input to the ASYCUDA system is the data contained in the customs warrants submitted by importers/exporters to the customs department. As the data is entered into ASYCUDA, several validity checks are carried out prior to registration in the databases. Checks are done, for examples, on the codes for Country of Origin/Consignment/ Destination, Currency Codes, Importer/Exporter codes, Net Weight, Gross Weight, Duty/Tax codes, Customs Value and many other fields. Customs warrants are processed through ASYCUDA prior to the payment of duties/taxes and the clearance of the goods. This prompt recording into the computerized databases, together with ASYCUDA's data validation, provide a good source of reliable trade data.

The ASYCUDA system contains functionality for the merging of data from individual office files into a single national file. It is this national file from which data is extracted and submitted to the statistics office for the compilation of trade statistics. The data is placed on electronic medium such as diskettes or transferred via modem and the Internet. It is in American Standard Code for Information Interchange (ASCII) format and therefore can be processed by popular software tools such as DBASE, ACCESS, EXCEL, and Word. Extraction can be done on a daily, weekly or monthly basis from the ASYCUDA system but most countries do monthly extractions.

The table in Appendix IV shows the full contents of the databases. However the elements actually stored depend on what is captured in the implementing country. The table also identifies the data items normally captured by most countries. It is to be noted that the data is not summarized but rather provided at the item level, thus making all items available for summary, analytic, and reporting purposes.

Eurotrace

Eurotrace is a statistical software package which was developed by CES-Communitaire on behalf of the European Commission's Statistical Office (Eurostat). It includes tools for data entry, data transfers, data checking, data editing, and the statistical inputs. It can be used as a companion package to ASYCUDA.

The current version of Eurotrace is DOS based but is being ported to Windows and Unix platforms. The system is written using an xBASE language and runs on stand-alone or networked personal computers. It caters for the keying of trade data from customs documents or inputting directly from the ASYCUDA system on electronic medium such as diskettes and modem.

There are two types of Eurotrace users, thus two types of needs: national institutions such as the statistics office in each country, and regional organizations such as OECS, and CARICOM. Eurotrace caters for both needs in the forms of Eurotrace National and Eurotrace Regional. Eurotrace National has been implemented and is running successfully in the following nine countries of the region:

Anguilla	Antigua and Barbuda	British Virgin Islands
Dominica	Grenada	Montserrat
St. Kitts and Nevis	St. Lucia	St. Vincent and the Grenadines

The major functionalities of **Eurotrace National** are:

To collect raw data	information related to items on customs forms
To manage raw data	checking the consistency of raw data and data editing
To manage reference data	reference data are the tables used for classifications. Up to nine (9) commodity nomenclatures are catered for together with correlation tables between the different nomenclatures
To build statistical databanks	databanks are built from the raw data, providing several families of trade statistics
To produce statistical tabulations	an end-user interface allowa users to produce various types of statistical results, mainly in the form of line/column tables
Trade Indices Module	to produce foreign trade indices from Eurotrace data

The major functionalities of **Eurotrace Regional** are:

To collect data	to gather data received from Member States

To convert data	when a Member State does not use the regional classification, Eurotrace Regional converts the national one
To build statistical databanks	databanks on regional trade are built on the national data; they provide several 'families' of trade Statistics, including intra-regional and extra-regional trade
To produce statistical tabulations	an end-user interface allows users to produce various types of statistical results, chiefly in the form of line/column tables

Eurotrace Regional is implemented in the Economic Community of West African States (ECOWAS) which comprises fifteen members, and the Common Market for Eastern and Southern Africa (COMESA) which comprises twenty-one members.

Current Situation

The current situation in the member states is presented hereunder in the same sequence as Item I of the Terms of Reference.

Ia. The present state of currency in the reporting of international trade statistics.

Almost all countries reported that trade statistics is published on a regular basis. Guyana, the exception, indicated that regular publications would resume in the current year. The situation in each country is summarized in the table below.

	Country	Regular Publ.	Period of Last Publ./When	Frequency of Publ. B = Bi-monthly M = Monthly Q = Quarterly A = Annually S = Semi-Annually
1.	Anguilla	Yes	Annual 1999 Qtr. 1, 2001/?	M, Q, A
2.	Antigua & Barbuda			
3.	Aruba	Yes		Q
4.	Bahamas			
5.	Barbados	Yes	Annual 1999/05-2001	M
6.	Belize	Yes	Annual 2000/02-2001	Q
7.	British Virgin Is.	Yes	1997/1998	A
8.	Dominica	Yes	Annual 1998/?	A
9.	Grenada			
10.	Guyana	No		A - Publ. to resume in 2001
11.	Jamaica	Yes	02-2001/05-2001	Q,A
12.	Montserrat	Yes		M, Q, A
13.	Netherlands Ant.	Yes	Q.4 1999/06-2001	Q
14.	St. Kitts & Nevis	Yes		A
15.	St. Lucia	Yes		M, B, Q, A
16.	St. Vincent	Yes	Jan.-Jun. 1999/1999	B
17.	Suriname	Yes		Q
18.	Trinidad & Tobago	Yes		M, A

Ib. The collection systems and nomenclature in use (ASYCUDA or home grown).

The major single source of trade data in every country is the documents which are submitted to the customs departments prior to the clearance of goods. The main document, a customs warrant, is submitted by importers and exporters declaring goods which are imported into, or to be exported from the country. This is a legal requirement which must be fulfilled.

The customs warrant contains information at two levels: general information about the shipment as a whole, and information on each item being imported or to be shipped. Under the general information would be items such as the name of the importer/exporter, name of consignee, name of declarant/broker, mode of transport, name and nationality of carrier, terms of payment for the goods, bank and branch number, and currency of the transaction. The data on the items will include tariff/commodity code, net weight, gross weight, customs value, country of origin/destination, country of consignment, supplementary quantity, and a calculation of the duties/taxes payable. A warrant is prepared for each shipment, and a shipment may contain several items.

The warrants, together with supporting documents (worksheets, certificates, and invoices) are submitted to the customs office for processing. At the office, the data on the documents is checked and corrected, if necessary. In countries which use the ASYCUDA system, the data from the warrants is entered into the computer. The system performs various checks and corrections must be made, after which the data is added to the databases. Thus two levels of checking are carried out.

Upon payment of any duties/taxes, a copy of the warrant is sent to the statistical office. Here the warrants are again checked, which seems redundant but in experience has been found necessary. One reason for this is simply that much of the data needed on the warrant for statistical purposes does not affect the computation of duties/taxes and in their eagerness to collect their revenue and to clear goods, the customs offices often relax their checks on these items. Examples of data items usually affected are the net weight, gross weight, supplementary quantities, and country of origin/consignment/destination. The statistics office resolves any errors on the warrants by consultation with the customs office, and if necessary with the importer/exporter.

After the data is verified, it is then entered into the statistical computerized system. These systems will carry out their own validity checks on the data prior to acceptance and recording in the databases.

The data collection system may be summarized as follows:

IMPORTERS/EXPORTERS/BROKERS

Prepare Customs Documentation
(Warrants, Worksheets, Supporting Documents)

CUSTOMS OFFICES

Check Accuracy of Documentation

Enter Data from Warrant into Computer System

Computer Verification of Data

Add Data to Computer Databases

Forward Copy of Warrants to Statistics Office

STATISTICS OFFICE

Check Accuracy of Warrants

Enter Data into Computer System

Computer Verification of Data

Enter Data into Databases

Prepare Statistical Tables

The table below identifies which countries key-in data into their statistical systems and which use the data extracted directly from ASYCUDA's databases. The nomenclature used in each country is also given.

	Country	Data Source		Nomenclature
		Warrants	ASYCUDA Extraction	
1.	Anguilla		Yes	HS, SITC Rev. 3
2.	Antigua & Barbuda	Yes		
3.	Aruba	Yes		Other
4.	Bahamas			
5.	Barbados	Yes		HS, SITC Rev. 3
6.	Belize	Yes		HS, SITC Rev. 3
7.	British Virgin Is.	Yes		HS, SITC Rev. 3
8.	Dominica		Yes	HS, SITC Rev. 3
9.	Grenada		Yes	HS, SITC Rev. 3
10.	Guyana	Yes		HS, SITC Rev. 3, ECLA
11.	Jamaica	Yes		HS, SITC Rev. 3
12.	Montserrat		Yes	HS, SITC Rev.3
13.	Netherlands Ant.	Yes		BTN, SITC Rev.1
14.	St. Kitts & Nevis	Yes		HS, SITC Rev. 3
15.	St. Lucia		Yes	HS, SITC Rev. 3
16.	St. Vincent & the Grenadines		Yes	HS, SITC Rev. 3
17.	Suriname	Yes		HS, SITC Rev. 1, BTN
18.	Trinidad & Tobago	Yes		HS, SITC Rev. 3

Ic. The transition from the recording of the trade transactions to the production of trade statistics.

The previous section outlined how the data is collected and verified. In this section the transformation of the data into trade statistics is presented.

All of the countries surveyed use computerized systems for producing their trade statistics, and the first task therefore is to get the data from the warrants into the computerized system. This is achieved by one of two means: keying-in the data from the warrants, or by using the electronic medium provided through the ASYCUDA system.

The following countries which utilize the Eurotrace system input the data from ASYCUDA directly into the Eurotrace package: Anguilla, Dominica, Grenada, Montserrat, St. Lucia, and St. Vincent and the Grenadines. The British Virgin Is., and St. Kitts and Nevis use Eurotrace but key the data from the customs warrants.

The question arises as to why key the data when it is easily obtainable on a timely basis on electronic media from the ASYCUDA system? The reasons generally advanced for this is lack of confidence in the ASYCUDA data, difficulties in making error corrections as the electronic data is stored in a different sequence to the warrants, and the non-inclusion of all the warrants with the data. These are not insurmountable problems as several countries have shown.

The trade data, when entered into the computerized system (be it Eurotrace or custom-built) is subjected to validation checks before being placed into databases. After the databases have been successfully constructed, statistical tables and reports are produced as required.

1d. The number of officers working on the trade statistics under the direct control of the Statistical Office and the possibility of their being able to supply on a scheduled basis the trade databases of their respective countries after they have been trained to do so.

The number of officers working on the capture of trade data and the number working on the capture of trade reports are given in the table below, by country.

	Country	Officers		Total
		Data Capture	Statistical Reports	
1.	Anguilla	1	1	2
2.	Antigua & Barbuda			
3.	Aruba	2	3	5
4.	Bahamas			
5.	Barbados	5	2	7
6.	Belize	4	1	5
7.	British Virgin Is.	3	1	4
8.	Dominica	6	2	8
9.	Grenada			
10.	Guyana	5	7	12
11.	Jamaica	31	2	33
12.	Montserrat	3	3	6
13.	Netherlands Ant.	1	Same person	1
14.	St. Kitts & Nevis	5	1	6
15.	St. Lucia	10	5	15
16.	St. Vincent & the Grenadines	3	2	5

17.	Suriname	5	3	8
18.	Trinidad & Tobago	18	6	24
TOTAL		102	39	141

The Consultant does not envisage that any additional staff would be required for the provision of data on a scheduled basis for the proposed system. The extraction of the data would be an extension to the work currently undertaken, provided that the necessary utility program and proper instructions are given to the country, and the work to be done by the statistical office is kept to a minimum. For example, the normalization of the data should not be a task for the individual statistical offices, but rather done at the ECLAC office.

1e. The configuration and adequacy of hardware owned by the Statistical Offices being used to process the trade data; a report on what is needed on a country to country basis to raise it to a level of adequacy and effectiveness.

Only two countries are in need of equipment to raise their level of adequacy and effectiveness. These are:

Aruba: A faster CPU.

Belize: A powerful high capacity computer dedicated to the production of trade statistics. The following basic configuration is recommended: Minimum 500MHz. CPU, 64 MB RAM, 6-9 GB Hard Drive, Jazz Drive.

A third country, Suriname, did not provide the specifications of their computer, however it is dedicated to the production of trade statistics.

The equipment in all other countries is considered adequate to meet the needs of trade statistics production.

The table below gives the main specifications of the computers used in the various countries for the production of trade statistics.

	Country	Equipment			Ded	Adeq	Need
		CPU Spee	Main Mem	Hard Drive	Y/N	Y/N	
		MHz.	MB	GB			
1.	Anguilla	677	128	8	N	Y	
2.	Antigua & Barbuda						
3.	Aruba	133	64	12			Faster Processor
4.	Bahamas						
5.	Barbados	400	64	8	Y	Y	
6.	Belize	200	32	2	N	N	More Powerful Computer
7.	British Virgin Is.	400	64	6.5	Y	Y	
8.	Dominica	450	128	4	Y	Y	
9.	Grenada	500	64	13	Y	Y	
10.	Guyana	800	64	6.4	Y	Y	
11.	Jamaica	High Capacity Server			N	Y	
12.	Montserrat	600 733	64 256	9 18	Y Y	Y Y	
13.	Netherlands Ant.	350	64	10	Y	Y	
14.	St. Kitts & Nevis	400	128	20	Y	Y	
15.	St. Lucia	266	64	10	Y	Y	
16.	St. Vincent & the Grenadines	550	128	12.1	Y	Y	
17.	Suriname				Y		(No specs. Given)
18.	Trinidad & Tobago	High Capacity Server			N	Y	

If. Other information bits necessary to a successful plan to capture and utilize the best trade statistical database possible.

The following information is provided to guide the later stage of the project. Various items are presented for consideration, not necessarily related to each other, but to the project as a whole.

Data Sources

The availability of data on electronic medium from the ASYCUDA and Statistical systems (Eurotrace and custom-built) can be a major asset to the project as substantial time and cost will be saved by not having to key-in data from source documents. The project should therefore consider sourcing data for the databases from these systems based on the considerations as given hereunder.

ASYCUDA

ASYCUDA has the advantage of being able to provide trade data within the shortest possible time. Normally, countries can make their trade data for a month available within three working days of the following month. Additionally, the data can be produced for any period but the current practice is to extract data for a full month. The most common medium for the data is diskette, but it can also be transmitted through a point to point modem connection, or the Internet.

While timely data is a very desirable quality, the data taken directly from ASYCUDA does contain a certain degree of inaccuracy. It has been found that customs officers often do not scrutinize the data on a customs entry which does not affect the computation of duty/tax, and hence some data elements do get recorded with inherent inaccuracies. The data items generally affected are Country of Origin/Consignment/Destination, Net and Gross Weights, and Supplementary Quantities. Use of the raw data in statistical computations can therefore result in inaccurate statistics.

Another disadvantage of ASYCUDA data is that not all the entries are captured in the system. This is particularly true of countries in which there are several offices where entries are processed, but all of which are not computerized. While the data from these entries should be input to the ASYCUDA system at the head office, the reality is that this is seldom done.

Statistical Systems

Data from statistical systems be they Eurotrace or custom-built, will be more accurate and complete than data from ASYCUDA. Statistical offices emphasize the accuracy of information, and hence pay a lot of attention to validating and correcting data before registering them in databases. The Eurotrace system does extensive checking and will not admit suspect data into its databases. Custom-built systems very likely does the same.

Statistical offices receive trade data from all the possible sources. Data from non-computerized customs offices, from export agencies, from Central Banks, and other sources are keyed into their system. Hence they gather data which may have been omitted by ASYCUDA and are in a position to provide national data.

The downside to this however is that checking and keying are time consuming activities, and hence there are likely to be delays in the availability of the data.

Level of Detail

The project must decide on the level of detail at which the data must be provided. This of course will be driven by the types of reports to be produced, and the extent of analysis to be performed. Aggregating data will facilitate processing speed and conserve data storage space, but however will sacrifice data analysis. On the other hand, detailed data will permit maximum analysis.

A hypothetical example will illustrate the above. Suppose that an entrepreneur wished to find out how much of a particular item was imported from a specific country and at what unit and averages prices. This is a legitimate request for someone who is considering establishing a facility to manufacture the product. An important decision! Only data at the item level can give that kind of information.

Data Normalization

All computerized systems utilize a high level of data encoding so as to minimize the data-keying effort and to conserve storage space. The ASYCUDA system, for example, has in excess of forty tables of codes. The Eurotrace system too, has many such tables. Examples of some ASYCUDA tables are:

Office codes	Importer/Exporter codes	Customs Procedure codes
Duty/Tax codes	Package codes	Mode of Transport codes
Payment codes	Country codes	Currency codes
Agreement codes	Bank codes	Supplementary Units codes

Though the ASYCUDA and Eurotrace systems attempt to adhere to the United Nations International Codes, the individual countries in building their ASYCUDA tables, to a large extent did not conform. Many countries allocated their own codes and unfortunately, though fourteen of the eighteen countries targeted in this project use the ASYCUDA system, they did not utilize common codes. The only codes, which are common in all the countries, are the Country and Currency codes.

As a consequence of the above, it will be necessary for the project to develop a set of standard codes, and to map the incoming data from all the countries to these. The use of international codes as contained in the United Nations Trade Elements Directory is recommended. It is to be noted that the mapping of the codes will require some initial programming effort.

Tables of Codes

The system which will be developed in the second phase of the project, will require a table of the commodity codes and their corresponding descriptions. The 1998 Common External Tariff, which is based on the 1996 Harmonized System, is the nomenclature used by CARICOM countries and contains in excess of six thousand items. A table will have to be prepared comprising of the codes for the six thousand items and their descriptions.

Since statistics is usually reported by another code, usually SITC Rev. 3, another table containing the CET codes and their corresponding SITC Rev. 3 codes will be needed.

Fortunately, these tables have already been prepared by Caribbean Export's ASYCUDA Consultants and are in use in the Member States. The planned system could benefit by

using the existing tables, which are proven for their completeness and accuracy. The tables are in xBASE format.

Confidentiality

The main source of trade data in every country is the customs department. The data which the department can supply is however restricted by confidentiality considerations. Data is usually provided in aggregate form, which as indicated before, can affect the statistics, and reports which the system can produce. The statistics administrations too would have confidentiality considerations concerning the data which they can supply. Cognizance must be taken of this factor in the designing of databases and reports.

Ig. The extent to which basic transport data is available of the ASYCUDA or other master files and an indication of the transport data available.

All countries capture some transport data such as Country of Origin, Country of Consignment, Country of Destination, and net weight in their databases. Most countries capture the means of transport but not the name of the carrier. However these items are recorded on the customs warrants and can be retrieved if necessary.

Present and Desirable Systems

II. The Consultant will prepare a report on the present and desirable systems for collecting and processing the trade statistics in the Caribbean countries (at national level). He/she will also evaluate the timeliness, comparability and level of detail of the publications or data delivery systems to UN agencies, Regional Organizations like the CARICOM Secretariat and any other such body.

Present Systems

At the present time, the majority of the statistical offices in the region utilize computerized applications which have been custom-built. Nine of the countries however, run the Eurotrace statistical package. While the different systems work well at the national level, there are inconsistencies between them which would pose some problems for integrating the data into regional databases. These inconsistencies relate to the nomenclature, codes, level of detail in which the trade statistics are reported, and the systems software used.

Nomenclatures
While there is no single nomenclature which is used throughout the region to identify commodities, the 1998 CET and the SITC Rev. 3 classifications are used by almost all countries. Only one customs administration use the BTN classification and two statistics offices report in the older SITC Rev.1.

Codes
Most of the data in the trade data bases are encoded, but the codes are not standardized. Except for the country and currency codes where the UN International Standard codes are used, all the other codes have been determined by the individual countries. For example, one country may use code '1' for Air Transport, and another may use code '10'. Yet another may use '2' and so on. Therefore when the data for the different countries are consolidated, there would be conflicts in the codes.

Level of Detail
The level of detail in which statistics is produced varies among countries. Most countries produce their statistics at the item level, but some do so at the 1 digit, 2, digits, and 3 digits level.

System Software
The computerized statistical systems are developed using different system software. The three common package used are MS-ACCESS, DBASE, and FOXPRO. While these are

all super software, the fact that different software is used for building the databases, will make merging data from the various systems more difficult. The difficulty increases in older mainframe systems which were developed in languages such as COBOL.

The software tools for manipulating the data too are different. Some countries use their system software to manipulate the data but some use tools such as SPSS and MS-EXCEL. If ECLAC is to provide countries with utilities for data extraction, then it would be faced with writing these utilities in the same variety of software which is used in the countries. The job would require an equally large and wide range of skills.

Desirable Systems

Timely Data
The ASYCUDA system has the capability of producing trade data in the shortest possible time. Data recorded today can be obtained at the end of the day. It can be provided on electronic medium in ASCII format and therefore can be used as input to any statistical system without re-keying. Since fourteen of the eighteen countries earmarked for this project use ASYCUDA, substantial time would be saved if these countries accept the electronic data from ASYCUDA. This would facilitate producing timely national statistics and timely forwarding of data to ECLAC.

Normalization
It has been pointed out in the previous section that the nomenclatures, codes, and software are not standardized throughout the region. This situation does not affect the production of statistics at the national level, but however will at the regional level.

At the present time thirteen countries use the HS in the form of the 1998 CET and twelve countries use the SITC Rev.3 codes. Eventually all CARICOM states would conform to the 1998 CET and all countries will have to produce their statistics in SITC Rev.3. While the majority of countries already comply, the question arises as to what will be done about those who don't as far as this project is concerned. The obvious solution is full compliance. Until this is achieved however, the project may have to cater for the different nomenclatures.

Codes
Other than the Country and Currency codes, the others are not standardized. The desirable position is that the codes should be standardized throughout the region. This would be difficult to achieve. CARICOM has been trying for years with no success. Once codes are implemented they are difficult to change. Change requires many tasks such as notification of Importers/Exporters, re-writing of coding documents, timing of implementation, modifications to computerized systems, and dual processing of old and new codes. In some countries the codes are written into the law, and hence change requires changes in the law. This generally takes a long time for approval.

In light of the above, the solution will be to accept the data from the national statistics offices with the existing codes, and to normalize them at ECLAC. For this, a set of standard codes must be developed, and computer routines prepared to carry out the normalization. Existing processing systems contain many tables of codes (ASYCUDA and Eurotrace have over forty). It would be a major task to normalize all of these, and it is therefore suggested that only those which affect the trade reports should be normalized (e.g. Mode of Transport, Supplementary Units). This would reduce the enormity of the task.

System Software

The national statistics offices utilize state of the art software for the production of their trade statistics, but several different products are used. The assimilation of electronic data into a regional database from these various systems would not be as easy as if all countries used the same software.

It is suggested that ECLAC utilize the MS-ACCESS software for building its databases. This is also suggested for national administrations which are considering changes. The reason for this is simply that ACCESS is available with the MS-OFFICE suite, which most administrations will acquire with their computer systems. Another important factor is that training in MS-ACCESS is usually available locally at reasonable cost.

Comparability

Given the circumstances as outlined under "Present" systems above, it would be difficult to compare the statistics of the member countries. Any comparison would have to be carried out through the use of hardcopy documents, as the non-standardized codes would make electronic comparisons difficult. The fact too that all countries do not report statistics at the same level would render comparisons at the product level impossible.

Sources that Offer a Comprehensive and User-Friendly Analysis

III. The Consultant will report on sources that afford a comprehensive and user friendly analysis capability for normalized trade statistics of Caribbean countries.

There is no single database containing data for all the Caribbean countries and therefore there is no capability for any kind for regional analysis. Additionally, there is no single computerized system in use for the production of trade statistics: eight countries use Eurotrace and the remainder utilize custom-built systems. The individual countries do have their trade data in computer databases, but as pointed out before, the codes are not normalized. The task is therefore larger than just bringing the databases together in one pool on a single computer network.

Countries do submit data to CARICOM on a regular basis, but again the data is not normalized. Attempts at normalization by CARICOM have not borne fruit. About three years ago this matter was discussed extensively at a CARICOM meeting in Port of Spain, Trinidad, and an agreement was reached on codes (mainly for customs procedures), which countries should use in submitting their data to CARICOM. To date, there has been no compliance.

The system, which comes closest to permitting the analysis required, is the **Eurotrace Regional** system. Eurotrace Regional collects data from member states, and if the state does not use the regional classification, it converts the data as necessary. Databanks on regional trade are built from the national data, and several families of trade statistics are provided, including intra and extra-regional trade. An end-user interface allows various types of statistical results to be produced, chiefly in the form of line/column tables. The results can also be produced on screen, to printer, or to a file.

Eurotrace Regional has been implemented by the Common Market for Eastern and South African States (COMESA) and the Economic Committee of West African States (ECOWAS) communities. These communities comprise twenty-one and fifteen members respectively. Both have attractive and informative sites on the Internet and can be located at www.comesa.int and www.ecowas.int. The COMESA site provide a variety of trade data and statistics. Information on the COMESA Eurotrace Regional Project and some pages containing trade data from the site are included in Appendix V.

Project Risk

The risk to the sustainability of this project is if the countries falter in submitting their trade data on a timely basis to ECLAC. For this reason the additional work which must be done at the national statistics offices should be kept to a minimum, and any utilities which would be required for extracting data must be provided. Data normalization and summaries, for example, should be the responsibility of ECLAC and not the national statistics offices.

Recommendations

1. The source data for establishing and maintaining the databases should be obtained from the statistical offices instead of the customs offices. The former is likely to have more complete data, that is, data on the entire country and not only from computerized offices. Additionally, the statistical data items would have been more thoroughly checked.
2. Data should be taken at a sufficiently detailed level so as to permit the maximum amount of analysis. Normalization and summaries should be done at the ECLAC office.
3. The tables, which would be required in the proposed system, should be taken from the Eurotrace system in electronic form. This would accrue in substantial savings in time and cost. These tables are Country Codes, Currency Codes, Correlations (HS-SITC), and table of all HS codes with their corresponding descriptions.
4. The Eurotrace Regional Statistical Package should be explored to determine if it could contribute to the planned system.
5. The Consultancy to be awarded for the development of the project should comprise the following skills:
   - Systems Analyst for the development of a set of common codes, normalization procedures, design of the databases and reports
   - Programmer for writing programs to produce standard reports and for providing data extraction and normalization routines
   - Programmer with Web page design skills for launching the system on the Internet.
6. ECLAC is invited to view similar work done in the COMESA and ECOWAS communities. Both have impressive web sites and can be found at www.comesa.int and www.ecowas.int.
7. This project will undoubtedly need the support of CARISEC and the Member States. CARISEC should therefore be briefed and kept informed on progress of the project. The opportunity should be taken of using one of the CARISEC forum, such as the annual STECO meeting to present, and keep members updated, on the progress of the project.
8. ECLAC should consider assisting those countries which do not have the required hardware capacity to effectively meet their own needs and to meet the additional demand of providing data for the project.
9. Adequate provision should be made in the project for visiting countries to collect data for the establishment of the databases and for the training of local staff in the subsequent provision of data.

APPENDIX I

TERMS OF REFERENCE

I. Working with and under the guidance of the Economic Affairs Officer (Statistics), the Consultant will collect information and report on the capabilities of the countries[1] surveyed with respect to:

a) The present state of currency in the reporting of international trade statistics;
b) The collection systems and nomenclature in use (ASYCUDA or home-grown);
c) The transaction from the recording of trade transactions to the production of trade statistics;
d) The number of officers working on the trade statistics under the direct control of the Statistical Office and the probability of their being able to supply on a scheduled basis the trade databases of their respective countries after they have been trained to do so;
e) The configuration and adequacy of hardware owned by the Statistical Offices being used to process the trade data; a report on what is needed on a country by country basis to raise it to a level of adequacy and effectiveness;
f) Other information bits necessary to a successful plan to capture and utilize the best trade statistical database possible;
g) The extent to which basic transport data are available of the ASYCUDA or other master files and an indication of the transport data available.

II. The Consultant will prepare a report on the present and desirable systems for collecting and processing the trade statistics in the Caribbean countries (at the national level). He/she will also evaluate the timeliness, comparability and level of detail of the publications or data delivery systems to UN agencies, Regional Organizations like the CARICOM Secretariat and any other such body.

III. The Consultant will report on sources that afford a comprehensive and user-friendly analysis capability for normalized trade statistics of Caribbean countries.

---

[1] The countries included in this phase of the project are the following:
Anguilla, Antigua and Barbuda, Aruba, the Bahamas, Barbados, Belize, British Virgin Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, Netherlands Antilles, St. Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago.

APPENDIX II

QUESTIONNAIRE ON THE COMPILATION OF TRADE STATISTICS

Write, or circle answer as appropriate

1.	Name of country answering this form:	.....
2.	What organization(s) is (are) responsible for processing external trade statistics?	.....
3.	What commodity classifications do you use in analyzing the trade?	1. BTN 3. SITC R.1 5. SITC R.3 2. SITC Original 4. SITC R.2 6. HS 7. Other (Specify) .....
4.	Do you publish your trade statistics on a regular basis?	Yes No
5.	With what periodicity do you publish trade reports? *(Circle as many as are true)*	1. Bi-monthly 2. Monthly 3. Quarterly 4. Annually
6.	At what level of aggregation do you publish the trade statistics?	1. Item level 2. 3-digit level 3. 1-digit level 4. Other (Specify).....
7.	When was your last trade statistics published and for what period?	When ..... Period.....
8.	How regularly do you receive trade data from the customs department?	1. Daily 2. Weekly 3. Monthly 4. Other (Specify).....
9.	How is the data received?	1. Electronic Medium (modem, diskette, tape etc.) 2. Customs Warrants 3. Both (1 & 2) 4. Other (specify).....
10.	From what period is your data available on electronic medium?	Period .....

11.	Do you analyze your trade statistics by country of origin or destination?	Yes No
12.	Do you capture information on name and nationality of carrier of cargo?	Name: Yes No Nationality: Yes No
13.	If "No" to any of Question 12 above, is it possible to capture name/nationality of carrier from customs warrant or other document?	Yes No
14.	Do you use a Data Base Management System? If yes, which one (DBASE, ACCESS etc.)?	Yes No DBMS Used.....
15.	How many of your staff members are engaged in the capture of statistics from the customs warrants?	.....
16.	How many of your staff members are engaged in processing the trade data into reports?	.....
17.	Describe the computer that houses the trade statistics	1. Speed in MHz..... 2. Size of Hard Disk..... 3. Memory Size.....
18.	Is the computer at Question 17 dedicated full time to trade statistics?	
19.	What software do you use to analyse the trade statistics?	
20.	To which United Nations agencies, and regional organizations do you forward your trade statistics?	....

Thank you for filling out this questionnaire

Completed by (Block Letters): .....

Telephone: .....

e-mail: .....

Please return completed questionnaire to:

Mr. Lancelot Busby
Economic Commission for Latin America and the Caribbean
3rd Floor, CHIC Building (63 Park Street)
Port of Spain
TRINIDAD and TOBAGO

You may e-mail the completed questionnaire to:
lbusby@eclacpos.org

APPENDIX IV

ASYCUDA DATABASE

No. ASYCUDA Data Item No.
Code ASYCUDA Data Item Name
Captured Whether data is usually captured in national databases. This varies by country but an indication of the likeliness of it being captured is given (Y).

No.	Code	Item	Capt-ured	Description/Comments
001	LINE	LINE NUMBER	Y	
002	IM/EX	IMPORT OR EXPORT	Y	
003	DAY	DAY	Y	Day entry is registered in ASYCUDA
004	MONTH	MONTH	Y	Month entry is registered
005	YEAR	YEAR	Y	Year entry is registered
006	TRIME	3 MONTH PERIOD		Not used in Region
007	SEMES	6 MONTH PERIOD		Not used in Region
008	DATE	DATE	Y	
010	CHAPT	CHAPTER (2 CHARS)	Y	
011	HEAD	HEADING (4 CHARS)	Y	
012	SUBHD	SUB-HEADING (6 CHARS)	Y	
013	COM08	COMMODITY CODE (8 CHARS)	Y	
014	COM10	COMMODITY CODE (10 CHARS)	Y	
015	KEY	COM CDE CHJECK LETTER	N	
016	NATC1	NAT TAR SUB DIV 7+8	Y	
017	NATC2	NAT TAR SUB DIV 9+10	Y	
018	MARK1	MARKS AND NUMBERS 1	Y	
019	MARK2	MARKS AND NUMBERS 2	Y	
020	RGCDE	REGIME CODE LETTER	Y	Such as I=Import, E=Export, S=Suspense
021	CRC	CUSTOMS REGIME CODE	Y	Such as C1= Direct Imports, C2= CARICOM Imports etc.
022	CPC	CUSTOMS PROCEDURE CODE	Y	C100= C101=
023	OFF.C	CLEARANCE OFFICE CDE	Y	
024	DCLAR	DECLARANT CODE	Y	

025	IMPEX	IMPORTER/ EXPORTER	Y	
026	CSGNE	CONSIGNEE		
027	ACCHD	ACCOUNT HOLDER		
028	DCREF	DECLNTS REF NO	Y	
029	PRDOC	PRECEDING DECL. NO.	Y	
030	WHS	WAREHOUSE CODE		
031	TSHED	TRANSIT SHED CODE		
032	BANK	BANK AND BRANCH	Y	
033	OFF.F	FRONTIER OFFICE	Y	
034	BANKR	BANK REFERENCE NO.	Y	
035	MANIF	MANIFEST NO.		
036	PRDCN	PREPAYMENT CODE NO.		
037	LICNO	LICENCE NO.		
038	NOPAK	NUMBER OF PACKAGES	Y	
039	PKCDE	PACKAGE CODE	Y	
040	MOT	MODE OF TRANSPORT	Y	
041	FLAG	NATIONALITY OF MOT	Y	The country in which the vessel is registered
042	B/L	BILL OF LADING NO.		
043	CTY C	CTY OF CONSIGNMENT	Y	
044	CTY O	CTY OF ORIGIN	Y	
045	CTY D	CTY OF FINAL DEST	Y	
046	TOP	TERMS OF PAYMENT		
047	TOD	TERMS OF DELIVERY		
048	AGMNT	AGREEMENT CODE		
049	SUPCD	SUPPL. UNIT CODE	Y	
050	LOCAT	LOCATION OF GOODS		
051	NET W	NET WEIGHT	Y	
052	GRS W	GROSS WEIGHT		
053	SUPP Q	SUPPLEMENTARY QUANTITY	Y	
054	CURCY	CURRENCY	Y	
055	TAXCD	DUTY/TAX CODE	Y	
056	AJUST	ADJUSTMENT COEFF.		
057	CONTR	CONTRA ENTRY	Y	
060	DEC S	DECLARATION SERIES	Y	
061	DECNO	DECLARATION NO.	Y	
062	ITEM	ITEM NUMBER	Y	
063	NODCL	NO. OF DECNS.	Y	
064	NOITMS	NO. OF ITEMS	Y	
065	ASS S	ASSESS. SERIES LTTR	Y	
066	ASSNO	ASSESSMENT NUMBER	Y	
067	ASSDA	ASSESSMENT DATE	Y	
068	INFOG	INFORMATION		

069	ASVAL	ASSESSED VALUE		
070	FOBFC	FOB VALUE IN FCY		
071	CUVAL	CUSTOMS VALUE	Y	
072	CIFNC	CIF VALUE IN NCY	Y	
073	INSUR	INSURANCE COST		
074	FRGHT	FREIGHT COST		
075	OTHER	OTHER COSTS		
076	FOBNC	FOB VALUE IN NCY		
077	DUTAM	DUTY/TAX AMT	Y	
078	ASTDE	ASSESSED TOTAL OF DEC	Y	
079	ASTIT	ASSD. TOT OF ITEMS	Y	
080	LOSSR	LOSS OF REVENUE	Y	
081	DEDVA	VALUE DEDUCTED		
082	DEDQU	QUANTITY DEDUCTED		
083	SUPV1	SUPPL. VALUE 1	Y	
084	SUPV2	SUPPL. VALUE 2	Y	
487	PCC	PRODUCT CATEGORY COD		
488	I/EAC	IMP/EXP APPROVAL COD		
489	PAC	PRODUCT APPROVAL COD		
490	GNCUR	GENERAL CURRENCY		
491	DOAGC	DAT OF APP. GEN CUR		
492	TBMAS	TOTAL BRUT MASS		
493	TFOBV	TOTAL FOB VALUE		
494	TFREV	TOTAL FREIGHTT VALUE		
495	TASSV	TOTAL ASSV. VALUE		
496	TOCOV	TOTAL OT. COSTS VAL.		

APPENDIX V

EUROTRACE DECLARATION FILE

No.	Field	Description
1	DEC00	Declaration Origin(Master, ASYCUDA, Ext., WS)
2	DEC01	Date
3	DEC02	Customs Office
4	DEC03	Form Number
5	DEC04	Item Number
6	DEC05	Forwarding Agent
7	DEC06	Trader
8	DEC07	Transport Type
9	DEC08	Transport Nationality
10	DEC09	Customs Procedure
11	DEC10	Commodity
12	DEC12	Country Origin/Destination
13	DEC12	Net Weight
14	DEC13	Gross Weight
15	DEC14	Quantity of the Supplementary Unit
16	DEC15	Customs Value
17	DEC16	Other Charges
18	DEC17	Freight
19	DEC18	Insurance
20	DEC19	Tax 1
21	DEC20	Tax Amount 1
22	DEC21	Tax 2
23	DEC22	Tax Amount 2
24	DEC23	Tax 3
25	DEC24	Tax Amount 3
26	DEC25	Tax 4
27	DEC26	Tax Amount 4
28	DEC27	Tax 5
29	DEC28	Tax Amount 5
30	DEC29	Tax 6
31	DEC30	Tax Amount 6
32	DEC31	Flag (Status of Record-Inserted,Rejected etc.)
33	DEC32	Country of Last Origin/Final Destination
34	DEC33	Total Taxes
35	DEC34	Invoice Value
36	DEC35	Currency
37	DEC36	Contract Type
38	DEC37	Financial Procedure

APPENDIX VI

COMESA AND ECOWAS SITES

www.comesa.int

www.ecowas.int