



## Report

# FOREIGN TRADE STATISTICS (FTS)

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**TA for the Scandinavian Support Program to Strengthen the  
Institutional Capacity of the National Statistics, Mozambique**

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## Table of contents

<b>1</b>	<b>SUMARIO EXECUTIVO</b> .....	<b>4</b>
1.1	Principais Recomendações .....	5
1.2	As acções mais importantes de lidar são:.....	6
<b>2</b>	<b>EXECUTIVE SUMMARY</b> .....	<b>7</b>
2.1	<i>Major reason for the mission</i> .....	7
2.2	<i>Major recommendations</i> .....	7
<b>3</b>	<b>INTRODUCTION</b> .....	<b>9</b>
3.1	The report and writer.....	9
3.2	Background and earlier missions .....	9
3.3	The content of the report.....	9
<b>4</b>	<b>MAIN FINDINGS AND CONCLUSIONS</b> .....	<b>10</b>
4.1	The Customs.....	11
4.2	EUROTRACE .....	11
<b>5</b>	<b>RECOMMENDATIONS</b> .....	<b>12</b>
5.1	The FTS staff.....	12
5.2	FTS Actions.....	12
5.3	EUROTRACE - a Plan for production systems .....	15
<b>6</b>	<b>APPENDIX 1. Persons met</b> .....	<b>17</b>
<b>7</b>	<b>APPENDIX 2. List of Literature</b> .....	<b>18</b>
<b>8</b>	<b>APPENDIX 3. Terms of Reference</b> .....	<b>19</b>
8.2	External Trade .....	19
<b>9</b>	<b>2. Main reasons for the mission</b> .....	<b>20</b>
<b>10</b>	<b>3. Benefactors of the mission</b> .....	<b>20</b>
<b>11</b>	<b>4. Objectives of the mission</b> .....	<b>20</b>
<b>12</b>	<b>5. Expected results</b> .....	<b>20</b>
<b>13</b>	<b>APPENDIX 5. Agenda, meeting between NSI/Customs/National Bank</b> .....	<b>25</b>
<b>14</b>	<b>APPENDIX 6. FTS file description. Data from Customs</b> .....	<b>28</b>
<b>15</b>	<b>APPENDIX 7. CPC-REGIME - Defintion table</b> .....	<b>29</b>
<b>16</b>	<b>APPENDIX 8. CPC definition Chart – Flows of goods</b> .....	<b>32</b>
<b>17</b>	<b>APPENDIX 9. Mirror statistics. Cooperation with the ZA</b> .....	<b>33</b>
<b>18</b>	<b>APPENDIX 10. EUROTRACE – FTS production system</b> .....	<b>35</b>
<b>19</b>	<b>APPENDIX 11. EUROTRACE – request for new version</b> .....	<b>44</b>
<b>20</b>	<b>APPENDIX 13. Monthly press release</b> .....	<b>45</b>
<b>21</b>	<b>APPENDIX 14. FTS Action PLAN of implementation</b> .....	<b>46</b>

## List of abbreviations

CO	Scanstat Coordination Office in Statistics Denmark
Danida	Danish International Development Assistance
DKK	Danish Kroner
DSt	Statistics Denmark
EUR	European Euro
INE	Instituto Nacional de Estatística, Mozambique
INE-P	Instituto Nacional de Estatística, Portugal
MZM	Mozambique Meticais
NOK	Norwegian Kroner
Scanstat	Consortium between Statistics Denmark, Statistics Norway and Statistics Sweden
SCB	Statistics Sweden
SEK	Swedish Kronor
SSB	Statistics Norway
USD	US Dollars
ZAR	South African Rand

## Lista de abreviaturas

CO	Gabinete de coordenação de Scanstat em Estatísticas em Dinamarca
Danida	Assistência de Desenvolvimento Internacional Dinamarquesa
DKK	Kroner Dinamarquesa
DSt	Estatísticas da Dinamarca
EUR	Euro Europeu
INE	Instituto Nacional de Estatísticas- Moçambique
INE-P	Instituto Nacional de Estatísticas – Portugal
MZM	Metical- Moçambique
NOK	Kroner Norueguês
Scanstat	Consórcio entre Estatísticas de Dinamarca, Estatísticas de Norega e Estatísticas de Suécia-
SCB	Estatísticas de Suécia
SEK	Kronor sueco
SSB	Estatística Norueguesa
USD	Dolares dos Estados Unidos da America
ZAR	Rande Sul Africana

# 1 SUMARIO EXECUTIVO

A razão que me levou a vir visitar o Instituto Nacional de Estatísticas (INE) em Maputo é de partilhar a minha longa experiência como estatístico profissional. Gostaria de mostrar o simples facto de que o trabalho difícil e orientado é único meio de progredir. A Estatística do Comércio Externo de alta qualidade é muitas vezes baseada nos dados do sistema de declaração administrativa das Alfândegas. Construir a qualidade para futuro significa em primeiro lugar criar trabalho diário de cooperação de dados que propicie ao pessoal do FTS no INE o conhecimento sobre como funcionam os sistemas da recolha de dados das Alfândegas. O INE precisa de compreender todo o braço aberto de oferta dos Oficiais das Alfândegas quando eles dizem honestamente que querem partilhar o futuro desenvolvimento das estatísticas oficiais de alta qualidade. Como facto inevitável, este objectivo deve ser acordado a todos os níveis do INE e permitir que o pessoal de FTS coopere diariamente, mediante condições de que dispõe, com os colegas das Alfândegas e confiá-los com a responsabilidade de aprender a desenhar linhas para o futuro de FTS. Isto constituiu o maior progresso durante a missão.

Uma importante reunião foi realizada no dia 20 de Maio de 2004 nas Alfândegas. Veja o apêndice 5 e ponto 4.2 das acções de FTS. Se as Alfândegas e dirigentes do TIMS cumprirem com as promessas feitas neste encontro, esta será a base para uma cooperação construtiva com as Alfândegas no trabalho da qualidade de dados no futuro

Também conseguimos instalar a versão de EUROTRACE de Maio de 2003, e para começar aprender a usá-lo. Veja os planos de EUROTRACE ponto 4.3 em baixo, para o uso contínuo deste SOFTWARE. A fase de teste piloto do EUROTRACE já foi executada e os primeiros conhecimentos básicos do funcionamento do Software foram alcançados. A versão de Maio 2003 foi instalada em muitos PCs, e também em um PCs em FTS. A missão foi um pouco curta para realizar a formação inicial adequada. Assim o pessoal de FTS deve continuar a praticar de forma independente.

Deve-se especificar onde foi instalado o EUROTRACE, pois na FTS só foi instalado em um PC (talvez tenha sido instalado no DISI pois o Consultor trabalhou com técnicos do DISI)

## 1.1 Principais Recomendações

No capítulo 4.2 em baixo, apresentamos uma lista das acções do FTS, que em linhas gerais constituem um resumo detalhado sobre as tarefas que o INE e FTS deve realizar. Esta lista foi feita particularmente com base na discussão havida na reunião de 20 de Maio com as Alfândegas. É um guião para o desenvolvimento contínuo do FTS e indica onde alguns problemas podiam-se apresentar.

Baseado nas acções da FTS devem ser criadas as condições para a implementação do PLANO de actividade de FTS, veja no apêndice 14.

Esta tabela constitui um plano longo e duro de acção com metas e distribuição de acções que se enquadram como continuação de advertências.

No capítulo 4.3 do EUROTRACE– o sistema de produção de FTS é um esboço da proposta. O mais importante aqui é que ao pessoal de FTS é atribuída a única responsabilidade de criar e desenvolver o sistema e é encorajado a fazê-lo (na cooperação com dirigentes e o departamento de IT). Aqui o esboço da 1ª versão é proposta de mudança o mais breve possível. O pessoal de FTS deve seguir as regras universais.

1. Todas as construções de sistemas devem ser acompanhadas por esquemas desenhados, com descrição do formato do ficheiro e listas sobre passos importantes no processamento de dados. (curtas - com palavras chaves se for possível)
2. A delimitação (definição) da FTS deve corresponder exactamente as selecções da tabela CPC e publicado junto com FTS oficial.
3. O pessoal do FTS deve ser responsável pela produção e do contacto com o utilizador.
4. O pessoal de FTS deve ser responsável por actualizações, execuções e mudanças na implementação do plano de acção de FTS (apêndice)

## 1.2 As acções mais importantes de lidar são:

- 1 Acordar sobre o novo formato de dados de FTS para fornecimentos a partir das Alfândegas para o INE.
2. Deixar o pessoal do FTS' continuar a trabalhar na consulta da tabela de definição do FTS através de preenchimento do diagrama no apêndice 8. Esta tabela deve ser preenchida, examinada correctamente por peritos de consultoria das Alfândegas se for possível.
3. Utilizar EUROTRACE e outros meios para consultar os dados e produzir uma lista de erros.
4. Continuar a cooperação com as Alfândegas/ TIMS e corrigir os erros no sistema de declaração das Alfândegas. Esta é uma solução preliminar até que o pessoal de FTS no INE seja capaz de construir um sistema seguro que lida com erros dentro do INE. Quando isto for possível, as declarações devem ser recebidas como originais uma vez apenas, e todas outras versões serão marcadas como correcções originais recebidas anteriormente.
5. Para instalar a última versão do EUROTRACE e aprender mais sobre o uso de Software.
- 6 Continuar a investigar o EUROTRACE envolvendo o responsável do IT para facilitá-lo tomar o papel como administrador.
7. Para se empenhar no trabalho num único tempo, que as Alfândegas querem executar sobre a reparação da rede extensiva e unidades de medida de má qualidade nas declarações de 2000-20003.( Perito Externo em cálculos FTS / índices poderão ser necessários). Este trabalho poderá ser muito duro para o INE e de nenhuma forma deve ser feito em detrimento do outro trabalho urgente do FTS.
8. Começar a preparar a rotina mensal para a publicação do FTS.
9. Ajudar as Alfândegas no esforço para melhorar a qualidade do FTS. Aprendemos no encontro do dia 20 de Maio que as Alfândegas poderiam beneficiar - se de receber a carta/ declaração do INE para as Alfândegas DG. Esta carta deve explicar porque é que o código MZ do país ( Moçambique) é uma ocorrência normal nas declarações das Alfândegas, mas que deve ser recodificado quando for usado nos dados FTS. Veja mais sob o ponto 4.2 e apêndice 14, actividade do INE- 05.

## 2 EXECUTIVE SUMMARY

### 2.1 Major reason for the mission

The reason for me to come and visit the Instituto Nacional de Estatística (INE) in Maputo, is to share with colleagues here my life-long experience as a professional statistician. I wish to show the simple fact that hard and fact-oriented work is the only way to proceed. A high quality Foreign Trade Statistics (FTS) is based mostly on data from the Customs Administrative declaration system. Building quality for the future, means first of all to create a daily data cooperation work, which gives the FTS staff at the INE inside knowledge about how the Customs data collection systems function. The INE needs to grasp every open arm the Customs offers offer, when they honestly say they wish to take their share in developing future official statistics of high quality. As an unavoidable fact, all levels in the INE have to agree to this goal, and allow the FTS staff to cooperate daily and on their own condition with the Customs colleagues, and to trust them with the responsibility to learn to draw the lines for future FTS. Major progress/achievement during the mission.

A crucial meeting was held 20 May 2004 with the Customs, see *appendix 5* and point 4.2 *FTS Actions*. If Customs and TIMS leaders follow up their promises from this meeting, this is a basis for a very constructive cooperation with the Customs on future data quality work.

We also managed to install the May 2003-version of EURTRACE and to start learning how to use it. For further use of this software, see point 4.3 EUROTRACE plans, below. A EUROTRACE pilot test phase has been executed and the first basic knowledge has been achieved of the functioning of the software. The May 2003 version was installed in many PCs, also the PCs in FTS. The mission was a little too short to carry out enough initial training, so the FTS staff has to experiment further on their own.

### 2.2 Major recommendations

In chapter 4.2 below we have set up a *FTS Actions*, which is a detailed overview over jobs the INE and the FTS staff should engage in. This list is set up, partly based on the 20 May discussions with the Customs. It is a guideline for further development of the FTS and indicates where some bottlenecks might be showing up.

Based on the *FTS Actions*, a shorter *FTS Activity PLAN implementation* is created, see *appendix 14*. This table is a milestone action plan, with deadlines and splitting of actions, which fits as a follow-up reminder.

In chapter 4.3 *EUROTRACE – a FTS production system*, is a draft proposal. The important thing here is that the FTS' staff is given the sole responsibility to create and develop the system, and encouraged to do so (in cooperation with leaders and the IT-department). Here is proposed only the draft of a 1<sup>st</sup> version, which will need to change soon. The FTS staff should follow some universal rules:

1. All building of systems has to be followed by drawing flow-charts, file format descriptions and lists over main steps in data processing (short, by key-words is OK).
2. The delimitation (definition) of the FTS should be exact matching the CPC-table selections, and published together with the official FTS.
3. The FTS staff should be responsible for the production and also users' contact.

4. The FTS staff should be responsible for update, execution and changes in the FTS Action PLAN of implementation (Appendix 14).

The most important **main actions** to deal with are:

1. To agree on a **new FTS data format** for deliveries from Customs to the INE.
2. To let the FTS' staff work further with **checking the FTS definition table** by filling in the CHART in appendix 8. This table has to be completed and correctly checked, if needed by consulting Customs' experts.
3. To use EUROTRACE and other means to check data and to **produce error lists**.
4. To continue the cooperation with Customs/TIMS and to **correct** these errors in the Customs declaration system, **together with** Custom officers. This is a preliminary solution, until the FTS staff and the INE are able to build a safe error-handling system inside the INE. When this is possible, declarations should only be received once, as originals, and all other versions later on marked as corrections of earlier received originals.
5. To install the **latest version of EUROTRACE**, and to learn more about the use of the software.
6. To continue to investigate EUROTRACE involving the IT-responsible, to enable them to take the role as **administrator**.
7. To **engage in the one-time job Customs want to execute**, about repairing the bad quality of net mass and kilogram in the declarations for 2000-2003. (External expert in FTS/index calculations might be a demand). This job, however, might be too challenging for the INE to deal with, and should in any case NOT be done to the detriment of other urgent FTS work.
8. To start preparing for a **monthly routine for publishing** the FTS.
9. To help Customs in their strive for better FTS quality, we learned at the 20 May meeting that Customs could benefit from receiving a statement (letter) from the INE to Customs DG. This letter should explain why the country code MZ (Mozambique) is a normal occurrence in the Customs declarations, but has to be re-coded when used in the FTS data. See more under point 4.2 and appendix 14, activity INE-05.

### 3 INTRODUCTION

I would like to express my thanks to all officials and individuals for kind support and showing open minds making friendly cooperation possible.

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This report contains also views of the author of the report, which do not necessarily correspond with the views of the INE or the Scandinavian Project Team.

#### 3.1 The report and writer

The report is written by Mr. Hans Kristian Ostereng, senior adviser in Statistics Norway. He has more than ten years of experience in international consultant work, mainly connected to the Eastern European countries' preparations before they became members of the European Union from 1<sup>st</sup> May 2004. He has also been working in the Western Balkan countries and in Bulgaria and Romania as well.

The counterparts in the INE have been Cirilo Timbe, who did his best to overcome all the duties connected to such a short mission. Also the FTS staff, Armando Tsandzane and Gabriel H. Lemequezani deserve credit for their positive spirit by meeting the challenges during the mission.

#### 3.2 Background and earlier missions

A short-term mission on FTS took place in November 2001 with support from the Twinning Arrangement (*MOZINE 2001:10*). The objective of this mission was to review the current production routines and suggest the basic actions for how to improve.

A second short-term mission on FTS took place during 28<sup>th</sup> April - 9<sup>th</sup> May 2003. This mission was to review the status and to give advises about how to proceed (*MOZ:2003:8*).

These two missions reports contain documentation and appendices, which are used as basis for further work in this mission report, see appendix 2 here.

#### 3.3 The content of the report

- The recommendations in the summary chapter 1, are proposing how to plan and execute future development of the FTS. Chapter 3 describes briefly the work done during the mission and with the main conclusions. In chapter 4 you find the recommendations written in a more detailed manner. The collection of appendices is also an important part of the mission report, and should be studied carefully by the persons who need to do so.

## 4 MAIN FINDINGS AND CONCLUSIONS

There have been two earlier missions connected to the FTS, see appendix 2, Literature list. The main finding is that nothing of importance has been done since then, based on the recommendation given in these reports. Of the last recommendations from 2003, only point 1 and 2 have been implemented, see list of recommendations below. One important reason is that improvements in the Customs also have been haltering, reducing the possibilities for the INE to proceed. Besides, INE leaders have tried to follow up the recommendations, without finding a way to proceed. Nevertheless, there are clear mismatches between agreed upon goals and the results.

Therefore, this third report is not a very word-rich one, but rather an attempt to focus on short and practical matters only, ending up with the **FTS Main Table of Actions**, see point 4.2 below and point 1.3 above. Based on this, a **FTS Action PLAN of implementation** has been elaborated (see appendix 14). This plan serves as a core of the follow-up work, and the tool for the project team leader to check progress and to help at the right time.

All further work should rely to this table and when the INE and the FTS staff and leaders change their plans, this **FTS Actions PLAN of implementation**, should be updated with a new version as soon as experiences and new ideas call for it. This table is also a main list over work to be done in cooperation with the Customs and the National Bank. It should be the FTS staff who is responsible to take initiative to change the content of the actions in this table. Any changes they propose should be approved by the Customs partners and by the FTS leaders.

**The recommendations from the May 2003-report are copied below and are integrated in the new 2004 recommendations:**

1. Increase the staff to at least two full time persons. Let one person be responsible for current production, another for development work
2. Secure that they work together, able to overlap 100%
3. *English has to be obligatory (Let FTS staff take English courses)*
4. *Everyday work on data quality has be established, -error detection, correction, aggregate, publish (Manual routines for error corrections)*
5. *The ETS should be published monthly (should be planned to start from 1.1.2004)*
6. *Establish a Network Group, NSI-Customs to support error correction work (Create a daily work-group with power to make decisions.)*
7. *Develop cooperation with Customs to reduce under-coverage and improve quality (Include the DU-simplified in the data)*
8. *To install EUROTRACE within December 2003 (CDs left to IT-Head)*
9. *To participate in EUROTRACE training course in Lusaka (INE contact)*
10. *Further continuation of FTS experts to support further development of the production system (Further advise can be arranged on INE's initiative)*

## 4.1 The Customs

The Customs could benefit from active support from the INE in the following areas:

1. To support the Customs in putting pressures on more strict reactions to officers who don't follow the quality rules for handling the Customs declarations. It is helpful for Customs to have this expressed, by stating the fact that official FTS can't improve, if the quality of the Customs Clearance system don't improve.
2. To inform Customs leadership about the fact that country code MZ is a normal coding in a Customs declaration system, but rather has to be handled on the way during processing data for making the official FTS. Even in Customs, some officers are not aware of this fact, see point 1.3.9.
3. To demand that the DU-simplified has to be integrated in the TIMS, - in order to be a natural part of the FTS data capture via the declaration system. The same is the case with declarations in and out of the Free Zones. The INE will benefit from having these types of flow integrated in the same and one flow.

**It is highly recommended that the INE will use these possibilities to create goodwill inside the Customs and among the Customs experts in charge of the daily improvements of the MZ Customs systems (TIMS).**

## 4.2 EUROTRACE

The latest version of EUROTRACE was not in our hands before I left, despite that we tried to request it in the most efficient manner, by consulting EUROSTAT directly before the mission. However, the old CDs were undusted (3.-8. above) and the software installed. Despite of no external support, we managed to study some of the main features and principles of the software during the two weeks. We also requested the new, latest version via the EU embassy, see appendix 11. This copy arrived a few days after the mission ended. It is a free-ware, and the software is also available via the EUROSTAT WEB-site on the Internet.

## 5 RECOMMENDATIONS

A summary of the recommendations below is listed in chapter 1.3 above. Below are the *FTS Actions* (4.2) with more details, and the *EUROTRACE – a FTS production system* (4.3). The *FTS Action PLAN of implementation* in annex 14 includes a column with proposals for deadlines, which the INE has to consider and eventually adjust to. These deadlines should be set carefully, to be realistic, so that the FTS staff is given a fair chance to be able to meet the deadlines.

### 5.1 The FTS staff

1. The INE made a very positive step ahead, by engaging another person, so that the FTS staff now consists of two full time employees. Now, there is a realistic size of the manpower input to proceed further with the development of the FTS in Mozambique.
2. Better English knowledge is still an urgent need for the staff responsible for FTS. These statistics are based on international harmonized recommendations and systems, and all communication is in English. Now, when FTS staff has two persons, it should be possible to give courses in English high priority.

### 5.2 FTS Actions

The basis for creation of the action plan is the meeting between the INE, the National Bank and the Customs, held in Customs 20 May 2004.

#### ACTION PLAN FOR FURTHER DEVELOPMENT OF FTS

A meeting was arranged with Customs/TIMS representatives<sup>1</sup> 20 May 2004. A memorandum was sent the day before, describing the technical problems the INE was facing when working to develop new routines for how to produce FTS.

At this meeting the National Bank and INE representatives<sup>2</sup> together with Customs concluded on a list of actions, which should be implemented both in Customs and in the INE, in close cooperation. These actions should be targeted to solve the main problems pointed out in the Memorandum distributed before the meeting.

The main points in this action plan are:

#### What Customs will do, in order to improve the FTS data quality:

**Cust-01. Improve quality of Customs officers' work on data entry/release of goods.** New rules are just to be introduced in the Customs, making Customs leadership able to punish officers who neglect to follow strictly the demands for complete and correct data entry in the Customs declarations, - which also is a basis for improvements of the quality of the statistical data as well.

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<sup>1</sup> IT Management consultant Helen MacQueen, camoz.it@teledata.mz (+258 082 311940) and consultant Alvaso Sousa.

<sup>2</sup> Ines Riquicho from the National Bank, Cirilo Tembe, Armando Tsandzane, Gabriel H. Lemequezani, Claudio Capriano, Paulo Benuesse from INE, Hans K. Ostereng Statistics Norway.

In specific will this concern **data input for future index calculations:**

Net weight will only be Kg (tonnes as a measure will expire)

Quantity will be filled in a proper manner according to the Tariff code

Training of officers will be a part of further improvements

**Cust-02. Introduce disciplin actions if rules are not obeyed.** In total, there should be a much more strict connection between demand for correct declaration data and the clearance (release) of the goods. In future on-line systems, this will take place automatically. improvement depends on a higher quality and ITorientation from the Customs officers involved in Customs clearance.

**Cust-03. Improve data quality in declarations for previous years.** The Customs (TIMS) plan to start work on improving the quality of earlier declarations (2000 - 2003). Especially the net weight and the quantity boxes will be investigated in order to replace errors with possible estimation from already acceptable items, or also from external sources like export data from the ZA Customs. The INE was invited to assist in these analyses about the method and how to impute the unacceptable data. This is a generous offer, which the INE could benefit from with a cooperation. These analyses and possibly subsequent improvements of the data quality (in specific connected to index calculations) are of crucial importance, since this might open for starting index calculation for earlier years. To do index calculations, at least one complete year (a base year) of data has to be established. The normal rule is that the base year is changing every year. **It was proposed that Customs create a basic data analysis file, extracting only the fields (DU boxes), which are needed for this purpose and copy to CD, to be easily available for the INE/consultants for price investigation analysis. It should contain data for all years in one CD.**

**Cust-04. Simplified data deliveries from the Customs to the INE.** The Customs will program a new data extraction routine tailor- made for data deliveries to the INE, after the INE has sent to Customs a data file description. Until now, the system with ACCESS files does not function well.. The Customs officers are not very familiar with ACCESS and it is easy to make mistakes. Besides; too many confidential data are now transferred to the INE, which they don't need for statistical production, at this stage of their development.

**Cust-05. Develop a more intensive, daily cooperation between Customs/TIMS officers and the FTS staff in the INE.** The Customs are willing and positive to cooperate with the INE and the FTS employees in order to correct errors found by validation checks in the INE. Before the INE manages to establish a more complex FTS production system, which enables separation of originals from later corrections, it is better that the updating of errors takes place in the Customs (TIMS) system. New data extraction and deliveries can then be made again, until the FTS data the INE will use, are of acceptable quality. By choosing this way, the FTS' staff gets a possibility to learn the functionality of the Customs clearance system. This is needed for their participation in development of FTS systems in the INE later on.

**Cust-06. Rules for how to re-code occurance of MZ as country in the Customs declarations, to fit the statistical FTS needs.** In Customs declaration systems (not only in Mozambique, but worldwide) it is normal that the national country code (like MZ here) occurs. This can have connection to origination rules and to combination of Customs procedures (Regime&CPC combinations), which technically give sense in Customs administrative work. Connected to statistical purposes and in specific for FTS, these cases have to be re-coded or deleted, depending what kind of goods movement we look at. Such a list over what to re-code or delete, might be included in the data extraction program, but the INE has to describe which rule that has to be implemented.

**Cust-07. Integrate DU-simplified in TIMS.** Customs plan to integrate the DU-simplified into the TIMS system. This work should be done in close cooperation with the INE, in order to improve the data capture. The DU-s is still missing in the FTS data input at the INE. NB! It is of great importance for the FTS that the Customs integrate the DU-s in the TIMS system as soon as possible, since the INE / trade statistics will benefit from having ALL types of declarations into one and the same Customs declaration system.

**Cust-08. Integrate all declarations connected to free zone activities in TIMS.** Declarations from the Free Zones will also be integrated in the TIMS system. This has also an impact on the FTS and the definition of official trade statistics. It has to be checked if the MZ free zones are of Industrial types (processing take place) or of Commercial types, since this may have impact on the definition of the trade statistics (See UN Recommendation 1998).

### **The INE's will do, in order to improve the FTS data quality:**

**INE-01. Secure good enough hardware/software.** The FTS staff need better hardware to be able to work normally with future FTS, and to use SQL and hopefully Oracle databases. PS: Already by 21 May, a new computer was installed, reserved for the FTS work. This makes working conditions better than before. However, it should be stressed that in a longer perspective, the FTS should be in a server, not in stand-alone PCs.

**INE-02. Set up a new file description.** A new file description has to be set up by the INE and handed over to Customs, see point Cust-04 above.

**INE-03. Check and understand the content of the Reg-CPC-definition Table.** The FTS staff has to check and correct the Reg-CPC-definition Table, which is the basis for later extractions, to publish either the General trade system or the Special trade system.<sup>3</sup> It will take some training/practice to get familiar with the interpretation of all the different movements of the goods. For help in this matters the INE may contact the staff at Customs DPAV (Department of Tariff and Valuation).

**INE-04. Contribute to retrospective analysis on data quality improvements.** The INE should try to participate in the retrospective analysis of the 2000-2003 declarations, in order to help the Customs to correct the errors/missing in the data. This is a difficult work and it is a question how the INE may find qualified people to participate in this exercise.

**INE-05. Rules for how to re-code MZ.** The INE should elaborate a set of rules about how to recode the cases where country code MZ occurs in the FTS data. The best is to first receive data as it is, and examine these items, - especially by studying the regime/CPC types, and then decide what to do with such combinations, see also point Cust-06 above.

**INE-06. Plan for FTS production system stages.** There has to be a long-term strategy for error detection and error correction, including practical solutions on how to develop routines for error handling in the INE later on. A proposal for how the INE could handle this in the very

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<sup>3</sup> **General trade:** input/output for warehouses/free zones are included in the trade statistics. **Special trade:** Imports is only goods into free circulation or industrial free zones, exports only directly from free circulation or from industrial free zones.

beginning of EUROTRACE system building and starting with a new data file format, see point Cust-05 above.

**INE-07. Plan for further use of EUROTRACE.** The EUROTRACE software will be installed and utilized, in a first round for complete validation of the codes, like commodity numbers and country codes, plus more. Concerning how to handle the correction of errors found in the FTS data, see point 6 above. A target with this arrangement is to allow the FTS staff to cooperate closely and daily with the Customs and to get knowledge about the updating routines in the TIMS system. This knowledge will be a basis for safer development of own FTS production systems in the INE.

**INE-08. EUROTRACE Training.** A plan for further development and training of EUROTRACE will be made. There should be appointed a data administrator (IT-person) for the system, while the FTS staff is defined as users. When starting production, the software is best to be installed in a server.

**INE-09. Installation of last version of EUROTRACE.** A latest version has been received and installed after the mission ended. In case more is missing, the INE should contact EUROSTAT directly.

**INE-10. Plan for EUROTRACE study trip.** The FTS staff would like to go to their colleagues in Angola, for the reason that they already use EUROTRACE and because the Customs there also use the same clearance system as TIMS. It is of course easier when they in addition speak Portuguese, but be aware of the need to practice English for the future.

**INE-11. Investigate further use of ZA mirror statistics.** In appendix 9 below, is an e-mail done during the preparations for the mission. The meaning was to start to cooperate with the South African Customs or Statistics, to arrange for exchange of import/export data. This information could be a basis for current quality work, and for analysis connected to Index Calculation problems, see actions Cust-03 and INE-04 above.

**INE-12. Start to publish FTS monthly.** It is essential to start publishing the FTS monthly. However, there need to be established a production system first. This system can be based on EUROTRACE databases. A first technique could be to have two databases; - one for data error checking, with the error correction done in Customs/TIMS, - and a second the a last storage of corrected data, a EUROTRACE production database.

### 5.3 EUROTRACE - a Plan for production systems

During the mission period we intended to fulfill an EUROTRACE Pilot study, in close cooperation with the IT staff. Limited time and capacity of the IT staff disabled these intentions. However, a basic draft has been drawn up, and the result is found in **annex 10** below. During the mission we learned some of the basic EUROTRACE routines and how to establish a system scratch. This period was not good for both the IT-responsible ones, who were not able to contribute as significantly as their intentions were.

They will have to dig more into it later on. The EUROTRACE should have an IT-person appointed as administrator and with the FTS staff defined as users. It will also be necessary to experiment more with the software before all solutions are concluded.

The most important is that the software is taken into daily use, and as proposed in **appendix 10**, a 1<sup>st</sup> version of the system should be based on error detection by the INE's FTS staff, but with data corrections done in the Customs declaration system. The checking and correction of data are done during the steps 1 and 2. The final storage of the data ready for dissemination and stored in a production system is a step 3.

More detailed results from the EUROTRACE pilot studies are in **appendix 10**.

### **The killing disasters**

The playing children are the unspoiled clear water source of human fantasy and imagination, which carry a load of endless life energy. Elder and wiser slowly kill the spiritual inspiration of youngsters by rigid rules for the right and wrong powered by authority. Slowly youngsters' souls turn into a heritage of disasters that has ruled defenceless for generations. Most valuable learning from elders to youngsters are the transfer of deep respect for all livings and land we share on the globe, true honesty and kindness, and the unique quality enabling humans to give away by hearth unconditionally. Youngsters grow when they meet challenges and are given responsibility and possibilities to decide. Elders preventing youngsters in growing exclude themselves from being a harmonic part of future, since life never stops to grow. There are many elders who deserve the necrology: *My dear father, lived with closed eyes, never reached to see his future.* So the only person truly worth to understand, is only yourself, if you have a wish to respect and tolerate fellow humans' mistakes.

## **6 APPENDIX 1. Persons met**

### **The INE staff:**

Mr. Azarias Nhanzimo - Director of Directorate for Economic statistics and Business statistics (DESE)

Mr. Cirilo Eduardo Tembe – Head of the Department for Services, Informal sector and Business register (cirilo.tembe@ine.gov.mz, Phone+258-1- 49 81 41)

Mr. Armando Tsanzane - Responsible for FTS production within DESE

Ms. Anastasia, IT-Head

Mr. Calado Fichamo, IT specialist, Economic Statistics

### **Joining the meeting with Customs/ Nat. Bank:**

Claudio Capriano, National Accounts

Paulo Benuesse, National Accounts

### **The Nordic team:**

Mr. Hans Erik Altvall, team leader

Mr. Mr. Mogens, IT-expert

### **Customs directorate:**

Mrs. Helen MacQueen, IT Management consultant; camoz.it@teledata.mz (+258 082 311940)

Mr. Alvaso Sousa, IT consultant

### **The National Bank:**

Mrs. Ines Riquicho

## 7 APPENDIX 2. List of Literature

### Previous missions:

Short-term mission on FTS, November 2001 (*MOZINE 2001:10*)

Short-term mission on FTS, May 2003 (*MOZ:2003:8*).

### Other sources:

1. **UN International Trade Statistics Concepts and Definitions, Statistical papers, 1998 (Copies left May 2004)**
2. **Seminar in Vilnius November 1992, 183 pages**
3. **Seminar in Riga October 1995, 125 pages**
4. **Baltic Working Group meeting in Bodo, 46 pages.**
5. **In addition a FTS Collection of documents including:**
  - Eurostat: European External trade Statistics in the light of International recommendations
  - Doc Phare no 9, rev.2+3, Luxembourg 10 Mar 2000 correlation customs-statistical regime
  - Example of FTS Definition Table (Estonia)
  - Doc Phare no 22, cooperation between Customs and Statistical Institutes
  - EOROSTAT: International classifications in economic statistics
  - ISO 3166 Maintenance Agency – information/addresses
  - Eurostat: Projects on non-financial National Accounts: Hidden economy
  - Statistics Norway: Paper on mirror statistics between Norway – Sweden and Estonia
  - Statistics Norway: FTS production system, seminar in Vilnius May 2000

## 8 APPENDIX 3. Terms of Reference

### 8.1.1.1.1.1 TERMS OF REFERENCE

#### 8.1.2

Within the Scandinavian Bridging Support Program

#### 8.1.2.1.1

For a short-term mission 28<sup>th</sup> April – 9<sup>th</sup> May 2003

#### 8.1.2.2

On

## 8.2 External Trade

### 1. Background

Foreign trade statistics (FTS) gives information about flows of commodities between Mozambique and other countries. Exports and imports are important economic indicators both in describing structural changes and in monitoring the economic trends. In Mozambique external trade statistics has been published since 1992. Before INE was established in 1996, the Ministry of Finance published the statistics.

A short-term mission on FTS took place in November 2001 with support from the Twinning Arrangement (*MOZINE 2001:10*). The objective of this mission was to review the current production routines and suggest improvements. The main recommendations from the mission were;

- To establish a new FTS production system based on customs data and company data
- To improve the cooperation between INE, the Bank of Mozambique and the Customs
- To install EUROTRACE, the NT version
- To secure a minimum level of qualified staff to work with the FTS
- To improve relevant IT competence and support (ACCESS and EXCEL skills)
- To publish more information from the FTS data
- To establish a cooperation with the neighboring countries (especially Sout-Africa)
- To study the illegal and unregistered trade, and propose new data collection or estimation methods

Unfortunately, it has not been possible to follow up many of these recommendations. This is especially due to a lack of staff working with FTS. Installation of EUROTRACE has not been possible because it simply has not been available as a windows version until now. There has thus been some progress in the production routine due to the fact that the transition of data from the customs to INE now is done electronically.

## **9 2. Main reasons for the mission**

The main reason for a mission on FTS now, is that the EUROTRACE NT-version finally is available. This means that INE can start evaluating, testing and eventually using this system in the production of FTS.

## **10 3. Benefactors of the mission**

The mission will benefit the FTS-staff at INE through improved capacity and competence in the makings of FTS. The users will benefit by getting a higher quality statistics.

## **11 4. Objectives of the mission**

- Help to start using EUROTRACE III – the NT-version. Training of staff (this implies that installation is done prior to the mission)
- Develop data checks and data flow controls in addition to checks available in EUROTRACE
- Give suggestions concerning what FTS should contain
- Give suggestions related to dissemination of FTS
- Discussions with the customs concerning implications for the data transfer when INE starts using EUROTRACE, with the objective to improve cooperation and increase efficiency of the data transfers

## **12 5. Expected results**

- An evaluation of EUROTRACE III
- Recommendations on who to use EUROTRACE III in the production of the FTS. Including a list of activities to be taken.
- Suggestions on additional production procedures
- Suggestions on content, definitions and dissemination routines for FTS
- More qualified FTS-staff
- A report from the mission

### **7. Agenda for the mission.**

NEEDS SPECIFICATION

12.1.1.1.1.1

### **8. Tasks to be done by INE to facilitate the mission**

- Install EUROTRACE III
- Prepare a complete documentation of the current production process
- Prepare other relevant documents and information
- Supply good working conditions for the consultant
- Prepare meetings with the customs
- 

### **9. Consultant and Counterpart**

Consultant: Hans Kristian Østereng, INE/Norway  
Counterparts: Azarias Nhanzimo - Director of Directorate for Economic statistics and Business statistics (DESE)  
Armando Tsanzane - Responsible for FTS production within DESE  
Calado Fijamo - IT-technician within DESE

**10. Timing of the mission**

The 28<sup>th</sup> of April to the 9<sup>th</sup> of May 2003.  
Number of working days at INE will be 9 in total because the 1<sup>th</sup> of May is a public holiday. Number of working days at home office (SSB) will be 3. Travel days come in addition.

**11. Report**

The consultant will prepare a draft report to be discussed with INE before leaving Maputo. He will submit a final draft to INE for final comments within one week of the end of the mission. Statistics Denmark as Lead Party will print the final version within 3 weeks of the end of the mission.

*These Terms of Reference were prepared by*

Day / / .....

*Approved by/in the name of the President of INE*

Day / / .....

## TERMOS DE REFERÊNCIA

Dentro do Programa Escandinavo

*Para uma curta missão de 28 de Abril a 9 de Maio de 2003*

No

### **12.1.2 Comércio Externo**

#### **1. Antecedentes**

*As estatísticas do comércio externo (FTS) fornecem informação sobre o fluxo de mercadorias entre Moçambique e outros países. Exportações e importações são importantes indicadores económicos, ambos na descrição da tendência da estrutura e monitoria económica. Em Moçambique, as estatísticas do comércio externo são publicadas desde 1992. Antes do INE fora estabelecido em 1996 que o Ministério do Plano e Finanças publicaria estas estatísticas.*

Uma missão de curta duração em FTS teve lugar em Novembro de 2001 com suporte do Twinning Arrangement (MOZINE 2001:10). O objectivo desta missão foi o de rever a corrente rotina de produção e tecer sugestões de aperfeiçoamento. As principais recomendações da missão foram:

- *Estabelecer um novo sistema de produção de FTS baseado na informação das Alfandegas e das empresas;*
- *Melhorar a cooperação entre o INE, o Banco de Moçambique e as Alfandegas*
- *Instalar o aplicativo EUROTRACE na versão NT*
- *Assegurar o nível mínimo de pessoal qualificado para trabalhar nas FTS*
- *Aperfeiçoar uma relevante competência em IT com suporte (perícia em Access e Excel)*
- *Publicar mais informação das FTS*
- *Estabelecer cooperação com países vizinhos (especialmente a Africa do Sul)*
- *Estudar o comercio externo ilegal e não registado e propor novas formas de captação de informação ou métodos de sua estimação*

Lamentavelmente, não tem sido possível implementar muitas destas recomendações. Isto é especialmnete por causa da exiguidade de pessoal a trabalhar em FTS. A instalação do aplicativo da EUROTRACE não foi possível, simplesmente porque não foi avaliada como uma versão do windows até agora. Tem havido, até aqui, pequenos progressos nas rotinas de produção uma vez que a transição da informação das Alfândegas ao INE actualmente é feita electronicamente.

## ***2. Principais Razões da Missão***

As principais razões para efectivação da missão em FTS agora é que a versão NT da EUROTRACE está finalmente disponível. Isto significa que se pode começar a avaliar, testar e eventualmente utilizar este sistema na produção de FTS.

## ***3. Beneficiários da Missão***

Esta missão irá beneficiar o pessoal que trabalho com o FTS no INE, através do aperfeiçoamento de capacidade e competencia na elaboração de FTS. Os utilizadores serão beneficiados pela disponibilidade de Estatísticas de elevada qualidade.

## ***4. Objectivos da Missão***

- Apoiar no começo da utilização da EUROTRACE na versão NT. Treinamento do pessoal (isto implica que seja priorizada a instalação antes da missão)
- Desenvolver a limpeza e o controle do fluxo de dados em adiconamento à disponibilidade do EUROTRACE
- Dar sugestões no que concerne ao que devem conter as FTS
- Dar sugestões relativamente a dessiminação de FTS
- Discutir com as Alfândegas no que concerne à implementação da transferência de dados quando o INE começar a usar o EUROTRACE, com o objectivo de aperfeiçoar a cooperação e aumentando eficientemente a transferência de dados.

## ***5. Resultados Esperados***

- Uma avaliação do EUROTRACE III
- Recomendações em quem deve usar o EUROTRACE na produção de FTS. Incluindo a lista de actividades que devem ser realizadas.
- Sugestões em procedimentos adicionais de produção
- Sugestões no conteúdo, definição e rotinas de disseminação para FTS
- Maior qualificação para o pessoal das FTS
- Um relatório da missão

## ***7. Agenda da Missão***

POR SER ESPECIFICADA

## ***8. Tarefas a serem realizadas pelo INE para facilitar a missão***

- Instalar o EUROTRACE III
- Preparar documentação completa do corrente processo de produção
- Preparar outros documentos e informações relevantes
- Oferecer boas condições de trabalho ao consultor

- Preparar encontro com as Alfândegas

### **9. Consultor e Contraparte do País**

12.1.2.1.1.1

12.1.2.1.1.2 Consultor: Hans Kristian Ostereng, INE/Noroega

*Contraparte: Azarias Nhanzimo – Director na Direcção de Estatísticas Sectoriais e de Empresas (DESE)*

*Armando Tsandzane – Responsável pela produção de FTS na DESE*

*Calado Fijamo – IT – técnico na DESE*

### **10. Sincronização da Missão**

De 28 de Abril a 9 de Maio de 2003.

*O número de dias úteis de trabalho no INE é de 9 no total por causa do dia 1 de Maio que é um feriado.*

*O número de dias de trabalho fora do INE (SBB) será de 3. Dias de viagem serão adicionados.*

### **11. Relatório**

O consultor irá preparar um draft do relatório a ser discutido com o INE antes de deixar Maputo.

Ele irá submeter o draft final à apreciação para comentários dentro da última semana da missão.

*As Estatísticas da Dinamarca como parte que lidera irão elaborar a versão final dentro de três semanas depois do terminus da missão.*

12.1.2.1.1.3

12.1.2.1.1.4 Estes termos de referência foram preparados por

Dia / / .....

12.1.2.1.1.5

12.1.2.1.1.6 Aprovados por/em nome do presidente do INE

Dia / / .....

## 13 APPENDIX 5. Agenda, meeting between NSI/Customs/National Bank

### E-mail sent 19 May:

----- Original Message -----

From: "Tembe, Cirilo" <[cirilo.tembe@ine.gov.mz](mailto:cirilo.tembe@ine.gov.mz)>

To: <[apsousa@yahoo.com](mailto:apsousa@yahoo.com)>

Cc: "Nhanzimo, Azarias" <[azarias.nhanzimo@ine.gov.mz](mailto:azarias.nhanzimo@ine.gov.mz)>; "Dade, Saide" <[saide.dade@ine.gov.mz](mailto:saide.dade@ine.gov.mz)>; <Magaua>; "Mónica" <[monica.magaua@ine.gov.mz](mailto:monica.magaua@ine.gov.mz)>; "Teixeira, Maria Fernanda" <[maria.teixeira@ine.gov.mz](mailto:maria.teixeira@ine.gov.mz)>; "Tsandzane, Armando" <[armando.tsandzane@ine.gov.mz](mailto:armando.tsandzane@ine.gov.mz)>; "Lemequezani, Gabrel" <[gabriel.lemequezani@ine.gov.mz](mailto:gabriel.lemequezani@ine.gov.mz)>; "Altvall, Hans-Erik" <[hanserik.altvall@ine.gov.mz](mailto:hanserik.altvall@ine.gov.mz)>; <[hko@netcom.no](mailto:hko@netcom.no)>

Sent: Wednesday, May 19, 2004 1:41 PM

Subject: Agenda de Encontro

Boa tarde Dr Alvaro,

Conforme nossa conversa de hoje de manhã, junto envio em attach o levantamento de questões que gostaríamos de discutir convosco (na reunião de amanhã, dia 20/05/04 às 10:00h no seu gabinete) em relação aos problemas que temos tido na utilização da base de dados que nos têm fornecido.

<<Customs-data-quality.doc>>

Com os melhores cumprimentos

Cirilo Eduardo Tembe

Chefe de Dto de Estatísticas dos Serviços e Cadastro

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\*\*\*\*\*

## MEMORANDUM

Technical problems using data from the TIMS

Scandinavian Bridging Support Program / Mr. Hans K. Ostereng

Evaluation connected to short-term mission 12<sup>th</sup> – 25<sup>th</sup> May 2004

## BACKGROUND

The INE plans to start using the EUROTRACE software to improve the consistency and the quality of the FTS. The INE need a daily, efficient contact with the Customs (TIMS Central) technicians to be able to improve the FTS data quality, and to develop more efficient data transfer routines. Different data problems and data quality short-comings has been discovered and should be discussed at a meeting Thursday 20 May, in order to decide what are the best solutions.

In a longer perspective, the INE plans to use the Customs data for Unit Value index calculations, in order to calculate import and export price changes on selected (Representative) products (Items by commodity number/tariff code, or commodity by country combinations). So far, the investigations show that there are serious problems with the TIMS data, connected to this purpose, see point 3 Index calculations below.

## AGENDA FOR A MEETING

### 1. Cooperation with the Customs about METADATA (catalogue/dictionaries)

In order to implement the EUROTRACE system in a secure manner, the INE needs source copies of the catalogue/dictionaries in the TIMS system, to establish a proper METADATA system. This job is partly a one-time job, but the catalogue/dictionaries need to be updated when changes in the TIMS system, -often connected to annual modifications (e.g. in the Tariff).

The following are especially urgent to solve: **NB! DATA needed as Excel/access files!**

#### A. Complete and correct set of DU box 3 Regime and of box B CPC.

The INE also needs the source document, stating the correct Customs Procedures stated by the Law as a background document. This information is the key table to classify the inclusion in official trade statistics, and to draw the main selection between Special trade system and General trade system.

#### B. Complete copy of the TARIFF for each year.

It is also necessary to have the list/file showing changes in commodity numbers/Tariff headings, to be able to mark and trace data series at commodity level over two or more years.

#### C. Complete set of smaller validation lists, like:

- Country codes and names (DU box 12,23,U)
- Currency codes (DU box F)
- Mode of transport (DU box 24)
- Delivery terms (DU box 27).
- Units (DU box R) - unit used for supplementary quantity.

### 2. Data problems

In the new data for 1<sup>st</sup> quarter 2004, there are systematic failures, which has to be corrected:

#### A. The HEADER/ITEMS don't match.

Normally, the header and items fully match by year\*office\*reference number. It seems that this is not the case for this data deliveries.

The INE propose that the TIMS deliveries should be changed, so that HEADER - ITEMS are already matched, before the CD creation and data delivery takes place. NB. The matching key has to be kept as fields in the data.

#### B. It seems there could be invalid CPC codes.

The CPC code '00' seems to occur in the data, but this code should have been expired, or not? See point 1 above about Metadata needs.

#### C. Imports and exports from MZ to MZ.

Together with the Customs, the INE need to find good rules about how to recode or delete these transactions. It is not logic and wanted, to have such items in the FTS databases.

### 3. Future Index calculations

As far as the INE are able to see, we need a reliable data input from Customs to make future index calculations of acceptable quality. The main purpose is to deliver import/export data to the National Accounts in constant prices.

**The only boxes useful for this purpose are:**

**DU box D - Net weight in kilogram**

**DU box E - Quantity in other units**

**DU box R - Units used for filling in box E.**

By now, the data quality of these boxes has been so bad that we can't even think about starting unit value index calculations. It is normal in most Customs (at least in Europe) that these boxes are filled in the Customs declaration system, and that the following data capture procedure (computer-validation A and B) takes place:

A. Box D, kg, are always to be filled in (only very few exceptions, like electric current, ships, which has a substitution measure, of its own reason).

B. The box R, the unit to be used as an alternative measure, is linked directly to the valid tariff code, and will trigger the following sub-procedure in the declaration filling-in:

1. For the chosen Tariff code, - If the unit R, is kg, - then box E shall be blank.
2. For the chosen Tariff code, - If the unit R, has a supplementary quantity measure, - then box E shall be filled in with a number > than 0.

**Other quantity measures in use in the DU.**

The INE are aware of that the DU box P, Package type, and DU box Q, Number of packages, are in active use by the Customs officers as a checking tool.

However, the main problem with this information is that the List of valid Package types includes to many variants and measures, which don't give sense in a unit value price estimation. These types have not a tight relation to the products (commodity numbers/Tariff codes), and are of this reason of minimal value for statistical purposes.

**The INE recommend that the Customs try to implement a kind of tight data input control for boxes D, E, R, as mentioned above.**

## **4. Cooperation between the INE/FTS and the Customs(TIMs).**

The Customs has already appointed two Customs officers, who are the contact persons assisting the daily work with the data cooperation between the INE, the Customs and the national Bank. This arrangement has a serious weakness. These contact persons are replaced frequently, which makes the cooperation and the progress of the work very difficult.

*It would be very good if Customs could decide to appoint persons able to keep this duty over a longer period of time. This would improve the possibility for good results.*

The persons in the FTS Work Group should be given the decision power to deal with jobs like:

A. Updating the metadata in the systems

B. Develop further a better and smoother data transfer, e.g. to start monthly data deliveries

C. Deal with Customs technical definition matters, like interpreting the treatment of Customs procedures and treatment of goods, improving the data coverage, participate in develop a better understanding of the use of statistical information also among Customs officers, etc.

D. Work on a solution to include the information from the DU-simplified system, which until now, has not been included in the MZ import statistics (even maybe not concerning TIMS).

## 5. Other matters

### 14 APPENDIX 6. FTS file description. Data from Customs

<b>FTS detailed data file description. Imports/exports data from Customs to INE. Ver 23.05.2004</b>					
Name	Format	DU box no	MZ name	Use/type	Comments
A=alphanumeric N=numeric					
<b>HEADER:</b> * flow, trade, action column shall NOT be included in the file from TIMS.To be inserted by INE					
© after Name: Validation of codes should be done under EUROTRACE data processing					
month	A 2	TIMS	-	KEY	of Customs Clearance date
year	A 4	TIMS	-	KEY	of Customs Clearance date
flow *	A 1	INE-system I=imp, E=exp			INE - Reg/CPC DEFINITION Table
trade *	A 1	INE-system G=Gen, S=Spes, 0=not in FTS			INE - Reg/CPC DEFINITION Table
action *	A1	INE-system P=process,R=repair,T=transit,0=else			INE - Reg/CPC DEFINITION Table
office©	A 5	02	estancia	KEY	Customs house issued the declaration
ref	A 5	00	-	KEY	DU reference number
exporter	A 10	01	-	-	Identification code
reg©	A 2	03	regime	reg	Customs Regime FTS definition table
importer	A 10	09	-	-	Identification code
items	N	10	artigos total	-	in this declaration
countrycons©	A 2	12	pais embarque	country	consignment
borderoffice©	A 5	16	-	-	Border passing office
countrydest©	A 2	23	pais destino	country	destination
transmode©	A 2	24	meio transporte	-	Transport mean
transnat	A 2	25	nacion transport	-	Nationality of transport mean
delterms©	A 3	27	entrega condicoes	delterms	Delivery terms
<b>ITEMS:</b>					
month	A 2	TIMS	-	KEY	of Customs Clearance date
year	A 4	TIMS	-	KEY	of Customs Clearance date
office	A 5	02	estancia	KEY	Customs house issued the declaration
ref	A 5	00	-	KEY	DU reference number
itemno	N	A	numero	-	digit between 1 - 9999
cpc©	A 2	B	procedure alf	cpc	Customs procedure FTS definition table
commodity©	A 8	C	codigo pautal	commodity	Customs Tariff code
weight	N	D	peso liquido	Net mass in Kg	Index Calculation
quantity	N	E	quantidade		Index Calculation
currency©	A 3	F	moeda (ME)	currency	
exrate	N 10.3	G	cambio	-	Exchange rate
valuefobme	N	H	valor fob em ME	in currency	FOB value in MZM = exports stat value
freight	N	J	frete em ME	in currency	Freight
insurance	N	K	seguro em ME	in currency	Insurance
othercosts	N	L	custos em ME	in currency	Other costs
valuecifme	N	M	valor cif em ME	in currency	
valuecif	N	N	valor cif	in Metecais	CIF value = imports statistical value
unit©	A 10	R	unidade	-	Index Calculation
countryorig©	A 2	U	pais origem	country	origin

## 15 APPENDIX 7. CPC-REGIME - Defintion table

The value for duty and taxes is calculated in accordance with the rules set out in No 3 of art. 10 of the IPPs (Dec. 30/99 of 24 of May, amended by Dec 19/2001 of 23 July)

regime	cpc	flow	trade	action	Description of customs regime	Starting point of movement
A1	01	I	B	0	Definitive importation	from other country
A1	02	I	S	0	Definitive importation	from customs regime <b>warehouse</b> without processing
A1	03	I	S	0	Definitive importation	from customs regime <b>warehouse</b> with processing
A1	04	I	S	0	Definitive importation	<b>from IFZ</b>
A1	05	I	B	0	Definitive importation	Change of regime of temporarily imported goods
A1	06	I	0	0	Definitive importation	<b>Change of regime of goods imported with exemption</b>
A1	11	I	B	0	Definitive importation	from other country
A1	12	I	S	0	Definitive importation	from customs regime <b>warehouse</b> without processing
A1	13	I	S	0	Definitive importation	from customs regime <b>warehouse</b> with processing
A1	14	I	S	0	Definitive importation	<b>from IFZ</b>
A1	15	I	B	0	Definitive importation	Change of regime of temporarily imported goods
A1	16	I	0	0	Definitive importation	<b>Change of regime of goods imported with exemption</b>
A1	21	I	B	0	Definitive importation	from other country
A1	22	I	B	0	Definitive importation	from other country
A1	23	I	S	0	Definitive importation	from customs regime <b>warehouse</b> without processing
A1	24	I	S	0	Definitive importation	from customs regime <b>warehouse</b> without processing
A1	25	I	S	0	Definitive importation	from customs regime <b>warehouse</b> with processing
A1	26	I	S	0	Definitive importation	from customs regime <b>warehouse</b> with processing
A1	27	I	S	0	Definitive importation	<b>from IFZ</b>
A1	28	I	S	0	Definitive importation	<b>from IFZ</b>
A1	29	I	B	0	Definitive importation	Change of regime of temporarily imported goods
A1	30	I	B	0	Definitive importation	Change of regime of temporarily imported goods
A1	31	I	B	0	Definitive importation	from other country
A1	32	I	S	0	Definitive importation	from customs regime <b>warehouse</b> without processing
A1	33	I	S	0	Definitive importation	from customs regime <b>warehouse</b> with processing
A1	34	I	S	0	Definitive importation	<b>from IFZ</b>
A1	35	I	B	0	Definitive importation	Change of regime of temporarily imported goods
A1	41	I	B	0	Definitive importation	from other country
A1	42	I	S	0	Definitive importation	from customs regime <b>warehouse</b> without processing
A1	43	I	S	0	Definitive importation	from customs regime <b>warehouse</b> with processing
A1	44	I	S	0	Definitive importation	<b>from IFZ</b>
A1	45	I	B	0	Definitive importation	Change of regime of temporarily imported goods
A2	01	I	0	0	Temporary importation	from other country
A2	02	I	0	0	Temporary importation	from customs regime <b>warehouse</b> without processing
A2	03	I	0	0	Temporary importation	from customs regime <b>warehouse</b> with processing
A2	04	I	0	0	Temporary importation	<b>from IFZ</b>
A2	11	I	0	R	Temporary importation	from other country
A2	12	I	0	R	Temporary importation	<b>from IFZ</b>
A2	21	I	B	P	Temporary importation	from other country
A2	22	I	S	P	Temporary importation	from customs regime <b>warehouse</b> without processing
A2	23	I	S	P	Temporary importation	from customs regime <b>warehouse</b> with processing
A2	24	I	S	P	Temporary importation	<b>from IFZ</b>
					Reimportation of goods originating from Mozambique or previously imported goods in free circulation in Mozambique.	
A3	01	I	B	0		from other country
A3	02	I	B	P	Reimportation (as above)	from other country
A3	03	I	0	R	Reimportation (as above)	from other country
A3	04	I	0	R	Reimportation (as above)	from other country
A3	11	I	S	0	Reimportation (as above)	<b>from IFZ</b>
					Reimportation after processing (as above)	
A3	12	I	S	P		<b>from IFZ</b>
A3	13	I	0	R	Reimportation after repair (as above)	from IFZ
A3	14	I	0	R	Reimportation after repair (as above)	from IFZ
E4	01	E	B	0	Definitive exportation	Goods originating from Mozambique or previously imported goods in free

E4	02	E	B	0	Definitive exportation	Castanha de Caju
E4	03	E	S	0	Definitive exportation	Goods held in customs regime <b>warehouse</b> without processing (other than products from customs regime <b>warehouse</b> approved for processing open)
E4	04	E	S	0	Definitive exportation	Products from IFZ
E4	05	E	S	0	Definitive exportation	Other goods <b>from IFZ</b> (excluding reexported goods)
E4	06	E	S	0	Definitive exportation	goods originating from Mozambique or previously imported goods in free
E4	11	E	B	0	Definitive exportation	Goods held in customs regime <b>warehouse</b> without processing (other than products from customs regime <b>warehouse</b> approved for processing open)
E4	12	E	S	0	Definitive exportation	Products <b>from IFZ</b>
E4	13	E	S	P	Definitive exportation	Other goods <b>from IFZ</b> (excluding reexported goods)
E4	14	E	S	0	Definitive exportation	Goods originating from Mozambique or previously imported goods in free
E4	15	E	S	0	Definitive exportation	Goods originating from Mozambique or previously imported goods in free
E5	01	E	0	0	Temporary exportation	Goods originating from Mozambique or previously imported goods in free
E5	02	E	B	P	Temporary exportation	Goods originating from Mozambique or previously imported goods in free
E5	03	E	0	R	Temporary exportation	Goods originating from Mozambique or previously imported goods in free
E5	04	E	0	R	Temporary exportation	Goods originating from Mozambique or previously imported goods in free
E5	05	E	0	0	Temporary exportation	Goods originating from Mozambique or previously imported goods in free
E5	11	E	0	0	Temporary exportation	Goods originating from Mozambique or previously imported goods in free
E5	12	E	S	P	Temporary exportation	Goods originating from Mozambique or previously imported goods in free
E5	13	E	0	R	Temporary exportation	Goods originating from Mozambique or previously imported goods in free
E5	14	E	0	R	Temporary exportation	goods originating from Mozambique or previously imported goods in free
E5	15	E	0	0	Temporary exportation	goods originating from Mozambique or previously imported goods in free
E6	01	E	0	0	Reexportation	Goods which were temporarily imported
E6	02	E	0	R	Reexportation	Goods which were temporarily imported
E6	03	E	B	P	Reexportation	Goods which were temporarily imported
E6	11	E	S	0	Reexportation	Imported goods held in customs regime <b>warehouse</b> without processing
E6	12	E	S	0	Reexportation	Imported goods held in customs regime <b>warehouse</b> without processing
E6	21	E	S	0	Reexportation	Imported goods held in IFZ which have not undergone any processing
F8	01	I	S	0	IFZ	Outside of the country - goods other than materials for processing
F8	02	I	S	0	IFZ	Customs Regime Warehouse - goods other than materials for processing
F8	03	I	S	0	IFZ	Other IFZ - goods other than materials for processing
F8	04	I	S	0	IFZ	Goods in free circulation in Mozambique, including locally manufactured
F8	05	I	S	P	IFZ	Outside of the country - materials for processing
F8	06	I	S	P	IFZ	Customs Regime Warehouse -materials for processing
F8	07	I	S	P	IFZ	Other IFZ - materials for processing
F8	08	I	S	0	IFZ	Goods in free circulation in Mozambique, including locally manufactured
F8	11	E	0	0	IFZ	IFZ
F8	12	E	0	0	IFZ	IFZ
T9	01	I	0	T	Customs Transit	Customs post of entry into the country
T9	02	I	0	T	Customs Transit	Customs post of entry into the country (International transit - interrupted)
T9	03	E	0	T	Customs Transit	Goods in the course of International Transit, held in designated transit warehouse
T9	04	E	0	T	Customs Transit	All goods in the course of International Transit
T9	11	I	0	T	Customs transit	Customs post of entry into the country
T9	12	E	0	T	Customs transit	Customs post in Mozambique
T9	13	0	0	T	Customs transit	Customs post in Mozambique
					Customs Regime Warehouses without processing (excluding warehouses designated for international Transit)	
W7	01	I	S	0	Customs Regime Warehouses without processing (excluding warehouses designated for international Transit)	Importation from outside the country
					Customs Regime Warehouses without processing (excluding warehouses designated for international Transit)	
W7	02	I	0	0	Customs Regime Warehouses without processing (excluding warehouses designated for international Transit)	Re-importation of temporarily exported goods from outside the country
					Customs Regime Warehouses without processing (excluding warehouses designated for international Transit)	
W7	03	I	S	0	Customs Regime Warehouses without processing (excluding warehouses designated for international Transit)	Other customs regime <b>warehouse</b>
					Customs Regime Warehouses without processing (excluding warehouses designated for international Transit)	
W7	04	I	S	0	Customs Regime Warehouses with processing	IFZ
					Customs Regime Warehouses with processing	
W7	11	I	S	P	Customs Regime Warehouses with processing	Importation from outside the country (materials for processing in warehouse)
					Customs Regime Warehouses with processing	
W7	12	I	S	P	Customs Regime Warehouses with processing	Re-importation of temporarily exported goods from outside the country (materials for processing in warehouse)
					Customs Regime Warehouses with processing	
W7	13	I	S	P	Customs Regime Warehouses with processing	Other customs regime warehouse (materials for processing in warehouse)

W7	14	I	S	P	Customs Regime Warehouses with processing	IFZ (materials for processing in warehouse)
W7	21	I	0	0	Customs Regime Warehouses without processing (excluding warehouses designated for international Transit)	Warehouses without processing
W7	22	I	0	P	Customs Regime Warehouses with processing	Warehouses with processing (imported raw materials held in duty suspe
W7	23	I	0	P	Customs Regime Warehouses with processing	Warehouses with processing (products which incorporate imported raw m
W7	31	I	0	0	Customs Regime Warehouses without processing (excluding warehouses designated for international Transit)	Warehouses without processing
W7	32	I	0	P	Customs Regime Warehouses with processing	Warehouses with processing (imported raw materials held in duty suspe
W7	33	I	0	P	Customs Regime Warehouses with processing	Warehouses with processing (products which incorporate imported raw m

## 16 APPENDIX 8. CPC definition Chart – Flows of goods

### CPC Definition CHART

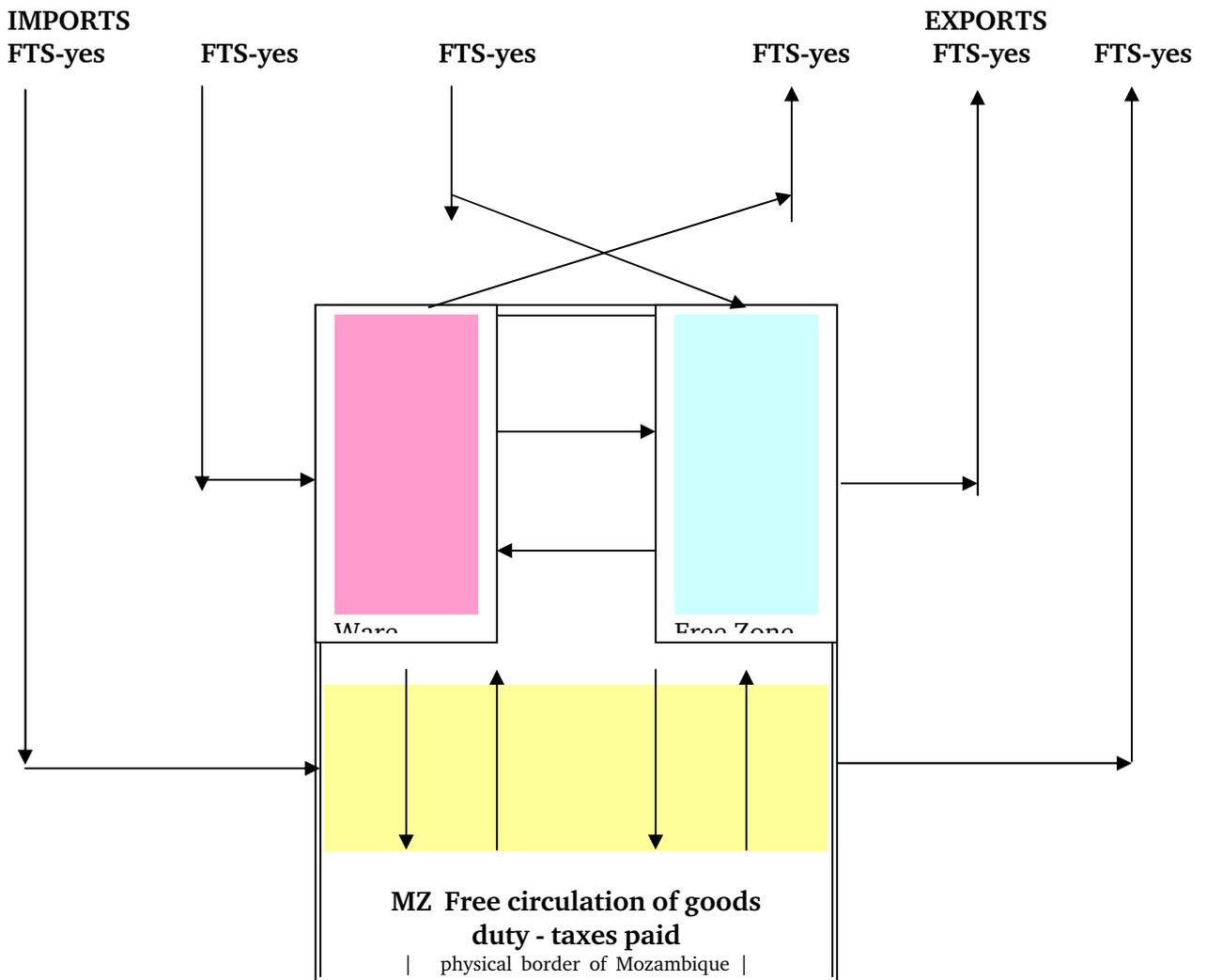
The definition chart is a visual illustration of the CPC-definition Table, which is used to classify the FTS items into *flow* (I=imports, E=exports), *trade* (G,B=General trade, S,B=Special trade, 0=not in FTS) and *action* (P=for/from processing, R=repair, T= transit, 0=other purposes/ordinary import-export). All valid combinations in the *Regime*<->*CPC* definition Table should be connected to an arrow in the CHART. This chart is to be filled in by the FTS staff, and if needed, by consulting the Customs DPAV (Department of Tariff and Valuation).

NB! The Customs *Regime* got a new legislation valid from January 2003. The Pre-declaration procedure was eliminated. The codes for Customs *regime* and *procedures* was changed, but not dramatically. During the mission, I set up a *CPC definition Table* together with the FTS staff, see appendix 8. The basis for this table was the table from May 2003, see Appendix 4, page 19, in the MOZINE 2001:10 report. We did not manage to verify that this is still a valid version. The May 2003 version was handed over from Mr. John Musgrave (external consultant, mob. 082 328421) and Mr. Danilo Mussa Nalá in the Customs in May 2003.

\*\*\* Right columns=codes included in FTS, Left column=codes NOT in FTS\*\*\*

### FTS Definition<sup>4</sup> CHART

**ALL Reg-CPC code combination are to be identified**



<sup>4</sup> FLOW: I=imports, E=Exports, TRADE: G,B=General trade, S,B=Special trade, 0=NOT FTS, ACTION: P=processing, 0=other transactions

## 17 APPENDIX 9. Mirror statistics. Cooperation with the ZA

### E-mails connected to MIRROR STATISTICS projects

-----Opprinnelig melding-----

Fra: Denell Chris ICO-S [mailto:Chris.Denell@scb.se]

Sendt: 21. april 2004 10:38

Til: Østereng, Hans Kristian

Kopi: Altvall, Hans-Erik

Emne: Kontakter med Sydafrika

Hej,

About your questions concerning the possibility to enter into an agreement with South Africa on trade data:

Statistics South Africa (Stats SA) is the national central statistics office in South Africa, producing quite a lot of statistics and with a coordinating role within the national statistical system. The Statistician General is Pali Lehohla. He is very busy and extremely difficult to arrange a meeting with. My idea would be to approach Chief Director Patrick Kelly, who among many other things are responsible for agreements with donors and has a long experience of Scandinavians. E-mail: PatrickKE@statssa.gov.za. The international relations officer is Miranda Mafafo, e-mail MirandaM@statssa.gov.za. She is very service-minded but still very junior. Tel exchange +27 (0)12 310 8911.

As I mentioned on the telephone, Stats SA don't produce trade statistics, these are produced by the South African Revenue Service (SARS). I have two names here, unfortunately both are a couple of years old. But they might work: Jack Heyns, working with Trade Statistics, e-mail jheyns@sars.gov.za, tel +27(0)12 422 6217; and Alex Marais, working with Management Information Systems, e-mail amarais@sars.gov.za, tel +27 (0)12 422 5178.

About SADC. There is a SADC Protocol on Trade whose objectives include to liberalise intra-regional trade on the basis of fair, mutually equitable and beneficial trade arrangements etc. etc. The sectoral responsibility for this lies on Tanzania, and I don't know how much that is going on, if anything. A few years ago, Sida proposed a SADC statistics project, including support in the trade statistics area. This proposal was not accepted then (there were some much bigger projects being launched just then), but if I understand correctly the SADC Secretariat is looking at it again. A person to contact at the SADC Secretariat in Gabarone, Botswana, is Assa Guambe [AGuambe@sadc.int], earlier responsible for international relations at INE, Moz. Hatte knows her well, perhaps you have met her too.

This is what I can remember just now, call me if there is something else I can help you with,

Chris

\*\*\*\*\*

-----Opprinnelig melding-----

Fra: Østereng, Hans Kristian

Sendt: 21. april 2004 11:20

Til: 'Altvall, Hans-Erik'

Emne: SV: Missão Foreign Trade- mirror statistics MZ-ZA

Hei Hatté,

as you will see, I had a phone call with Cris today, to check out the possibility concerning my idea about the use of mirror statistics, in order to improve the MZ trade data, and to find out if INE could use ZA data for imputation/substitution, to make the MZ trade statistics better. As a very first point this is only an idea, -for you to consider and to discuss/approve with INE colleagues-, and after that we could investigate the possibilities more in details.

A possible benefit from this approach is 2-fold: 1. It might be that MZ Customs are interesting in cooperating, because of the SADC Protocol Agreement Chris mention and because they are eager to illuminate the occurrence of illegal/unregistered trade. This means that this topic would be an excellent topic for a INE-CUSTOMS Cooperative Working Group...

2. It is a mean to improve the quality of the MZ trade statistics over a longer time span. The ZA data might also show to be useful connected to the unit value price calculations, where the MZ data, -as I saw them May last year.

In case you agree to follow up this idea, any contact to the contact persons Chris refer to, would be best to do directly from INE. Just now, I would guess that in case we should agree to have ZA data delivered from SARS, it might be such a kind of file:

Monthly data for import+export with MZ as country of origin or consignment/destination:  
with columns:

**Commodity number (Tariff codes) \* Customs border office \* Customs procedure/Regime \*  
Kilogram \* Quantity-other-measures \* Value ZAR/USD**

I send this now, in case you manage to discuss this before I arrive. In case INE colleagues follow up, I am also willing to follow INE colleagues, to visit Pretoria to discuss any agreement which could be made.

I hope this is not too far from your ambitions and ideas.

I address this to you, but it would be great if you are able to discuss the idea with Mr. Azarias and other FTS colleagues during the nearest days.

Many greetings  
Hans Kristian

### Documentation of work processes (A) and data processing related to the Eurotrace (B) for the pilot project

#### A. Work processes

*The INE has received a CD every quarter from the Customs with data for all previous months. Until now, this CD contains a lot of data, which the INE do not need, given their stage of development (See appendix 8 in the May 2003 report). Since the data delivery for 1st quarter 2004 troubled, and since we should start to document all file formats in a FTS system, a new file description was proposed under the mission (See appendix 6 above). This has to be agreed to by the National Accounts and with the Customs, so to be a shorter and a more target-oriented file format.*

*This will be the data to be pre-checked and afterwards imported into EUROTRACE. Below is a resume about how to proceed with the establishment of a EUROTRACE system.*

#### 1 How to define dictionaries and dataset in eurotrace

**Domains:** A eurotrace domain is a dictionary created for a sub-project or routine. As an example, it could be meaningful to create one domain for data validation work (given the strategy that INE do the error correction work directly in the TIMS, together with Customs officers, after they have run validation checks in INE and produced error lists). The, name the domain e.g. 'FTS\_pre\_checks'. When repeated data error updating has taken place, and a 'final' and acceptable data set is extracted from the TIMS, a final import could be processed in a domain named e.g. 'FTS\_production'. Data in this domain will be accessed when making aggregates/tables for publication and for users of FTS.

**Dictionaries:** Dictionaries are first of all used to validate data for correct codes or not. Codes, not found in the dictionaries, will be marked, and shown in the error list after importation of a dataset. The first step in building a eurotrace system is to complete a 'Classification plan'. This means to first create all the dictionaries you wish to establish. A dictionary should be made in the following manner:

1. Create a complete and correct version of the dictionary in an excel or access sheet, e.g. one for checking the commodity numbers. Get the right source version of the Customs Tariff from the Customs. Be aware of the validity period, e.g. that this Tariff is valid only from Jan 2003 to December 2003. Then, this dictionary can be used only for validation of 2003 data. So, if there are changes in January 2004, a new dictionary for 2004 has to be made. The dimensions / variables in the data, which should be validity checked, are marked with a '©' after name in the *FTS detailed data file description*.
2. Open Eurotrace and switch to *Classification Plan* option create a new dictionary. Be aware of using the same code name as the name of the dataset dimension (= the name of the column in the data file after pre-treatment, same as the name given in the *FTS detailed data file description*).

3. Start the import wizard after right-click the dictionary name. Remember that the '*Structure*' and '*Size*', = the length of the code, has to be set correctly.
4. Fulfill the wizard procedure, and the dictionary will be automatically filled in with data. There is a log created during this process.
5. All the dictionaries is possible to change later on; new codes, labels may be added, deleted etc. BUT, it is better to change the Excel/access source files instead: delete and create new the same dictionary, and then import it again. The reason for this is to have only one source file for a dictionary, - in case many domains are created, which use the same dictionaries. Remember: SOURCE METADATA should always have only one original source!

**Dataset:** Datasets has only 2 formats; codes - which is alphanumeric and values - which is numeric, meaning that you are wish to aggregate data from this dimension later on. NB! A code can very well have only numeric bytes!

Datasets are created in the following manner:

1. Switch to 'dataset' option in eurotrace and select '*Create a new dataset*'. BUT, before starting that, decide what should be a standard way to names to a dataset. We are expected to work with monthly batches of data, and a way to name them could ne like this: 200201ver01 = FTS data for year 2004 month January, version 01.
2. Be aware of the risk to load same data twice; -it is a risk that eurotrace don't check the complete source data string. This means that the first time you load (import) a file, eurotrace are not able to recognize that you are loading exactly the same file again!
3. When an empty dataset is created, chose *dataset* and then *structure*. Be aware that by DEFAULT, the dimension *period* is automatically created. the periods are an EUROSTAT standard, which you are not able to change. The dimension *year*, is also a default dimension created instantly.
4. Right-click in *Fields*, *New key* and then choose *coded dimension* (if this dimension match with a dictionary create during the previous step, in order to do a validation check). Be aware of giving the right size and format of the dimension. NB! after finishing, you don't need to click *OK* button every time, just go ahead, right-click *Fields*, and choose inserting a new dimension.
5. If the next data field in input data is an alphanumeric dimension/variable, whcish you don't want to check for validation, choose *New key* and then *Independent Dimension*. Choose also the format. If a next data dimension/variable is a value, like e.g. weight in Kg, then choose *New value* and then *Standard value*.
6. In the *Fields* window, a linked file description will built up. You may change this any time later on. When all the data dimensions/variables are entered, the dataset has been described.

**Data imports:** After finishing the dataset description, it is still not possible to import data into the eurotrace database. The following 2 main steps has to be done first, creating at least one *Editor design*, and a View/scope of the datset :

1. Right-click on the dataset and choose *Dataset* and then *Editor design*.

2. Right-click in the upper, left field in the window popping up. Choose *New*. Eurotrace will now create automatically a screen with all the dimensions placed in boxes, ready for a scrolling of single records, fitting for use in the eurotrace Editor.
3. All dimensions will be selected by default. The layout content and number of dimensions can be edited. It is possible to create many screens of the same dataset, but with different content/layout.
4. Create a dataset *View*. Click on *dataset* on the one you are working with. Click then on *Views* in the left window. Right-click on the blank below, and choose *New*. Give the View a name and click *OK*.
5. After these operations, click on the dataset to work with, right-click the dataset name and choose *Import...* This opens the import wizard, which will guide you through import procedure.
6. When coming to the step where the import data should be matched with the dataset description, the *Period* and the *Year* will be described as *Constant*, while all other dimensions as *Fields*. If this is the case, all names have been correctly written (both in the dictionary code, in the dataset description, and in the column name in the data file itself). If NOT, another description, like *Constant*, will occur. Then, it is possible to use the choice *Assosiate*, in order to overcome the mismatches between the data and the dataset definitions.

## 2 How to process the data from customs

The data will follow the new format agreed to by the INE and the FTS Work Group.

In a preliminary solution for a production system (1<sup>st</sup> version), the stages could be this:

### Error checking cycle

A EUROTRACE domain named e.g. '2004data-valid ' is built up with correct *Dictionairies* and *Dataset* description and used for validation of items. One month of data is processed each time. The error lists are exported to Excel/Access.

The input data file items is also checked for abnormal values, and it is possible to make simple price calculations and manual price checks as well (See example of the techniques in the May 2003 mission report). From this, it is possible to make error lists with values which should be investigated further.

Also the net mass and the quantity boxes could be checked, e.g. studying items prices sorted by commodity, to be familiar with errors and ways to correct wrong net mass and quantity.

The error lists from these two sources are then used in Customs (together with FTS employees) to correct declarations there. This, of coarse, depend on agreement and that officers on the Customs are given priority for this work. So far we interpret the Customs/TIMS representatives at the meeting 20<sup>th</sup> May in this manner.

### Production database

When a repeated data delivery shows that one months data is acceptable, the data are finally imported into another Domain, e.g. '2004data-production'. This database is used for publishing of FTS and will at this stage be used for a stable data source and for aggregation.

The EUROTRACE Browser has still to be installed and investigated.

At a later stage, when the experiences with the EUROTRACE grows, it will be possible to establish more sophisticated data controls, especially connected to logic controls and good systems for data error corrections (Both correction in the INE, and handling of corrections made by the Customs).

## **B. Data processing**

### **1. Overall description of technical solution.**

The main steps in a 1<sup>st</sup> version is described in chapter 3 below. The system proposed established as a very first one, has **3 parts or steps**:

**Step 1:** The pre-treatment step, which includes a manual investigation of values and quantities, with the purpose to produce a list of items with errors, which has to be corrected. In this step the FTS definition table is merged into the data.

**Step 2:** The loading into a EUROTRACE validation database, where the main goal is to secure that all items with invalid codes shall be separated on error lists. The error lists from pre-treatment and EUROTRACE validation, shall be corrected in the TIMS Customs system. Afterwards, the monthly data are extracted again, and the SAME MONTH loaded in the INE system again. When this cycle shows acceptable results, go to step 3. Step 1 and 2 are the FTS ERROR DETECTION system.

***Step 3: The data are finally loaded in the a EUROTRACE PRODUCTION system, where data ready for publishing are stored. From this database all data extractions are made. The EUROTRACE database is a copy of the same set up as in step 2, only that data here, will be stored for all previous months.***

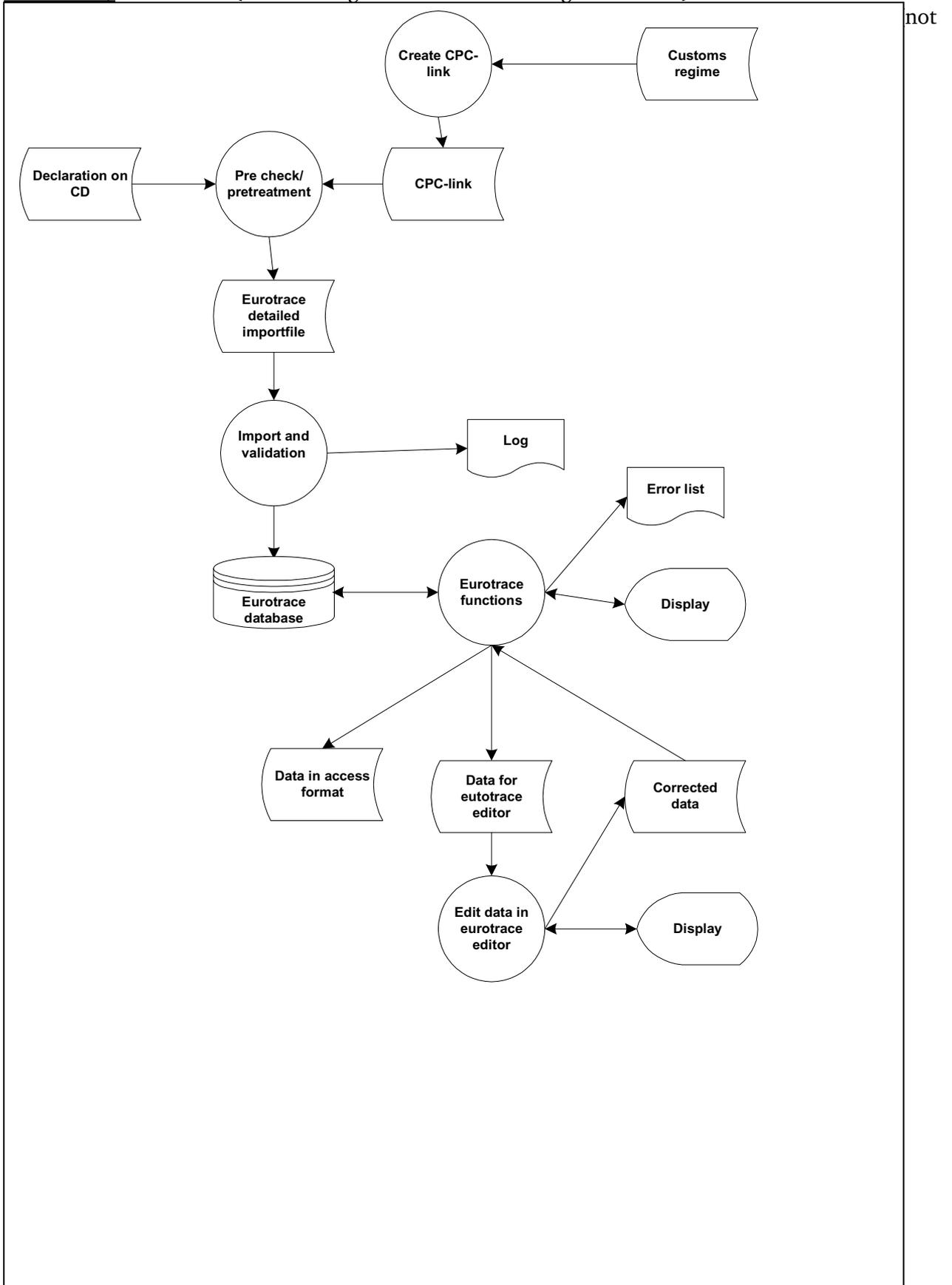
This solution (1st version of a system) base on the principle that all error corrections shall be done in the Customs declaration system. This is why the steps 1 and 2 above only target to make error lists and not intend to be a complete database for keeping track on original items and corrected items. New, already corrected items will be loaded as a new version of an old data set, e.g. complete dat for one month.

This solution depends on the INE's will and cleverness to cooperate with the Customs about correcting errors together, and to use the Customs declaration system. The advantage of this is that the FTS staff will get daily contact with the quality problems of the declaration system. They will also be better trained in understanding how custoims systems functions technically.

So Step 3 is therefore used only to store all data (preliminary and final) ready for publishing. This database should be a documentation for all items used for the official FTS statistics.

## 2. Data flow diagram

Preliminary flow chart (Source Mogens: Should be changed later on). It is recommended that



### 3. Description of functions

List of functions:

#### **STEP 1: Pre-treatment: Outside eurotrace** **(Starting with thw data/CD from the Customs):**

101 Link Hedaer and Items, and create and link the cpc-definition table

102 Manual logic data controls, which still has to be established. Some ideas about how to start, is written in the May 2003-report, chapter 6.2. This should result in an error list for unreliable vaues and quanities recorded in Customs data. These error lists should be set together with the EUROTRACE invalid code list, and to be corrected in the monthly cycle, in clos e cooperation with the Customs (TIMS) appointed contact persons

103 Creation of the FTS detailed file, ready for import into EUROTRACE

#### **STEP 2: Data cotrol and storage: Inside eurotrace:**

201 Create and use DOMAINS

202 Define and create DICTIONARIES

203 Define DATASET and create links to dimensions

204 Defining more complex data checks (to be done in later versions)

205 IMPORT DATA into Eurotrace with the FTS detailed file

206 EXPORT ERROR DATA to Eurotrace editor and copy error list over invalid codes and/or

206 EXPORT ERROR DATA to ACCESS - as error lists to be used for Customs corrections

**NB! DETAILED DESCRIPTIONS BELOW ARE NOT COMPLETED**

(Has to be donre by the INE/FTS staff).

**STEP 1:**

<b>Function name:</b> 101 Merge data, including file with cpc-link information	<b>Date:</b> 21/05/04
<b>Purpose:</b> Inclusion of codes to show which items of foreign trade the INE will publish	
<b>Input:</b> Customs regime table, header & items (taxes) from Customs	
<b>Output:</b> FTS detailed file including CPC-link codes (See file description, appendix 6)	
<p><b>Description</b></p> <p>The CPC Link Table is created on the basis of information found in the mission report, appendixes 7 and 8.</p> <p>The link table is used in the pre-treatment. First, the <i>Header</i> and the <i>Items</i> are merged into one table. Then the <i>Header-Item</i> table are merged with the <i>CPC-LINK-Table</i>. This makes the detailed data file input for EUROTRACE. This file can also be used for investigating suspicious values and net mass/quantity figures.</p>	

<b>Function name:</b> 102 Pretreatment	<b>Date:</b> 21/05/04
<b>Purpose:</b> To check the data for unrealistic values / quantities and un-logic combinations	
<b>Input:</b> The FTS detailed file output from 101	
<b>Output:</b> Error lists, which should be brought to Customs and corrected together with appointed Customs officers. These lists should be combined with error lists over invalid codes, see step 2.	
<p><b>Description</b></p> <p>Some proposals on how to establish manual pre-treatment checks, are to be found in the mission report May 2003, part 6.2.</p> <p><b>When such routines are set, it is important to describe them (write it down) and that the routine is repeated in the same manner each month.</b></p>	

**STEP 2:**

<b>Function name:</b> 201 Define dictionaries	<b>Date:</b> 21/05/04
<b>Purpose:</b> To create codelists, to be used in the validation etc	
<b>Input:</b> Excel sheets	
<b>Output:</b> Dictionaries in Eurotrace	
<b>Description</b>  The following dictionaries have been created	

<b>Function name:</b> 202 Create dataset	<b>Date:</b> 21/05/04
<b>Purpose:</b> To create dataset definition	
<b>Input:</b> Excel sheets	
<b>Output:</b> Dataset definition in Eurotrace	
<b>Description</b>	

Further sheets/details: Has to be fulfilled by the INE/FTS and IT staff.

**Description of data**

The only data file description done until now is the Customs data delivery file, **see appendix 6.**

## 19 APPENDIX 11. EUROTRACE – request for new version

### Request about a copy of the last version of the EUROTRACE

-----Original Message-----

**From:** Tembe, Cirilo

**Sent:** den 13 maj 2004 10:35

**To:** '[Romesh.paul@cec.eu.int](mailto:Romesh.paul@cec.eu.int)'; '[pierre-Eric.balboni@cec.eu.int](mailto:pierre-Eric.balboni@cec.eu.int)'

**Cc:** '[Ramon.YNARAJA@cec.eu.int](mailto:Ramon.YNARAJA@cec.eu.int)'; Nhanzimo, Azarias; Altvall, Hans-Erik; '[lko@ssb.no](mailto:lko@ssb.no)'

**Subject:** FW: Vossa visita a nossa Delegacao----- EURTRACE in INE, Mozambique, request for assistance

Dear Paul,

I am now at the INE, trying to help them to get the old version of EUROTRACE to function.

After my phone call with Pierre Balboni Monday this week, he proposed to send via the EU delegation in Maputo the latest version of EUROTRACE. He told me that a new version is just ready and available in your office at EUROSTAT.

Now our question is if you could be so kind to instantly pack one copy with the CDs of the program and send to :

Mr. Ramon Ynaraja

Private Sector & Trade Officer

Delegation of the European Commission

2820, Julius Nyerere Avenue - P.O. Box 1306 - Maputo (MOZAMBIQUE)

Ph (+258 1) 481 049 Fax (+258 1) 491 866 Cell (+258) 84 425 322

When the package arrive, we trust that he is kind to ring Mr. Cirilo Tembe (phone 08 270 2234) or to mail him.

Since I am working here until 25 May, it would be great to have this when I still am here (if possible).

In any case, the INE will need this updated version.

We own EU delegation honour for this assistance, it would be very useful for the INE in the project to improve MZ Foreign Trade Statistics.

Best wishes to all,

Hans Kristian Ostereng and Cirilo Tembe

\*\*\*\*\*

-----Original Message-----

**From:** Ramon.YNARAJA@cec.eu.int [mailto:[Ramon.YNARAJA@cec.eu.int](mailto:Ramon.YNARAJA@cec.eu.int)]

**Sent:** Thursday, May 13, 2004 7:47 AM

**To:** [cirilo.tembe@ine.gov.mz](mailto:cirilo.tembe@ine.gov.mz)

**Subject:** Vossa visita a nossa Delegacao

Senhor Tembe,

Eu tenho informação da Sra. Ines Alves, mia companheira da Delegação, referida a sua visita a nossa Delegação e do seu inteires por o programa informático EUROTRACE do nosso sevicio estadístico EUROSTAT.

Informou que estou averiguando a formula para poder dar o Senhor uma resposta o mais antes possível.

Cumprimentos,

Ramon Ynaraja

Private Sector & Trade Officer

Delegation of the European Commission

2820, Julius Nyerere Avenue - P.O. Box 1306 - Maputo (MOZAMBIQUE)

Ph (+258 1) 481 049 Fax (+258 1) 491 866 Cell (+258) 84 425 322

[www.delmoz.cec.eu.int](http://www.delmoz.cec.eu.int)

[www.europa.eu.int](http://www.europa.eu.int)

## 20 APPENDIX 13. Monthly press release

### Press Release of Monthly Foreign Trade Statistics, Norway

Source: [http://www.ssb.no/english/subjects/09/05/muh\\_en/tab08-01.shtml](http://www.ssb.no/english/subjects/09/05/muh_en/tab08-01.shtml)

## External Trade in Commodities, October 2001

### Decline in Foreign Trade

Norway exported goods for NOK 43.7 billion in October, whereas imports amounted to NOK 26.2 billion. From October of last year to October this year exports of crude oil decreased by 30 per cent.

This year imports for October came to NOK 26.2 billion whereas last year the amount was 28.1 billion, a decrease of 6.8 per cent. Traditional exports went down to 19.1 billion from 20.1 billion last year.

### Oil prices down

The export value of crude oil, natural gas and condensate amounted to 24.6 in October compared with 31.2 billion in October 2000. The price per barrel for the month was NOK 178 against NOK 292 last year. The average daily export volume increased from 2.91 million barrels last year to 3.33 barrels this year.

### Trade balance

Due to the price decline the trade balance in October went down by one billion to NOK 19.1 billion. Still the first ten months this year show a higher surplus than for the corresponding period last year, 194 billion [corrected 22.11.01] compared with 176 billion, respectively.

Excluding crude oil and natural gas the trade deficit for the first ten months was 58 billion compared with 55 billion for the same period last year.

### External Trade in Goods, excl. Ships and Oil Platforms. Million NOK

	January-October		Change, per cent	October		Change, per cent
	2000	2001		2000	2001	
1 – Imports	231 130	238 006	3,0	28 143	26 232	-6,8
2 – Exports	423 101	432 026	2,1	51 317	43 729	-14,8
Of which						
Crude oil	211 494	200 483	-5,2	26 321	18 446	-29,9
Natural gas	35 561	46 415	30,5	4 911	5 732	16,7
Condensates	.	5 270	.	.	407	.
3 - Exports excl. crude oil, natural gas and condensates	176 047	179 858	2,2	20 084	19 144	-4,7
Trade balance (2-1)	191 971	194 020	1,1	23 174	17 497	-24,5
Trade balance excl. oil, natural gas and condensates (3-1)	-55 083	-58 148	.	-8 059	-7 088	.

More information: [hans.kristian.ostereng@ssb.no](mailto:hans.kristian.ostereng@ssb.no), tel. +47 21 09 47 13, or [utenrikshandel@ssb.no](mailto:utenrikshandel@ssb.no), tel. +47 21 09 47 52

Table 1 **Imports** of traditional commodities in October and January-October. 2000 and 2001.

Preliminary figures. Million NOK

Table 2 **Exports** of commodities, ships and oil platforms excluded, in October and January-October 2000 and 2001.

Preliminary figures. Million NOK

Table 3 **Trade with countries** and regional groups of countries. Traditional commodities. January-October. 2000 and 2001.

Preliminary figures. Million NOK.

## 21 APPENDIX 14. FTS Action PLAN of implementation

hko/27.05.04		<b>FTS Action PLAN</b>		file name: APP-14-Action PLAN.xls	
Executing	SUB-			month--day	
Sequence	jobs	Action No and content (see also point 4.2 in the mission report)	Start	End	Comment
1	-	<b>INE-02. Set up a new file description &amp; new data deliveries</b>			Agree, as soon as possible
1.1		Revise the draft and include the needs of National Accounts (draft:APP-6-Customs-FTS_File_descr.xls)	0621	0624	
1.2		Send it to Customs addressed Helen McQueen and Alvaso Sousa, with a COPY to Customs DG + the Nat. Bank. Ask an answer within a week. Refer to meeting point , see Cust-04. Consider to send them ALSO a copy of the FTS Main Action Table, which is the minutes from the meeting, and which was translated by Gabriel into Portuguese.	0624	0702	
1.3		Follow up the answer and get the promise from Customs to make the extraction program (Cust-04) done	0624	0702	
1.4		The new data file content are received and tested: It's OK	0610	0615	
2		<b>INE-03. Check and understand the content of the Reg-CPC-definition Table.</b>			FTS staff: Fill in the appendic 8 CHART and check = correct
2.1		Ask Customs about the valid versions of CPC Regimes. If there has been chages, ask for validity (valid from - to) for historic codes. (The May 2003 version we used in May 2004, was handed over from Mr. John Musgrave (external consultant, mob. 082 328421) and Mr. Danilo Mussa Nalá in the Customs in May 2003).	0621	0624	
2.2		Check/update this against the prototype version we already have made while I was in Maputo.	0602	0604	
2.3		Produce a complete Reg-CPC-table, including the text	0604	0604	
2.4		Make finally from this the Reg-CPC-table to be used for data processing	0604	0604	
3		<b>INE-09. Installation of last version of EUROTRACE.</b>			New version in use
3.1		I need to find out why we still did not have the last version, and how to get it from EUROSTAT	0526	0531	
3.2		The new version must be sent/made available in the INE - and to get it installed in all actual PCs	0602	0610	
3.3		The INE shall appoint on IT-person who shall be the responsible data administrator	0610	0615	
4		<b>INE-06. Plan for FTS production system stages.</b>			Include in EUROTRACE plans
4.1		Draw up again /from the draft drawing FTS staff kept) computer-written FLOW-CHARTS showing the whole solution for a 1st version of the production system: data input - Pre-treatment including link of RegCPCtable - creation of a EUROTRACE data input file - A routine for manual checks of the values + maybe quantities (Se mission report MOZINE 200 xxx, point 6.2.2.B) - TWO main parts of the EUROTRACE use: Domain-ERRORchecking and domain-PRODUCTION. Do it in cooperation with the IT-administrator. For setting up the EUROTRACE deatailed system, see enxnt point.	0601	0610	

- 4.2 Start to experiment with details about how the pre-treatment show be done in reality, to what degree it is possible to check values/quantity, and how the ERROR-lists should be created and look like (e.g. the same formats as the EUROTRACE validation ERROR-lists?) **0601 0615**
- 4.3 After concluding to point 2 above, start to produce ERROR-list as from January 2004
- 4.4 Set up a CUSTOMS FTS DATA LOG, which should be an EXCEL sheet with a line for each year/month and with columns showing the file total sum of all preliminary received values and all quantities. Further, new columns with the same, but based on sums from the PRODUCTION domain for the same dimensions/variables. This LOG is a very important documentation in the FTS data processing system, and are used to supervise the level of difference between first delivery and the set of data first published. The sheet is upated manually, and the sums are done sirectly in the data sheets. **0615 0630**
- 4.5 A monthly production plan should also be set up, which is a spreadsheet where the main steps are in columns. ( e.g. data received from Customs, ERROR-list ready, ERRORS updated first round, PRODUCTION domain loaded, production data finally checked, etc.). **0615 0630**
- 4.6 Produce also into the subsequent EUROTRACE system, validation ERROR-list, and merge them with the value/quantity ERROR-list **0701 0715**
- 4.7 Make agreement with the Customs/TIMS to cooperate and to correct as many of the errors as possible in the Customs declaration. If problems to get access to suitable Customs officers, bring in help from the TIMS consultant (Helen/Alvaso) and INE Directors. **0715 0723**
- 4.8 Return to INE with a new extraction with data for the same month(s), and run the data checking circle again. If needed repeat until satisfaction **0720 0727**
- 4.9 After data for one month is satisfactory, load the data into the PRODUCTION domain and test tables/macro figures **0728 0730**
- 5** **INE-07. Plan for further use of EUROTRACE.**
- 5.1 Based on the report descriptions (see point 4.3), the FTS staff should set up their own plan for how the EUROTRACE ERRORchecking domain and the PRODUCTION domain should be set up and function. **0531 0610**
- 5.2 After point 3.2 above is finished, implement the plans in point 5.1 above. The point 4.3 in the mission report will give more details about what, and how to do this. There will also be possibility to use LONG-DISTRACE consultance, when questions/problems arise. **0610 0615**
- 5.3 The first set-up has to be tested first, use real data. Make some experiments to see that all modules and operations are covered. **0615 0622**
- 5.4 Set up FIXED RULES for how to give data files names and version, so that ALL naming of files are a standard, AND allways indicates the time data period and what data version. **0615 0630**
- 5.5 After the tests has been completed and the results seems accepted, a first EUROTRACE version is in production phase, and you can turn to proceed from point 4.3 above **0615 0701**
- 5.6 Try to learn more about EUROTRACE set up, about how to enlarg it's control system with LOGIC controls, to be able later to include some of the PRE-treatment value/quantity checkings into EUROTRACE. **0701 1231**

IT-staff system administrator

<b>6</b>	<b>INE-05. Rules for how to re-code MZ.</b>			See CUST-06 above
6.1	The INE should send to the Customs (attn: Director General), a letter which explains the opinion in the Action Plan, point Cust-06. The reason for this is that even in the Customs, some leaders don't understand this phenomena and the technical experts in the Cuistoms/TIMS would indeed appreciate some support to make the realities just stated, once for all	0531	0604	
6.2	The FTS staff will isolate and find out which kind of variants, or in which connections, the code MZ occurs in the declarations. It should be made a short written report, stating in which situations (Customs procedures and rules of originations) the use of MZ code appears.	0701	0813	
6.3	Based on this, the INE should decide rules for re-codong or deletion of item, and there are two solutions: 1. The re-coding rules could be implemented in the extraction program in the Customs. 2. The rule could be used in the INE (in the PRODUCTION domain), to repair for this data incompatibility.	0813	0827	
<b>7</b>	<b>INE-10. Plan for EUROTRACE study trip.</b>			
7.1	The INE has to decide a budget/money and to allocate them	0531	0631	
7.2	A study trip should best be arranged AFTER point 5.1 above has started the investigation, but before it concludes on, finally. The preliminary plans for a EUROTRACE setup should be done before a study trip takes place.	--	--	
7.3	A report has to be drawn from the study trip, which in specific explains what new proposals/ideas has been the output from the study. It should be concluded to which of these proposals should be taken into the plans for proceeding with the MZ EUROTRACE system, point 5.2 above.	--	--	
<b>8</b>	<b>INE-08. EUROTRACE Training.</b>			Constant activity
8.1	The INE/FTS leader, should investigate all possibilities to send the FTS staff AND ITADMINISTRATOR to EUROTRACE cources, any place this is possible.	--	--	
<b>9</b>	<b>INE-01. Secure good enough hardware/software.</b>			Long-term: FTS in a server
9.1	In a longer term, the EUROTRACE should NOT be run on stand-alone PCs, but rather in a server. This goal should be integrated as one of the common INE IT-goals.	--	--	
<b>10</b>	<b>INE-11. Investigate further use of ZA mirror statistics.</b>			Customs has already a coop!
10.1	At the meeting in Customs 20 May 2004, Helen told us that the MZ Customs already receive data from the ZA Customs, showing the flow of goods passing the Garcia border point. The INE (the FTS staff) should find out if it is possible for them to have access to this data. If not, new connections should be investigated for the INE to cooperate directly with the INE Customs. Contacting addresses for this is given in the APP-9-Email_Mirror_statistics.doc.	0701	0730	
10.2	The INE should somehow get access to ZA import/export statistics, to use this in their own supervision and in the work to improve their own data quality. The goal is to arrange a monthløy data delivery (files, bu e-mail, see appendix 9.	0802	0831	

11	<b>INE-12. Start to publish FTS monthly.</b>	It is important to start to publish FTS monthly, since this will be in line with international practice, and the users need.
11.1	At the mission briefing meet with Director Azarias, it was concluded that the INE decide to start MONTHLY publishing from 1 January 2005. This FTS Action PLAN should be updated with Regular meetings with the FTS staff, plus Director Azarias and the Project Team Leader Hasn-Erik.	0601 1231
11.2	To prepare for this monthly publishing, soem preparations will have to be done, see below:	-- --
11.3	Layout and content of tables to publish regualry has to be darfted and decided	0901 1029
11.4	A publishing Calendar has to be decided to. This means to have a fixed, pre-set date for 'press-release' every month. This event has to be connected to a Monthly production plan, where the main steps in the monthly production routine, see point 4.5 above.	0901 1231
12	<b>INE-04. Contribute to retrospective analysis on data quality improvements.</b>	May be a need for external consultant assistance
12.2	At the Briefing meeting 25 May, this was discussed, but it seems too ambitious for the INE to engage in. It is better to concentrate on the plan for the future. In any case, -if the INE should follow up this, there will be a need for external specialists in index calculations to be engaged.	-- --
<b>These points is explained more in the 4.2 Main Table of Actions, -the result from the 20 May meeting:</b>		
21	<b>Cust-04.</b> Simplified data deliveries from the Customs to the INE.	TIMS/Helen will program a new data extraction routine
22	<b>Cust-05.</b> Develop a more intensive, daily cooperation between Customs/TIMS officers and the FTS staff in the INE.	Can start as soon as new data file received, and FTS staff made 1 <sup>st</sup> error list to investigate
23	<b>Cust-06.</b> Rules for how to <u>re-code occurrence of MZ</u> as country in the Customs declarations, to fit the statistical FTS needs.	Let FTS staff investigate the occurance first, after that; to decide recoding/delete - rules
24	<b>Cust-01.</b> Improve quality of Customs officers work on data entry/release of goods	New rules approved by DG
25	<b>Cust-02.</b> Introduce disiplin actions if rules are not obeyed.	URGENT for the INE, see 3.1
27	<b>Cust-07.</b> Integrate DU-simplified in TIMS.	URGENT for the INE, see 3.1 in the mission report.
28	<b>Cust-08.</b> Integrate all declarations connected to free zone activities in TIMS.	Customs wish help from the INE
29	<b>Cust-03.</b> Improve data quality in declarations for previous years.	