

NORTHERN CORRIDOR TRANSIT TRANSPORT
COORDINATION AUTHORITY (NC-TTCA)

**BASELINE SURVEY OF KEY NON-PHYSICAL BARRIERS
ALONG THE NORTHERN CORRIDOR AND THE
ESTABLISHMENT OF A DATABASE AT THE TTCA
SECRETARIAT**

Final Report

BY

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ABBREVIATIONS

COMESA	Common Market for Eastern and Southern Africa
DRC	Democratic Republic of Congo
ICD	Inland Cargo Depot
ICRC	International Committee of the Red Cross
KTA	Kenya Transport Association
LAN	Local Area Network
MPRO	Mombasa Port Release Order
NCTA	Northern Corridor Transit Agreement
NC-TTCA	Northern Corridor Transit Transport Coordinating Authority
SPRU	Special Protection Revenue Unit
TOR	Terms of Reference
TTCA	Transit Transport Coordinating Authority
UCTA	Uganda Commercial Truckers Association
URA	Uganda Revenue Authority

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EXECUTIVE SUMMARY

1. INTRODUCTION

A contract agreement for the Provision of Consultancy Services for the Baseline Survey of Key Non-Physical Barriers Along the Northern Corridor and the Establishment of a Database at the Transit Transport Coordinating Authority (TTCA) Secretariat was signed between M/S PROME Consultants LTD in association with Dr C K Kaira Associates Ltd and the SSATP of the World Bank on 13th August 2003. The consultancy services were duly commenced on 26th August 2003.

2. STUDY BACKGROUND

The Northern Corridor is the transport infrastructure and other related facilities in Eastern Africa served by Kenya's seaport of Mombasa. The corridor connects the Eastern Africa states of Kenya, Uganda, Rwanda, Burundi and Democratic Republic of Congo, who entered a multilateral treaty, the Northern Corridor Transit Agreement (NCTA) that provides a legal framework for cooperation. The organs of the NCTA are the Authority (a Council of Ministers responsible for Transportation) referred to as the Transit Transport Coordination Authority (TTCA) assisted by the Executive Board of senior officials and the Secretariat headquartered in Mombasa, Kenya.

The main objective of the NCTA is that the contracting states should guarantee each other free passage of transit traffic through their respective territories. The vision of the TTCA is to make the Northern Corridor the most cost-effective in East and Central Africa to enhance the sub-regions competitiveness in the global market. The consequent mission of the TTCA is reduction of transport costs through undertaking the following measures:

- a) Streamlining customs documentation and procedures;*
- b) Harmonization of technical standards and traffic regulations;*
- c) Harmonization of transit charges and the elimination of unnecessary charges imposed on transit traffic and cargo;*
- d) Improvement of transport infrastructure and the removal of all non-tariff barriers; and*
- e) Adoption of modern information and communications technology.*

Substantial progress has been made in the above areas of intervention resulting in substantial reduction of transport costs along the corridor. There are however, still some impediments on transit traffic requiring further policy development and implementation initiatives to further reduce costs. The lingering impediments identified are of non-physical nature, referred to as non-physical barriers.

3. STUDY OBJECTIVE

The objective of the study is developing and implementing sound policies that will facilitate cost-effective transport operations along the Northern Corridor. This is to be achieved through the establishment of a practicable transit traffic monitoring and tracking system for which a baseline survey and monitoring exercise of key non-physical barriers to transit movement is to be undertaken.

4. APPROACH TO AND ACTIVITIES OF THE STUDY

The Consultant paid consultation visits to the NC-TTCA Secretariat in Mombasa and reviewed relevant literature to gather the necessary data on non-physical barriers; carried out consultations with key stakeholders in the region who included Mombasa Port Authority, Customs Departments, Revenue Authorities, Finance Departments, Trade and Industry Departments, Transport Departments, Immigration Departments, Clearing and Forwarding Associations, Freight Transport Associations and Freight Transport Operators; conducted workshops in Kampala, Mombasa and Kigali on non-physical barriers and data collection; designed field survey instruments; deployed a Field Assistant to conduct a trial run on a selected cargo truck to collect data, and the Transport Economist carried out an observatory run along the Mombasa-Malaba-Kampala-Ishasha (Uganda/DRC border) route; developed a database, tested it, produced a User Manual and trained the NC-TTCA Secretariat staff; distributed data collection forms to selected transport firms for field data collection by drivers; captured the data and generated a set of reports on non-physical delays; and prepared a Final Report, a Project Document and TOR for further support services.

5. NON-PHYSICAL BARRIERS

The initial findings regarding non-physical delays informed by interviews of informants in Mombasa and the field trips by the Economist and the Field Assistant are as follows:

a) Documentation and Procedures at the Customs Long Room in Mombasa

Documentation and procedures at the Customs Long Room in Mombasa presently take up to 3 days on the average. Five (5) hours are deemed to be sufficient.

b) Rush of Trucks into the Port

Trucks rush into the Port on Saturdays and Sundays and at 11.00 o'clock during working days, causing congestion and bottlenecks.

c) Documentation and Procedures (at the Port)

There are delays associated with the port from the time the driver gets the Mombasa Port Release Order (MPRO) after all charges have been paid. These are procedural and documentation duplication delays, which include:

- i. Registering the truck, container number and particulars of the driver at the gate.*
- ii. Registering the above information again at the Container Terminal.*
- iii. Movement, or lack of it, in time of the MPRO quadruplicates to the registration/check points.*
- iv. Loading Slip with similar information as the MPRO.*
- v. Truck is allowed to enter the first gate after which search for container ensues.*
- vi. A Customs Memo, giving a list of trucks cleared has to be at the gate, otherwise, delays.*
- vii. Customs Memo closes at 3.30p.m. Thus trucks arriving after this time are stuck till the following day.*
- viii. Only Forwarding and Clearing Agent's Clerks are allowed to sign the Gate Pass. If not available the truck will not proceed.*

On the average, a truck takes up to 36 hours to load or discharge a container at the port of Mombasa.

d) Convoy/Escorts

i. From Mombasa Port to Mariakani Weigh Bridge (32km from Mombasa)

- *These escorts are available daily.*
- *Time taken to assemble convoy fleet of 25 trucks.*
- *Time escort is available to commence movement.*
- *Memo for escort is closed at 3.30p.m. Trucks released from port after this time must wait till the following day to proceed to Mariakani.*

ii. From Mariakani to Athi River (24km from Nairobi)

- *These escorts are provided 3 times a week, on Monday, Wednesday and Friday. Special escort may be provided on other days at a fee.*
- *Time taken to assemble convoy fleet.*
- *Time escort is available to commence movement.*
- *Time waiting for the next scheduled escort, given that escorts from Mombasa Port are on a daily basis and those from Mariakani are only 3 times a week.*
- *Cost of special escort.*
- *Time lost conforming to pace of vehicles moving at lower speed due to their power rating, mechanical condition, load carried, driver idiosyncrasy, etc.*

iii. From Athi River to Malaba

- *Escorts are available only 3 times a week, on Wednesday and Friday and Sunday.*
- *Time taken to assemble convoy fleet.*
- *Time escort is available to commence movement.*
- *Cost of special escort.*
- *Time lost conforming to pace of vehicles moving at lower speed due to their power rating, mechanical condition, load carried, driver idiosyncrasy, etc.*

iv. From Kigali to Burundi Border

The escorts are on alternating days, and are sometimes not available.

e) Weigh Bridges

i. Mariakani, Kenya

- *Long queues of trucks to the weighbridge as escorted vehicles arrive in convoys in the evenings.*
- *Inadequacy of weighbridges as only one weighbridge is functioning, the second one being out of order.*
- *Queuing for customs check after weighing the truck.*

ii. Athi River, Kenya

- *Long queues of trucks to the weighbridge as escorted vehicles arrive in convoys in the evenings of Sunday, Tuesday and Thursday.*
- *Queuing for customs check after weighing the truck.*

iii. Another 5 weighbridges in Kenya are at Narok (mobile), Gilgil (Static), Eldoret (mobile), Webuye (static) and Amagoro (mobile but permanent).

iv. Malaba border, Uganda

- Long queues of trucks to the weighbridge, as they arrive at the border escorted in convoy. A truck can be in the queue whole morning and afternoon.
- Queuing for customs check after weighing.

v. Iganga, Uganda (mobile but permanent)

There are no long queues at this weigh bridge as there is no escort of vehicles in Uganda and therefore vehicles do not arrive at the weigh bridge in convoys.

vi. Inaccuracies of weigh bridges

Weighbridges along the route give different readings for the same vehicle.

vii. Lack of transparency in reading and recording axle loads

The driver's assistant is not given the chance to witness the weighbridge reading.

f) Road Blocks / Check Points

i. There are about 13 checkpoints in Kenya manned by security agencies mainly Kenya police and administration police. The checkpoints are located at Mombasa (town exit), Miritini, Mazeras, Voi, Konza, Athi River (before weighbridge), Mai- Mai, Mau escarpment, Mai-Mahiu, Gilgil, Salga, Timborwa and Kandui.

ii. There are 7 checkpoints in Uganda located at Malaba (Special Protection Revenue Unit (SPRU) checkpoint), Busitema (Uganda Revenue Authority (URA) checkpoint), Kitende (police), Lukaya (URA/SPRU), Kyazanga (police), Mbarara (URA) and Kabale (police). There are also URA designated parking yards in Busia, Malaba, Luwero, Masaka, Ntungamo and Ishaka. There is no movement beyond these places between 10.00pm and 8.00am when Customs staff are not on duty.

iii. There are 5 check points in Rwanda at Rwefandi (police), Kabuye (customs), Kasiyata (Inland Cargo Depot (ICD)), Kigali (customs) and Ruhengeri (police).

g) Insecurity

Drivers may be attacked, trucks broken into and cargo grabbed at rough and / or high gradient sections of the road, especially at Kamu, Kimariu, Salama, Molo Hill and Mukutano, in Kenya. Toward these points drivers tend to wait for their colleagues so that they move in convoy, thus incurring delays.

In Burundi due to insecurity there is effectively a curfew from 4.00pm to 10.00am Monday to Friday, and the whole of Saturday and Sunday.

h) Border Crossing Procedures

- i.** Border crossing procedures and working hours cause lengthy delays on each side of the border, especially Malaba.
- ii.** Too many trucks arriving at the same time cause congestion and delays at border crossings.

On the average, it takes a minimum of 24 hours to clear on each side of the Kenya/Uganda border.

i) National Documents

Several national documents have been imposed on transit cargo despite the use of the COMESA Customs Deceleration agreed on in the Northern Corridor. These include police form P27, Customs Manifest, Certificate of Destination, Log Sheet and PAC.

j) Inland Terminal/Transit Parking Yards Procedures and Facilities

There are considerable delays caused by procedures and facilities (or lack of them) at Inland Terminals/Transit Parking Yards. In Burundi the delay can go up to a week and in Rwanda up to 5 days.

k) Self – Imposed Delays

A transport operator and / or his/her agent inflict delays on him/herself. For instance drivers tend to get stuck for hours, or even days, at spots of social/economic interest.

6. TRIAL RUN

A trial run by a Field Assistant from Mombasa to Kigali on board a loaded fuel tanker identified non-physical causes of delay, their location and associated delay time for this particular truck and route.

The Analysis of the trial run data reveal that the total journey time from Mombasa to Kigali is 116 hours out of which 26hours (22%) is attributed to non-physical delays. Documentation and procedures at Mombasa and border points have the lion's share of delay time of 19hours (23% of total delay time), followed by weighbridge delays of 4hours (15% of total) and customs check (en route at points other than border posts) of 3hours (12% of total).

It is noted that this particular truck did not incur delays at Mombasa Customs Long Room and Mombasa Port as it picked its cargo of furnace oil outside the port. Delays caused by escort were also not incurred as the commodity carried is not sensitive to attract escort. Terminal delays at destination were not recorded as the Field Assistant did not wait to measure this delay. For a typical truck where these delays are incurred and recorded, the non-physical delays would have been much in excess of 26hours and delay time as a percentage of total journey time much more than 22%. The total journey time would also have been more than 116hours. Nevertheless, the trial run data was of good quality with a high degree of accuracy and consistence.

7. FIELD DATA COLLECTION AND ANALYSIS

1. Data Collection

The Consultant distributed a total of 507 data forms to 16 selected transport firms for data collection. The NC-TTCA Secretariat received a total of 120 completed questionnaires, 10 of which were unuseable. The 110 usable questionnaires were captured and a set of reports generated.

2. Analysis of findings

Because of the small number of vehicles reporting on the route sections in Burundi and the DRC, this analysis mainly refers to Kenya, Uganda and Rwanda.

- a) The average transit time within the port of Mombasa is 65 hours, of which 55 hours is between loading and departure.
- b) Transit time in Kenya, excluding the port of Mombasa is approximately 7 days, while it is 3-4 days in Uganda. In Rwanda the transit time is approximately 5 days for Bukavu bound traffic, but only two days for Goma bound traffic.
- c) Journey times on average range from 129 hours for Nairobi to Kampala, to 337 hours for Nairobi to Bujumbura. Perhaps more indicative is the 255 hours for Mombasa to Kigali.
- d) Transit times in hours per border post are as in the table below:

Malaba (K)	17	Malaba (U)	30
Katuna (U)	18	Gatuna (R)	12
Mirama (U)	8	Kagitumba (R)	13
Akanyaru (R)	4	Akanyaru (B)	16
Gisenyi (R)	1	Goma (C)	16
Ruzizi (R)	15	Bukavu (C)	32
Ruzizi II (R)	8		

Apart from Katuna/Gatuna, the outward border post procedures are shorter than the inward border post procedures. In many cases, the time reported for border post procedures includes an overnight stay at the 'border post'.

- e) After Mombasa port (65 hours), the longest delays in Kenya were at Makutano (28 hours) and Mau Summit (25 hours).

In Uganda, the longest delays were at Malaba (30 hours), Katuna (18 hours), and Kinoni (13 hours); while in Rwanda they were at Gikongoro (73 hours), Rwamagana (26 hours) and Kigali (22 hours).

- f) The causes of the longest delays in Kenya were Port Procedures, Border Post Procedures and Insecurity.

The causes of the longest delays in Uganda were Border Post Procedures, Inland Terminal Procedures, and Insecurity.

The causes of the longest delays in Rwanda were Unstated Reasons, Weighbridges, and Personal Reasons.

- g) The average time for customs checks away from border posts was 3 hours in Kenya, 3 hours in Uganda, 14 hours in Rwanda, and hour in the DRC.*
- h) The average duration of the delay per stoppage is 9hours in Kenya, 11 hours in Uganda, and 13 hours in Rwanda.*
- i) The average total delay in Kenya is 89 hours; while in Uganda it ranges from 65 hours on the Mirama Hills bound traffic, to 72 hours on the Katuna bound traffic. In Rwanda, the longest delays are on the Gatuna- Ruzizi route (103 hours), while the shortest delays are on the Gatuna-Gisenyi route (37 hours).*
- j) Customs checks were most common in Uganda (13), followed by Rwanda (10). This is out of a total of 27 reported. Out of the 21 reported Police/Security checks, 13 were in Kenya, and 6 were in Uganda. Out of 10 weighbridges reported, 8 were in Kenya and only 2 in Uganda.*
- k) Goods experiencing least delays in Kenya are Fruits, Petroleum Products, Iron and Steel; while goods experiencing longest delays are Cooking Oil, Tobacco leaf, and Machinery.*

Goods experiencing least delays in Uganda are Tobacco Leaf, Cooking Oil, Grains; while goods experiencing longest delays are Personal & Household Items, Fabrics and Garments, Machinery.

Goods experiencing least delays in Rwanda are Building Materials, Cosmetics, Grains; while goods experiencing longest delays are Tobacco Leaf, Iron and Steel, Tyres and Tubes.

- l) The rate of containerization of traffic is 47%.*

3. Data Quality

The Secretariat was only able to receive a total of 120 completed questionnaires out of the expected 500, representing a 24% response rate. This response was far below what was expected considering that sufficient sensitization and consultation had been made followed by engaging a research assistant to follow up data collection.

Besides the low response rate, the data came in after over 12 months, against the expected 2 months, from the time data forms were distributed to transport firms in March 2004. This made the planned activity schedule unattainable, considerably delaying completion of the Study.

The quality of the responses received was generally not very good, and suggests that perhaps drivers are not the best persons to use for this kind of exercise. As an example, some drivers were recording ‘border post procedures’ as the reason for stopping at locations which were not border points.

4. Validation of Survey Results

The Consultant carried out ten (10) additional journeys to validate the survey results. All in all, the delay indicators in the validation runs are consistent with those in the main survey.

8. **CONCLUSION AND RECOMMENDATION**

CONCLUSION

- a) *There still exist non-physical barriers along the Northern Corridor causing lengthy delays to traffic and increasing transport costs. These delays have been confirmed and corroborated by the trial run data, main survey data, and validation data of this study.*
- b) *The majority of truck drivers are not literate enough to handle the data collection forms. This constraint should be taken into account when determining data collection methods and procedures.*
- c) *Only 110 journeys were realized against the desired sample of 500 journeys mainly because of the constraint of literacy levels of drivers stated above. However, the data collected gives useful information on delays on which further monitoring of delays can be built. The data-base has also been established.*
- d) *There is thus a clear understanding of the transit transport delay issues on the basis of which policy and intervention measures for removal of delays and monitoring can be effected. Accordingly, the Consultant has prepared a Project Document and TOR for support services for elimination of non-physical barriers along the Northern Corridor.*

RECOMMENDATION

It is recommended that:

- i. *The NC-TTCA Secretariat pursue securing of support services for elimination of non-physical barriers along the Northern Corridor.*
- ii. *Monitoring of the effects of the policy on and intervention measures for elimination of non-physical barriers be continuous.*
- iii. *For future data collection, a few sound and reliable transport firms be selected who in turn should select reasonably educated drivers to participate in data collection. The driver should be motivated with commensurate remuneration. Dedicated trial runs by Field Assistants should supplement data collected by drivers.*
- iv. *The NC-TTCA Secretariat acquires a multi-user database system, such as ORACLE.*

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

A contract agreement for the Provision of Consultancy Services for the Baseline Survey of Key Non-Physical Barriers Along the Northern Corridor and the Establishment of a Database at the Transit Transport Coordinating Authority (TTCA) Secretariat was signed between **M/S PROME Consultants LTD in association with Dr C K Kaira Associates Ltd** and the **SSATP of the World Bank** on 13th August 2003. The consultancy services were duly commenced on 26th August 2003.

1.2. STUDY BACKGROUND

1.2.2. The NCTTCA Mandate and Mission

The Northern Corridor has been defined as transport infrastructure (road, rail and pipeline networks and routes) and other related facilities in Eastern Africa served by Kenya's seaport of Mombasa. These infrastructure components are detailed in Protocol No. 2 of the Northern Corridor Transit Agreement (NCTA), which is a multilateral treaty providing the legal framework for cooperation among the contracting states, namely Uganda, Kenya, Burundi, Rwanda and the Democratic Republic of Congo (DRC). The road routes radiate from Mombasa in Kenya, and run through Kampala in Uganda, Kigali in Rwanda, and terminate in Bujumbura in Burundi and Goma, Bukavu, Bunia and Kisangani in DRC, while the rail route starts from Mombasa in Kenya and currently terminates in Kampala, the Kampala-Kasese and Kampala Pakwach lines having closed in the 1990s. The main objective of the NCTA is that the contracting states should guarantee each other free passage through their respective territories, of transit traffic and trade and the following nine Protocols, which are included in the NCTA, outline the modus operandi in the various aspects of transit transport operations:

- i. Use of maritime port facilities;
- ii. Designation of transit routes and facilities;
- iii. Customs control;
- iv. Documentation and procedures;
- v. Transportation by road;
- vi. Transportation by rail;
- vii. Transportation of dangerous goods;
- viii. Facilities for Transit Operators and their employees; and
- ix. Motor Third Party Insurance.

In order to facilitate the realization of the objectives set out in the NCTA and the above Protocols, an Authority (a Council of Ministers responsible for Transportation) was set up. The Authority, (referred to as the Transit Transport Co-ordination Authority (TTCA)), is assisted by an Executive Board of senior officials, private sector stakeholders, and the Secretariat with its headquarters in Mombasa, Kenya.

The vision of the TTCA is *to make the Northern Corridor the most cost effective route in East and Central Africa to enhance the sub-region's competitiveness in the global market.* In order to achieve this vision the Authority's mission is centred on the reduction of transportation costs through undertaking the following measures:

- i. Streamlining customs documentation and procedures;
- ii. Harmonization of technical standards and traffic regulations;
- iii. Harmonization of transit charges and the elimination of unnecessary charges imposed on transit traffic and cargo;
- iv. Improvement of transport infrastructure and the removal of all non-tariff barriers; and
- v. Adoption of modern information and communications technology.

Indeed substantial progress has been made in the above areas of intervention and the proliferation of national customs documents has virtually been eliminated through the introduction of a single transit document, which is currently being replaced by a single goods declaration document. Working hours of customs administrations of the five contracting States have also been harmonized. Transit charges have been harmonized, in lieu of various national charges. There is mutual recognition of truck operator licenses issued by the appropriate Licensing Authorities of the contracting parties as opposed to previous requirement of road service permits to be purchased by foreign registered vehicles. A regional motor third party insurance scheme is in place to facilitate inter-state movement of vehicles. In addition Kenya Railways and Uganda Railways concluded a working agreement, within the NCTA framework, to facilitate their operations, including the operation of block trains. Furthermore, the Northern Corridor Stakeholders Consultative Forum, for the facilitation of the movement of goods along the corridor has been established. This Forum is an example of private/public sector partnership, which is being promoted.

However, while the above achievements have resulted in the substantial reduction of transport costs along the corridor, there are still some impediments requiring further policy development and implementation initiatives, which are expected to result in further reduction of costs.

The lingering impediments include procedures and documentation at the customs long room in Mombasa; disharmonised working hours at the Port of Mombasa; verification delays caused by too many actors at the Port of Mombasa; late payment of charges due by the consignee or his/her agent; duplicated documentation and cumbersome procedures for taking delivery of cargo from the port by trucks; lack of forward planning by transport operators and advance communication with the port authorities; rush of trucks into the port; escort of trucks in convoys; delay at weigh bridges; numerous road blocks; insecurity at rough and/or high gradient sections of the road; board crossing procedures and working hours; numerous national documents imposed on transit cargo in contravention of the agreed COMESA Customs Declarations and transit bond.

1.3. STUDY OBJECTIVES, SCOPE OF WORK AND OUTLINE

(a) Objectives

The underlying objective of the assignment is to enable the NC-TTCA Secretariat to develop and implement sound policies that will facilitate cost-effective transport operations along the Northern Corridor. This is expected to be achieved through the establishment of practicable transit traffic monitoring and tracking systems for which a baseline survey and monitoring exercise of the key non-physical barriers to transit movements is undertaken to enable better understanding of the priority needs of such tracking systems. The study Terms of Reference are reproduced in **Annex 1**.

(b) Scope of Work

As given in the Study Terms of Reference, the Consultant is to undertake the following tasks:

- i. Undertake consultation with private sector transporters and associations based in NC member states and who are engaged wholly or partly in transit traffic operations.
- ii. Defined desirable survey outputs in terms of total time delays from all causes and time delays disaggregated by cause, location, date, and time of day.
- iii. Defined parameters of reports so as to capture data related to direction of travel, “nationality” of vehicle, and type of cargo (container, bulk, refined petroleum products, etc.).
- iv. Conducted workshops/seminars in one or more locations along the Northern Corridor to sensitise transporters and drivers to the objective and outputs of the work, and to define the format of data sheets to be carried and completed by drivers during the course of their journey. These must be simple enough so as not to impose undue burdens on drivers, but adequate enough to capture good data. These data sheets will need to be provided in both English and French.
- v. Calculate the required size of the sample journeys to be surveyed so that they are Statistically valid.¹
- vi. Agree with transporters arrangements for certifying and collecting completed data sheets at the termination of journeys and transferring them to the offices of the Secretariat in Mombasa.
- vii. Undertake trial runs with data sheets on actual journeys and making changes, revisions as may be required.
- viii. Set up a database or spread sheet in the offices of the Secretariat in Mombasa, and inputting data.
- ix. Generate monthly reports which should include a full account of average total time delays per journey, and average time delays by individual causes disaggregated by date, “nationality” of vehicle, country (and location), type of cargo (bulk, container, POL, etc).
- x. Disseminate monthly reports to all stakeholders by as many means as possible.
- xi. Train TTCA Secretariat to sustain the database, report generation and dissemination.

¹ It is vital importance that the reports generated are based on statistically valid data. Confidence in the outputs must be beyond doubt if they are to achieve the awareness raising impacts desired. At the same time the integrity of the Secretariat and the SSATP must be preserved.

- xii. Prepare a project document, TOR for further support services, cost estimates, and a time-bound implementation plan for the remedial measures aimed at policy improvement, reduction of costs along the corridor, including the establishment of a fully-fledged Database, Website and tracking system.

(c) Study Outline

To attain the outputs spelt out in the Scope of Work above, the Consultant initially planned to execute the following tasks:

Task 1: Mobilization

Task 2: Assignment Appreciation and Literature Review

Task 3: Stakeholders Consultations

Task 4: Design of Field Survey Instruments

Task 5: Data-base Development and Testing

Task 6: Training/Sensitisation Seminars for Drivers

Task 7: Field Data Collection by Drivers

Task 8: Training of NC-TTCA Staff

Task 9: Preparation of the Final Report

During the actual implementation of the project, it however, became more feasible and practicable to execute the assignment by re-arranging the tasks as follows:-

Task 1: mobilization

Task 2: Literature Review, Assignment Appreciation/Analysis, and Design of Field Survey Instruments.

Task 3: Stake-holders Consultations/Workshops for Field Data Collection

Task 4: Database Development, Testing and Training of NC-TTCA Staff

Task 5: Field Data Collection by Drivers

Task 6: Preparation of the Final Report

CHAPTER 2: ASSIGNMENT APPRECIATION

2.1 MOBILISATION

The Consultant fully mobilized and put all key-personnel in place, tasks well defined, scheduled and assigned, as is evident in the Activity Schedule (**Annex 2**) and Team Composition and Task Assignment (**Annex 3**).

2.2. LITERATURE REVIEW

The Consultant visited the NC-TTCA Secretariat in Mombasa on 26-29 August 2003 and among others, gathered the necessary data, reviewed relevant literature and identified key stakeholders and prepared **the 1st Project Report: Inception Report**.

For purposes of verifying delays and their causes, the Consultant deployed a Field Assistant to conduct a trial run in a selected cargo truck. In addition, the Transport Economist carried out an observatory run along the Mombasa-Malaba-Kampala-Ishasha Uganda/DRC border.

2.3. KEY NON-PHYSICAL DELAYS

The initial findings regarding non-physical delays informed by interviews of informants in Mombasa and the field trips by the Economist and the Field Assistant are as follows:

a) *Documentation and Procedures at the Customs Long Room in Mombasa*

Documentation and procedures at the Customs Long Room in Mombasa presently take up to 3 days on the average. Five (5) hours are deemed to be sufficient.

b) *Rush of Trucks into the Port*

Trucks rush into the Port on Saturdays and Sundays and at 11.00 o'clock during working days, causing congestion and bottlenecks.

c) *Documentation and Procedures (at the Port)*

There are delays associated with the port from the time the driver gets the Mombasa Port Release Order (MPRO) after all charges have been paid. These are procedural and documentation duplication delays, which include:

- i) Registering the truck, container number and particulars of the driver at the gate.
- ii) Registering the above information again at the Container Terminal.
- iii) Movement, or lack of it, in time of the MPRO quadruplicates to the registration/check points.
- iv) Loading Slip with similar information as the MPRO.
- v) Truck is allowed to enter the first gate after which search for container ensues.
- vi) A Customs Memo, giving a list of trucks cleared has to be at the gate, otherwise, delays.

- vii) Customs Memo closes at 3.30p.m. Thus trucks arriving after this time are stuck till the following day.
- viii) Only Forwarding and Clearing Agent's Clerks are allowed to sign the Gate Pass. If not available the truck will not proceed.

On the average, a truck takes up to 36 hours to load or discharge a container at the port of Mombasa.

d) Convoy/Escorts

i. From Mombasa Port to Mariakani Weigh Bridge (32km from Mombasa)

- These escorts are available daily.
- Time taken to assemble convoy fleet of 25 trucks.
- Time escort is available to commence movement.
- Memo for escort is closed at 3.30p.m. Trucks released from port after this time must wait till the following day to proceed to Mariakani.

ii. From Mariakani to Athi River (24km from Nairobi)

- These escorts are provided 3 times a week, on Monday, Wednesday and Friday. Special escort may be provided on other days at a fee.
- Time taken to assemble convoy fleet.
- Time escort is available to commence movement.
- Time waiting for the next scheduled escort, given that escorts from Mombasa Port are on a daily basis and those from Mariakani are only 3 times a week.
- Cost of special escort.
- Time lost conforming to pace of vehicles moving at lower speed due to their power rating, mechanical condition, load carried, driver idiosyncrasy, etc.

iii. From Athi River to Malaba

- Escorts are available only 3 times a week, on Wednesday and Friday and Sunday.
- Time taken to assemble convoy fleet.
- Time escort is available to commence movement.
- Cost of special escort.
- Time lost conforming to pace of vehicles moving at lower speed due to their power rating, mechanical condition, load carried, driver idiosyncrasy, etc.

iv. From Kigali to Burundi Border

The escorts are on alternating days, and are sometimes not available.

e) Weigh Bridges

i. Mariakani, Kenya

- Long queues of trucks to the weighbridge as escorted vehicles arrive in convoys in the evenings.
- Inadequacy of weighbridges as only one weighbridge is functioning, the second one being out of order.
- Queuing for customs check after weighing the truck.

ii. Athi River, Kenya

- Long queues of trucks to the weighbridge as escorted vehicles arrive in convoys in the evenings of Sunday, Tuesday and Thursday.
- Queuing for customs check after weighing the truck.

iii. Another 5 weighbridges in Kenya are at Narok (mobile), Gilgil (Static), Eldoret (mobile), Webuye (static) and Amagoro (mobile but permanent).

iv. Malaba border, Uganda

- Long queues of trucks to the weighbridge, as they arrive at the border escorted in convoy. A truck can be in the queue whole morning and afternoon.
- Queuing for customs check after weighing.

v. Iganga, Uganda (mobile but permanent)

There are no long queues at this weigh bridge as there is no escort of vehicles in Uganda and therefore vehicles do not arrive at the weigh bridge in convoys.

vi. Inaccuracies of weigh bridges

Weighbridges along the route give different readings for the same vehicle.

vii. Lack of transparency in reading and recording axle loads

The driver's assistant is not given the chance to witness the weighbridge reading.

f) Road Blocks / Check Points

i. There are about 13 checkpoints in Kenya manned by security agencies mainly Kenya police and administration police. The checkpoints are located at Mombasa (town exit), Miritini, Mazeras, Voi, Konza, Athi River (before weighbridge), Mai- Mai, Mau escarpment, Mai-Mahiu, Gilgil, Salga, Timborwa and Kandui.

ii. There are 7 checkpoints in Uganda located at Malaba (Special Protection Revenue Unit (SPRU) checkpoint), Busitema (Uganda Revenue Authority (URA) checkpoint), Kitende (police), Lukaya (URA/SPRU), Kyazanga (police), Mbarara (URA) and Kabale (police). There are also URA designated parking yards in Busia, Malaba, Luwero, Masaka, Ntungamo and Ishaka. There is no movement beyond these places between 10.00pm and 8.00am when Customs staff are not on duty.

iii. There are 5 check points in Rwanda at Rwefandi (police), Kabuye (customs), Kasiyata (Inland Cargo Depot (ICD)), Kigali (customs) and Ruhengeri (police).

g) Insecurity

Drivers may be attacked, trucks broken into and cargo grabbed at rough and / or high gradient sections of the road, especially at Kamu, Kimariu, Salama, Molo Hill and Mukutano, in Kenya. Toward these points drivers tend to wait for their colleagues so that they move in convoy, thus incurring delays.

In Burundi due to insecurity there is effectively a curfew from 4.00pm to 10.00am Monday to Friday, and the whole of Saturday and Sunday.

h) Border Crossing Procedures

i. Border crossing procedures and working hours cause lengthy delays on each side of the border, especially Malaba.

ii. Too many trucks arriving at the same time cause congestion and delays at border crossings.

On the average, it takes a minimum of 24 hours to clear on each side of the Kenya/Uganda border.

i) National Documents

Several national documents have been imposed on transit cargo despite the use of the COMESA Customs Deceleration agreed on in the Northern Corridor. These include police form P27, Customs Manifest, Certificate of Destination, Log Sheet and PAC.

j) Inland Terminal/Transit Parking Yards Procedures and Facilities

There are considerable delays caused by procedures and facilities (or lack of them) at Inland Terminals/Transit Parking Yards. In Burundi the delay can go up to a week and in Rwanda up to 5 days.

k) Self – Imposed Delays

A transport operator and / or his/her agent inflict delays on him/herself. For instance drivers tend to get stuck for hours, or even days, at spots of social/economic interest.

2.4 TRIAL RUN

A trial run by a Field Assistant from Mombasa to Kigali on board a loaded fuel tanker identified non-physical causes of delay, their location and associated delay time for this particular truck and route, and these are shown in **Table 1**. From the analysis of the data of this trial run the following emerge:

- a) Total journey time from Mombasa to Kigali is 117.5 hours.
- b) Total delay time due to non-physical barriers is 26.36 hours – 22% total journey time.
- c) Total delay time due to documentation and procedures at Mombasa and border posts is 19.365 hours (73%) of total delay time.
- d) Total delay time due to weighbridges is 4.205hours (15%) of total delay time.
- e) Total delay time due to customs check at points enroute other than border posts is 2.790hours (12%) of total delay time.
- f) Delay time is 20.24 hours (77% of total delay time) in Kenya, 5.79 hours (22% of total delay time) in Uganda, 0.33 hours (1% of total delay time) in Rwanda.
- g) 9 hours (46%) of delay time due to documentation and customs procedures occur in Mombasa / Changamwe.
- h) 5.58 hours (54%) of documentation and border procedures delay occur in Kenya, 4.455 hours (43%) occur in Uganda and 0.33 hours (3%) occur in Rwanda
- i) 3.66 hours (87%) of weighbridge delay occur in Kenya and 0.545 hours (13%) occur in Uganda.
- j) 2 hours (72%) customs check point delay occur in Kenya, 0.79 hours (28%) occur in Uganda.
- k) There was delay due to tyre puncture totalling to 15 hours, which is not included in Table 1 as it is not part of non-physical barriers.

- l) The truck picked its load (furnace oil) outside Mombasa Port. Therefore, delays in the customs long-room and the port are not incurred.
- m) The commodity carried by this particular truck does not attract escort in which case delays attributed to escort are not incurred.
- n) On reaching destination, the Field Assistant did not wait to measure the time between arrival and discharge of cargo. Terminal delays have therefore, not been included for this truck and route.

For a typical truck going through the port, carrying a sensitive commodity, and terminal delays being recorded, more delays would have been incurred at the Mombasa Customs Long Room, in the port and during escort, and the time between arrival at destination and discharge of cargo added to the delay time. The total delay time would therefore have been much in excess of 26hours and delay time as a percentage of total journey time much more than 22%. Non-the-less the trial run data was of good quality with a high degree of accuracy and consistence.

Table 1: Trial Run (09.09.2003 - 14.09.2003)

Time Delay by cause and location

Route: Mombasa - Nairobi - Busia - Kampala - Katuna - Kigali

Commodity:- Diesel Fuel

Cause	Location / Delay Time																					
	Kenya								Uganda						Rwanda		DRC		Burundi		TOTAL	
	Mombasa	Mariakani	Machakos	Athi River	MaiMai	Gilgii	Busia	Total	Busia	Busitema	Iganga	Mbarara	Ntungamo	Katuna	Total	Katuna	Nyaconga	Total				
Documentation & procedures	9						5.58	14.6	0.125					4.33	4.455	0.33	0.33					
Weighbridge		0.5	0.08	1.33	0.08	0.67	1	3.66	0.125		0.42				0.545							4.205
Customs Check point		1.25		0.75				2.0		0.5		0.13	0.16		0.79							2.790
Police Check points																						
Other Security																						
TOTAL	9	1.75	0.08	2.08	0.08	0.67	6.58	20.24	0.25	0.5	0.42	0.13	0.16	4.33	5.79		0.33					26.36

2.5 PREPARATION OF INSTRUMENTS FOR FIELD DATA COLLECTION

The Consultant paid another consultation visit to the NC-TTCA Secretariat in Mombasa from 09-11 December 2003. Discussions held with the client resulted in agreement on survey instruments and methodology for field data collection:

a) Survey Instruments

The proposed Data Collection Form in the Consultation Paper was reviewed and adopted with amendments. The adopted form is shown in **Figure 1**.

b) Route Sections

Table 2 shows the route sections identified and agreed on.

Table 2: Identified and agreed on route sections

Kenya	Uganda	Rwanda	Burundi	Congo (DRC)
Mombasa-Mariakani	Malaba -Ninja	Kagitumba-Kigali	Akanyaru-Bujumbura	Kasindi-Beni
Mariakani-Athi River	Busia-Jinja	Katuna -Kigali		Kasindi-Butembo
Athi River-Nakuru	Jinja-Kampala	Kigali-Gisenyi		Beni-Bunia
Nakuru -Eldoret	Kampala-Mbarara	Kigali-Kanyaru		Beni-Kisangani
Eldoret -Malaba	Mbarara-Ntungamo	Kigali-yangugu		Bunagana-Goma
Nakuru -Kisumu	Mbarara-Mpondwe			Ishasha -Goma
Kisumu-Busia	Mbarara-Katunguru			
	Ntungamo-Kakitumba			
	Ntungamo-Kabale			
	Ntungamo-Ishasha			
	Kabale -Bunagana			
	Kabale -Katuna			
	Katunguru-Mpondwe			
	Katunguru-Ishasha			

Figure 1: Northern Corridor Transit Transport Coordination Authority Non-Physical Barriers Delays Manifest

DATA COLLECTION/INPUT FORM: IN-BOUND/OUTBOUND

- Name of driver..... Company.....

 1. Origin:..... 2. Destination:
 3. (a) Receipt of Loading Permit: Date.....Time.....
 (b) Loading: Date.....Time.....
 4. Departure: Date.....Time.....
 5. Vehicle Reg. No.
 6. Vehicle Country of Registration
 7. Vehicle Type: (a) Truck-Trailer..... (b) Semi-Trailer.....
 (c) Rigid Truck
 8. Vehicle Make: 9. No. of axles:
 10. Cargo Form: (a) Container..... (b) Loose Cargo.....
 (c) Tanker.....
 11. Goods Carried (**from Schedule (i)**).....
 12. Weight of goods.....
 13. Stoppage Details

Stoppage No.	Stoppage Location			Reason/Cause of Stoppage (ii)	Arrival at Stoppage Location		Departure from Stoppage Location		Stoppage Delay
	Name	Route Section (i)	Country		Date	Time	Date	Time	
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
12.									
13.									
14.									

14. Arrival at Destination: Date Time

15. Discharge of Cargo: Date Time

Signature.....

c) Reason/Cause of Delay

The following categories of delay were identified and agreed on:

- i. Police/other security checks
- ii. Customs checks
- iii. Weighbridges
- iv. Escorts
- v. Port Procedures
- vi. Border Post Procedures
- vii. Insecurity
- viii. Personal Reasons
- ix. Vehicle Breakdowns
- x. Inland Terminal Procedures and
- xi. Others

d) Goods Carried

Table 3 shows commodities that were identified and agreed on to constitute a list of possible goods carried.

Table 3: List of possible commodities carried along the Northern Corridor

Tea	Coffee
Hides and skins	Tobacco Leaf
Beans and other Legumes	Fish
Sesame	Cocoa
Pepper	Vanilla
Fruits	Live Animals
Ground /Cashew nuts	Timber
Minerals	Cotton
Grains (Maize, Rice, Wheat etc.)	Sugar
Tyres & Tubes	Vehicles Spares
Electronics	Cigarettes
Cooking Oil	Cosmetics
Building Materials	Machinery
Motor Vehicles	Footwear
Flour	Pulp and paper
Books and other printed Materials	Iron and Steel
Medical and Pharmaceutical Products	Petroleum Products and related Materials
Dry Cells	Foodstuffs and Beverages
Utensils	Fabrics and Garments
Personal and Household Items	Safety Matches

e) Performance Indicators

A number of indicators were agreed on as listed below:

- i. Time for Customs
- ii. Transit Time/Route/Mode of transport
- iii. Transit Time per Border Post

- iv. Journey Time Origin/Destination by country
- v. Rate of containerisation of transit traffic
- vi. Number of checkpoints (weigh-bridges, police, customs, road toll) per country/per route
- vii. Transit time within the port
- viii. Detailed delays
- ix. Periodic comparative delays
 - x. Delays by vehicle types
 - xi. Delays by causes
 - xii. Delays by countries transited
- xiii. Delays by goods/commodities carried and
- xiv. Delays by vehicle country of registration

f) Sampling Methodology

- i. It was agreed that the population of interest is the journeys in a month and these were estimated at 4775 journeys (see estimation of Traffic Flow by road through Malaba and Busia Y2001) **Table 4.**
- ii. The sample is to be selected through transporters with the help of exporters and importers, especially for Rwanda and Burundi.
- iii. It was also agreed that a 10% sample of these journeys be selected for the exercise, stratified by country of destination, proportional to traffic. (Expected numbers are Uganda – 445, Rwanda – 21, Burundi – 7, DR Congo – 26)

g) IT facilities

The consultants reviewed the IT set up at the Secretariat and recommended that the Secretariat should acquire a multi-user database system, such as SQL Server.

Table 4: Estimation of Traffic Flow by Road Through Malaba and Busia

Total Trucks Weighed (Malaba and Busia) Y2001

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Malaba	3,263	3,248	3,227	2,963	3,410	3,685	3,411	3,624	3,575	4,142	3,511	3,131	41,190
Busia	1,243	1,171	1,332	1,322	1,436	1,354	1,404	1,483	1,317	1,424	1,335	1,296	16,117

Source: MoWHC, Uganda

Total Traffic (Burundi, Rwanda, Burundi, Democratic Republic Congo (DRC), & Sudan)

	Uganda	Rwanda	Burundi	DRC	Sudan	Total
	1,710,098	80,822	28,760	100,225	92,999	2,012,904

Source: Kenya Ports Authority (NKP)

Total traffic distribution through Malaba and Busia Y2002 (Tons)*

	Uganda	Rwanda	Burundi	DRC	Sudan	Total
Malaba	1,231,271	58,192	20,707	72,162	66,659	1,449,291
Busia	478,827	22,630	8,053	28,063	26,040	563,613

* Extrapolate from percentage on total trucks passing through Busia & Malaba (Y2001)

Source: NC-TTCA, Mombasa

CHAPTER 3: STAKEHOLDERS WORKSHOPS

3.1. CONSULTATION PAPER

The Consultant prepared the 2nd **Project Report: Stakeholders Consultation Paper** that formed the basis for discussion at workshops on non-physical barriers along the corridor. The NC-TTCA Secretariat translated the Paper from English to French and distributed it to Stakeholders in Burundi, Rwanda, DRC, and the English one, in Kenya. The Consultant circulated the paper to Stakeholders in Uganda.

3.2 STAKEHOLDERS WORKSHOPS

There were three workshops held to sensitise the stakeholders on non-physical barriers and to develop a road map for data collection. The workshops were held in Kampala, Mombasa and Kigali.

(a) Stakeholders Workshops in Kampala

A Stakeholders Consultation Workshop was held in Uganda at Hotel Africana on Thursday 19th February 2004. Participants included representatives from the Uganda Government, and transporters in Uganda. List of participants is in **Annex 4**.

i. Non-Physical Barriers

The Economist presented the initial findings of the study identifying the non-physical delays as reflected in **section 2.3**, performance indicators (**Section 2.5 (v)**) above as well as the results of the trial run by the Field Assistant from Mombasa to Kigali on board a loaded fuel tanker. From the discussions, the following emerged:

- Terminal delays are very important especially in Burundi (where the delay can go up to a week) and Rwanda (where the delay can go up to 5 days);
- There are escorts in Rwanda too (from Kigali to Burundi Border). This escort is on alternating days, but it sometimes not available.
- Gross tonnage is not harmonized: it is, for example, 52 tons in Kenya, and 56 tons in Uganda;
- Border opening hours are not harmonized either;
- In Burundi, due to insecurity, there is effectively a curfew between 4.00pm and 10.00am Monday to Friday, and the whole of Saturday and Sunday;
- There are URA-designated parking yards (Busia, Malaba, Masaka, Ntungamo, Ishaka), which implies no movement beyond those places between 10.00pm to 8.00am when customs staff are not on duty;
- The total number of offices/stamps involved in the whole Port Process should be considered an indicator.
- Corruption is a major cause of delay (*It was however agreed that this would be difficult to capture*).
- Delays related to immigration procedures:

- Drivers need to personally clear through immigration, and this varies from country to country;
- Uganda offers 6-month multiple entry visas to holders of East African passports, but this is not reciprocated by Kenya or Tanzania, where the drivers are required to queue to get visas at every entry.
- Non-East African passport holders need to pay for visas (US\$30 for Uganda, US\$50 for Kenya).
- Kenya does not readily issue temporary travel documents to East Africans.

ii. Data Collection

The IT Specialist presented the proposed data collection form, the sampling methodology, and data collection procedures. After lengthy deliberations, the following were agreed with the stakeholders:

- Drivers were the right persons to collect the data. However, where drivers are the causes of delay, they should not be expected to provide correct information.
- The Uganda Commercial Truckers Association (UCTA) has a list of members with their fleet sizes, which could be used to assign drivers;
- Though some transit traffic does not pass through Busia/Malaba, we should at this stage restrict ourselves to traffic to and from Mombasa;
- There was need to co-opt the transport officers of the different transport companies as these are the persons who assign drivers and who have the basic information on each trip (actually available on the transport permit);
- Consequently, training should be given to the transport officers, who could actually complete sections 1 to 12 of each form before handing it on to the drivers to complete sections 13 to 15. The transport officers would in turn train their own drivers.
- The chairman of UCTA was to contact members of his association with a view of having a training workshop for transport officers on 1/3/04.

Informed by the deliberations at the Kampala Workshop, it was agreed that Transport/Operations Officers, rather than Drivers, be trained and sensitised on data collection as they are the people who assign drivers to particular trips and who have information on each trip. The Transport/Operations Officers would in turn train their own drivers.

A Training/Sensitisation Seminar for Transport/Operations Officers was held at the same hotel in Kampala on 1st March 2004. The workshop revealed similar issues as the first workshop.

(b) Stakeholders Workshops in Mombasa

Insight gained from the Workshop and Training Seminar in Uganda for the stakeholders informed the conduction of the stakeholders' consultations in Mombasa. Consequently, a combined Workshop for Stakeholders and Training of Transport/Operations Officers was held at Whitesands Hotel, Mombasa, on 24th March 2004 (Annex 4).

At the Mombasa workshop procedures for data collection were deliberated on taking consideration the two Kampala workshops. With regard to data collection, it was unanimously agreed that drivers were to be used for data collection whereby Transport /Operations Officers would distribute forms to drivers operating selected routes according to the samples agreed on per route. After filling in the forms, the drivers were to hand in the forms to their respective Transport /Operations Officers who would in turn submit them to Kenya Transport Association (KTA). The KTA was finally to submit the forms to NC-TTCA Secretariat.

(c) Stakeholders Workshops in Kigali

A combined Workshop for Stakeholders Consultation and Training of Transport/Operations Officers from Rwanda, Burundi and DRC was held at Novotel Kigali Umubano on 14th April 2004 (Annex 4). The workshop was bilingual (French/English) and covered the same contents as the Kampala and Mombasa workshops.

CHAPTER 4: DATABASE DEVELOPMENT, TESTING AND TRAINING OF NC-TTCA STAFF

4.1 INTRODUCTION

The basic requirement was for:

- a) A database system at the TTCA Secretariat to capture and report on data from the surveys of key non-physical barriers to transit movements, and
- b) TTCA staff trained to sustain the database.

In order to finalise the design of the database, the IT Specialist needed to and did participate in the finalisation of the data collection forms, the definition of performance indicators, and the review of the IT set-up at the Secretariat. This was mainly achieved during a visit to the TTCA Secretariat from 9- 12 December 2003.

The review of the IT facilities at the TTCA Secretariat revealed that these consisted of a Local Area Network (LAN), with a Pentium IV server running Windows 2000 Server and eight (8) workstations (Pentium IV) running Windows XP. Each of the workstation has Ms Office 2000 installed. The consultant is of the view that in the long run these facilities will not be adequate and recommended that the Secretariat should procure a multi-user database system, such as SQL Server.

In view of the available facilities, a database system was developed in MS Access.

4.2 SYSTEM DESIGN

The basic database design consists of a table for journeys, a table for stops, and look up tables for relatively permanent information (Master Information) like Country, Vehicle Type etc.

The System has the following functionalities:

- a) Master Maintenance – for inputting and updating information on:
 - i. Country
 - ii. Vehicle Type
 - iii. Cargo Form
 - iv. Route Section
 - v. Reason for Delay
 - vi. Goods Carried
 - vii. Origin Place
 - viii. Destination Place
- b) Maintaining Operations – for inputting and updating information on journeys and stops

c) Reporting – for generating reports

The following reports and query can be generated:

- i. Mean Stoppage time by vehicle type
- ii. Mean Stoppage time by Cause
- iii. Mean stoppage time by vehicle registration
- iv. Mean stoppage time by goods carried
- v. Mean Stoppage time by stoppage country
- vi. Periodic Comparative delays
- vii. Time spent at origin
- viii. Time between receipt of load permit and load time
- ix. Time between load time and departure time
- x. Delay by cause by stoppage country
- xi. Delay by stoppage country by stoppage place
- xii. Delay by goods carried by stoppage country
- xiii. Delay by vehicle type by stoppage country
- xiv. Vehicle make frequency
- xv. Vehicle Type frequency
- xvi. Cargo form frequency
- xvii. Mean transit time
- xviii. Number of Check points
- xix. Query

Since it is not possible to anticipate and hence predefine all possible reports from the database, a feature has been included to export a 'view' of the database to an Excel worksheet from which any desired analysis and graphing of the data can be carried out. From here, the data can in addition be exported to a Statistical Package like SPSS if advanced analysis is required.

4.3 SYSTEM CHARACTERISTICS

The System has the following characteristics:

- a) The functionality provided through logical groups called modules. These modules are integrated with each other.
- b) On-line data capturing.
- c) Menu-driven functions with options to perform various tasks.
- d) Context sensitive help and auto hints.
- e) Facility for inquiries and reports.

The System has the following types of screens:

- a) Data entry screens
- b) Screens for generating reports

These screens and the menus leading to them are the sole user interface, and the user does not need any knowledge of MS Access.

4.4 INSTALLATION AND TRAINING

The system was initially installed on three stand-alone computers at the NC-TTCA Secretariat.

Initially three members of staff were instructed in its use viz:

1. Mr Jean Kizito Kabanguka - Transport Economist
2. Mr Venant Ntahonsigaye - Highway Engineer
3. Mr Eliombo Lisumbu - Customs Expert

A User Manual to guide the staff on the operation of the system is at **Appendix 1**.

The IT Specialist together with his assistant paid a working visit to the NC-TTCA Secretariat in Mombasa from 11/4/2005 to 16/4/2005 for:

- a) Capturing field data and producing reports and
- b) Finalizing the installation of the database and training staff

The updated database was installed on the network of the NC-TTCA Secretariat in April 2005. Five members of staff were trained in the use of the database, viz,

1. Mr. Godfrey Matata Onyango/Executive Secretary
2. Mr. Jean Kizito Kabanguka/Transport Economist
3. Mr. Venant Ntahonsigaye/Highway Engineer
4. Mr. Eliombo Lisumbu/Customs Officer and
5. Mr. Athman Muhammad/IT Support Officer

CHAPTER 5: FIELD DATA COLLECTION AND ANALYSIS

5.1 FIELD DATA COLLECTION

(a) Distribution of data collection forms

The Consultant distributed the Data Collection Forms to selected transport firms in Mombasa on 25th and 26th March 2004. Data collection was to commence immediately thereafter. Furthermore, on 14th April 2004 at the Kigali Stakeholders' Workshop, 50 forms each were given to M/S Jambo Safari and M/S TMK, both DRC based. Firms that were given forms, countries they serve and number of forms are given in **Table 5**.

Table 5: Firms given forms for data collection

No.	Transport Firm	Area of Operation	Number of Forms Given
1.	M A Bayusuf & Sons Ltd Contact Person: Mr. Angala (Operations Manager) Tel: 254-41-228500/228586/228533 mabayusuf@africaonline.co.ke	U	30
2.	A O Bayusuf & Sons Ltd Contact Person: Mr. Hassan Awadhi Bayusuf (Director) Tel: 254-41-223895/223170/223249 0722-400040 aob@africaonline.co.ke	U, R	30
3.	Roadtainers (Mombasa) Ltd Contact Person: Mr. Kimani Tel: 254-41-433266/433690/433678 roadtainers@africaonline.co.ke	U, R	30
4.	Transpares (K) Ltd Contact Person: Mr. Mbaji Tel: 254-41-432317/432319/433991/2 transpires@transpares.com	U, R	30
5.	P N Mashru Ltd Contact Person: Mr. Jitu Mashru (Managin Director) Tel: 254-733-618980/41-11432723/434309 pnmashru@pnmashru.com pnmashru@africaonline.co.ke	U, R, B	50
6.	Rakai Clearing and Forwarding Contact Person: Mr. Patrick Kiyemba (Director) Tel: 254-41-54432/722-411183 rakai@africaonline.co.ke	U	30
7.	Kenfreight (K) Ltd Contact Person: Mr. Mbogo (Exports & Booking) & Mr. Patrick Maina Tel: 254-41-435405/316713 trucking@africaonline.co.ke	U	30

No.	Transport Firm	Area of Operation	Number of Forms Given
8.	Multiple Hauliers (EA) Ltd Contact Person: Mr. Dilip Dokaldas (Branch Manager Mombasa) Tel: 254-722-410092/733-294634/02-555163 saleinfo@multiplehauliers.com	U, R	40
9.	Awale Transporters Ltd Contact Person: (Receptionist) Tel: 254-41-535401/13/35/432131 awaletransporters@africaonline.co.ke	U	25
10.	Transeast Ltd Contact Person: Mr. Benjamin Kessi (Personnel Manager) Tel: 245-41-434172/434173 transeast@wananchi.co.ke	U	20
11.	International Committee of the Red Cross Contact Person: Ms Isabella Maina (Logistics Manager Mombasa) Tel:	U	30
12.	SDV Transami (K) Ltd Contact Person: Mr. Mike Keats (Transport Manager) Tel: 254-41-221703/222991/221112 tramom@transami.co.ke	U, R	30
13.	Coast Hauliers Ltd Contact Person: Mr. Shrazali Janmohamed (General Manager) Tel: 254-41-433405/433665/433216 info@highwaycarriers.com	U, R, B	30
14.	Musthafa Enterprises Limited Contact Person: Mr. A. Yankrije (Director)	R, DRC	2
15	JAMBO SAFARI Contact Person: Mr. Mazambi M.M Chef de transport, BP 231 Goma, DRC, Tel: +250 08301098, 250 08533416, Fax: 250 543030/543030, Email: Makabuza@yahoo.fr	R, DRC	50
16	TMK (Transport et Messageries du Kivu) tmkgoma@hotmail.com	DRC	50
	Total forms distributed		507

(b) Response on data collection

Towards the end of April 2004, the Consultant followed up the data collection exercise with an enquiry to the NC-TTCA Secretariat about the number of filled in forms they had received from the selected transport firms. There was complete non-response by the transport firms in filling in the data forms. Only 6 forms by World Food Programme had been returned to the Secretariat.

The Consultant further made telephone contact with the transport firms to clarify on the position on data collection. Most of the contact persons reached on telephone had no ready answer on the position of data collection forms that were given to them. Even those firms who claimed to have some completed forms (Coast Hauliers Ltd and Rakai Clearing and Forwarding) had not returned any forms.

The telephone contact above was followed with an e-mail of May 31, 2004, **Annex 5**, asking the transport firms for up-date on progress made in collection of data and inviting them to state any obstacles they were facing and assistance they would require. The firms have not responded to this communication up to the time of writing this report.

The reasons for failure of the selected firms to collect data are yet to be known. When distributing the data forms to the firms, they were all appreciative of the objectives of the study and were enthused over participation. This is a sign of the willingness of the firms to participate in the exercise.

In the circumstances the Consultant engaged a Research Assistant to follow up collection of data. The role of the Research Assistant was:

- i. To be the focal point in Mombasa for distribution, follow-up and collection of data forms to/from transport firms plus continued sensitisation of the transporters.
- ii. To explain to transport firms the content of the data collection form and how it is to be completed or filled in by the drivers.
- iii. To continuously remind the transport firms about the forms.
- iv. To monitor the data filled in by the drivers and ensure its quality.
- v. To liaise in his/her work with the NC-TTCA Secretariat by whom he/she was to be directed and to whom he/she was to report.
- vi. To contact all transporters who were given data forms as shown in paragraph 4.5 above.

The Research Assistant was engaged for a period of 2 months effective 3rd January 2005, within which period he was to have accomplished the task. He was answerable to the Secretariat of the NC-TTCA, which was responsible for certifying payments to him on the basis of satisfactory performance of the services stipulated above.

When the IT Specialist paid a working visit to the NC-TTCA Secretariat in Mombasa in April 2005, he found that the Secretariat had received a total of 120 completed questionnaires. Of these, 10 were found unusable due to inconsistent or irrelevant data. The 110 usable questionnaires were captured with the help of 2 data entry clerks recruited *ad hoc* with the assistance of the NC-TTCA Secretariat.

A set of reports generated from the captured data is attached to this report as **Appendix 2**.

An analysis of the findings follows in the next section.

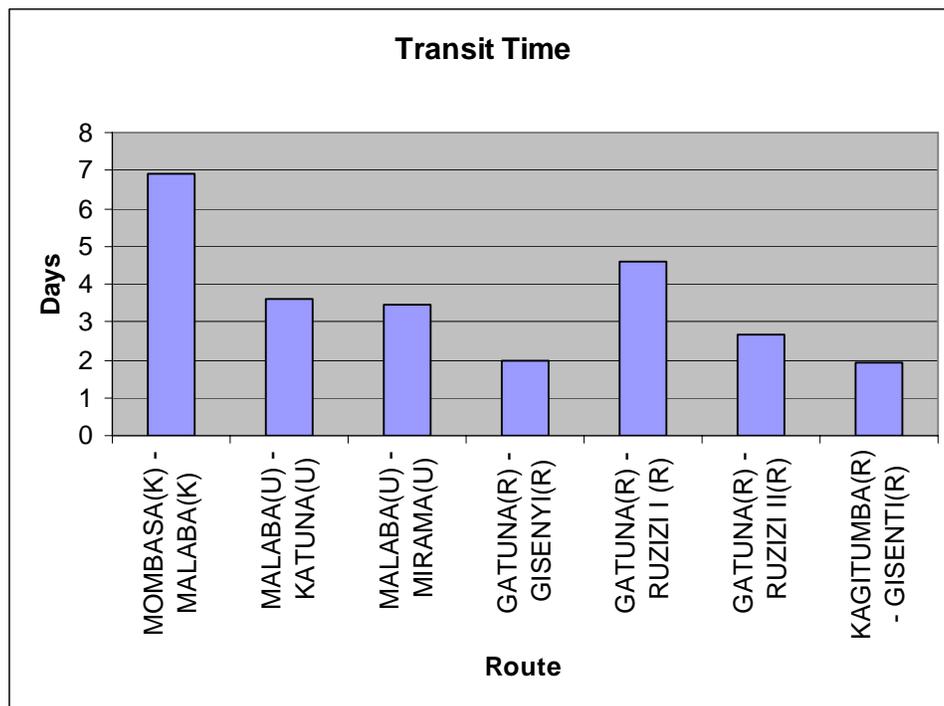
5.2 ANALYSIS OF FINDINGS

(a) Data Analysis

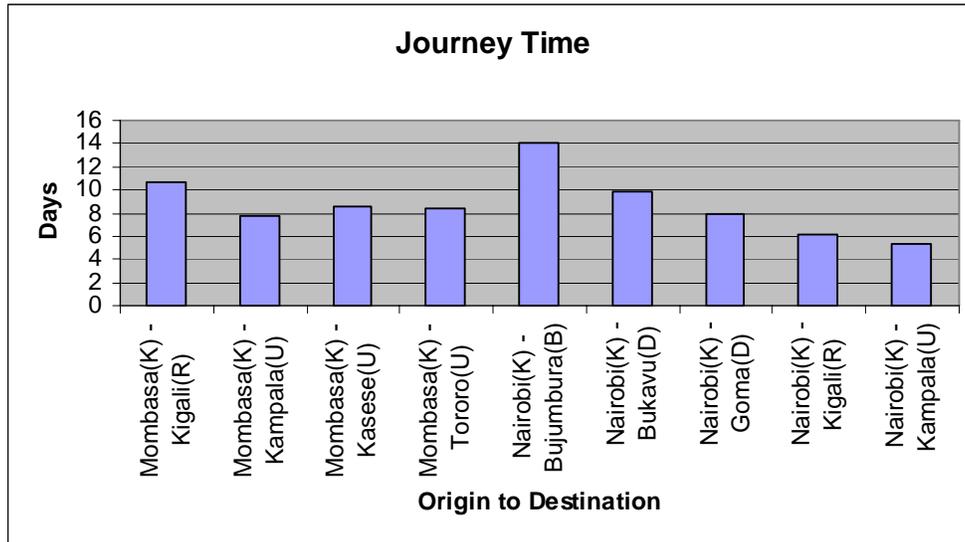
Because of the small number of vehicles reporting on the route sections in Burundi and the DRC, this analysis mainly refers to Kenya, Uganda and Rwanda. The tables referred to in this analysis are in Appendix 2.

- i. The average transit time within the port of Mombasa is 64 hours and 49 minutes, of which 55 hours and 15 minutes is between loading and departure (**Tables 1,2**).
- ii. Transit time in Kenya, excluding the port of Mombasa is approximately 7 days, while it is 3-4 days in Uganda. In Rwanda the transit time is approximately 5 days for Bukavu bound traffic, but only two days for Goma bound traffic (**Table 4**).

The comparison is shown graphically below.



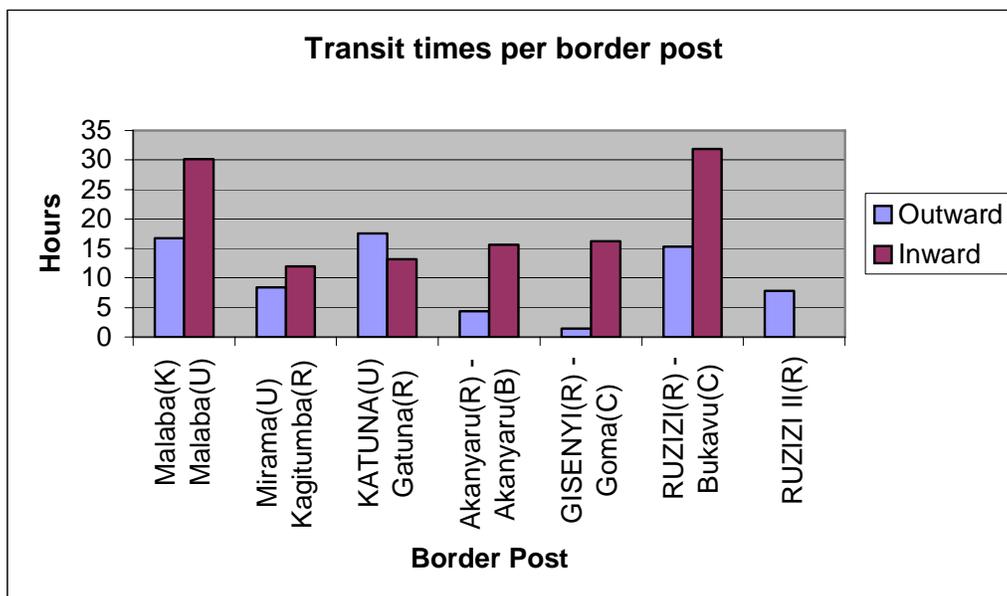
- iii. Journey times on average range from 129 hours for Nairobi to Kampala , to 337 hours for Nairobi to Bujumbura. Perhaps more indicative is the 255 hours for Mombasa to Kigali (**Table 5**). Average journey times are depicted below.



iv. Transit times per border post are as in the table below: (hh:mm)

Malaba (K)	16:45	Malaba (U)	30:09
Katuna (U)	17:32	Gatuna (R)	13:11
Mirama (U)	8:25	Kagitumba (R)	11:56
Akanyaru (R)	4:20	Akanyaru (B)	15:37
Gisenyi (R)	1:26	Goma (C)	16:15
Ruzizi (R)	15:19	Bukavu (C)	31:49
Ruzizi II (R)	7:47		

Apart from Katuna/Gatuna, the outward border post procedures are shorter than the inward border post procedures. This is clearly illustrated in the following chart.

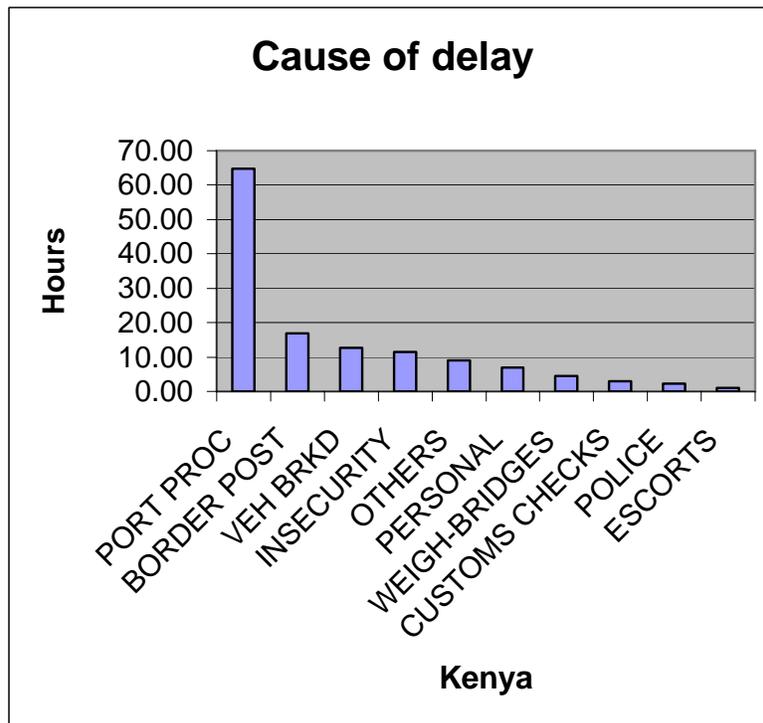


In many cases, the time reported for border post procedures includes an overnight stay at the 'border post'.

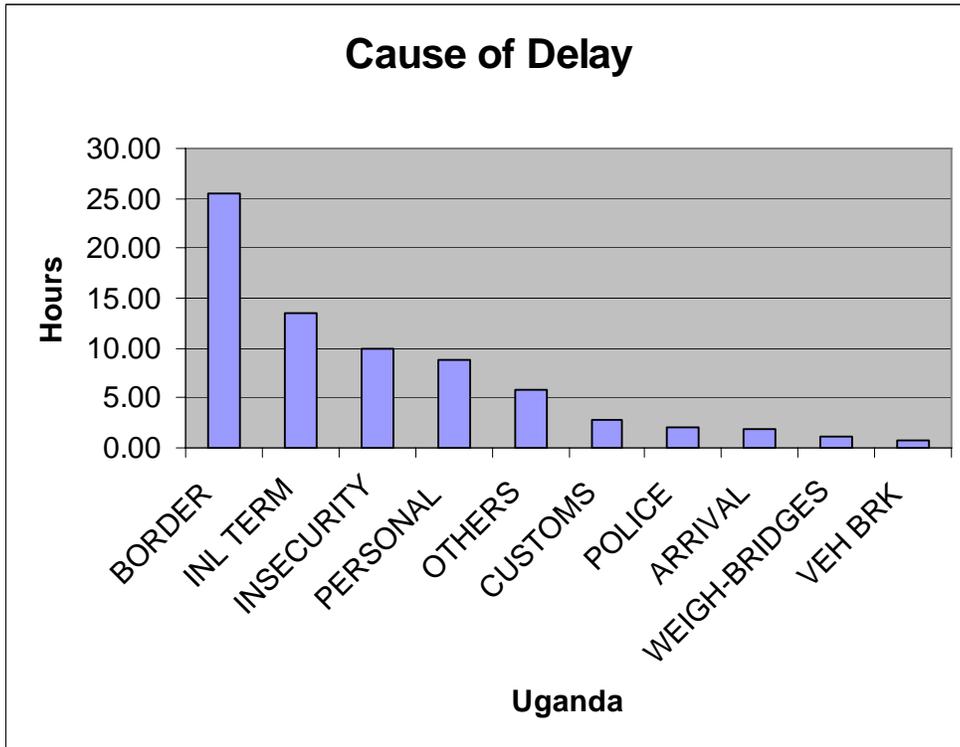
- v. After Mombasa port (64 hours 49 minutes), the longest delays in Kenya were at Makutano (28 hours) and Mau Summit (24 hours 30 minutes (**Table 6**).

In Uganda, the longest delays were at Malaba (30 hours 09 minutes), Katuna (17 hours 32 minutes), and Kinoni (13 hours 4 minutes); while in Rwanda they were at Gikongoro (72 hours 38 minutes), Rwamagana (26 hours) and Kigali (22 hours 7 minutes).

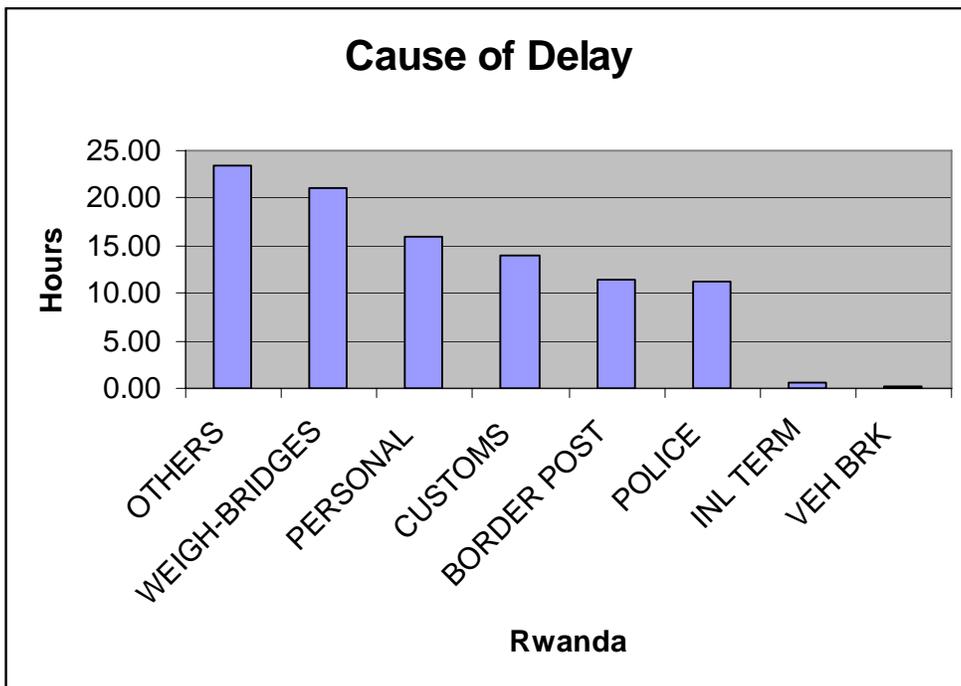
- vi. The causes of the longest delays in Kenya were Port Procedures, Border Post Procedures and Vehicle Breakdowns, as depicted below.



The causes of the longest delays in Uganda were Border Post Procedures, Inland Terminal Procedures, and Insecurity.

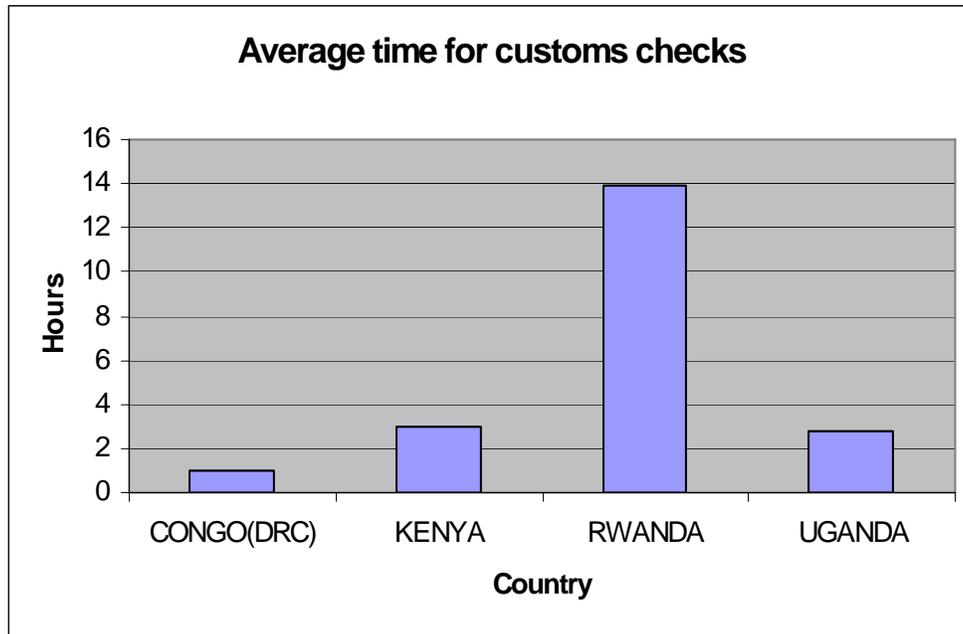


The causes of the longest delays in Rwanda were Unstated Reasons, Weighbridges, and Personal Reasons (**Table 7**).



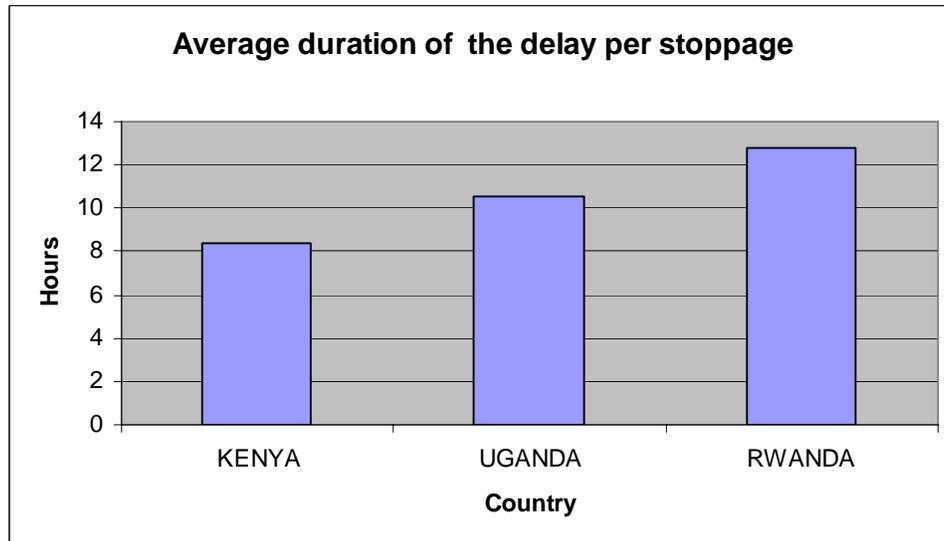
- vii. The average time for customs checks away from border posts was 3 hours in Kenya, 3 hours in Uganda, 14 hours in Rwanda, and hour in the DRC,. The large figure for Rwanda is due two trucks that spent 72 hours in Gikongoro and 24 hours in Kigali respectively (**Table 7**).

This comparison is depicted below.



- viii. Vehicle breakdown appears to be a problem only in Kenya, with average delay due to vehicle breakdown of 13 hours compared to 45 minutes in Uganda and 15 minutes in Rwanda (**Table 7**).
- ix. The average duration of the delay per stoppage is 8 hours 41 minutes in Kenya, 10 hours 34 minutes in Uganda, and 12 hours 49 minutes in Rwanda (**Table 8**).

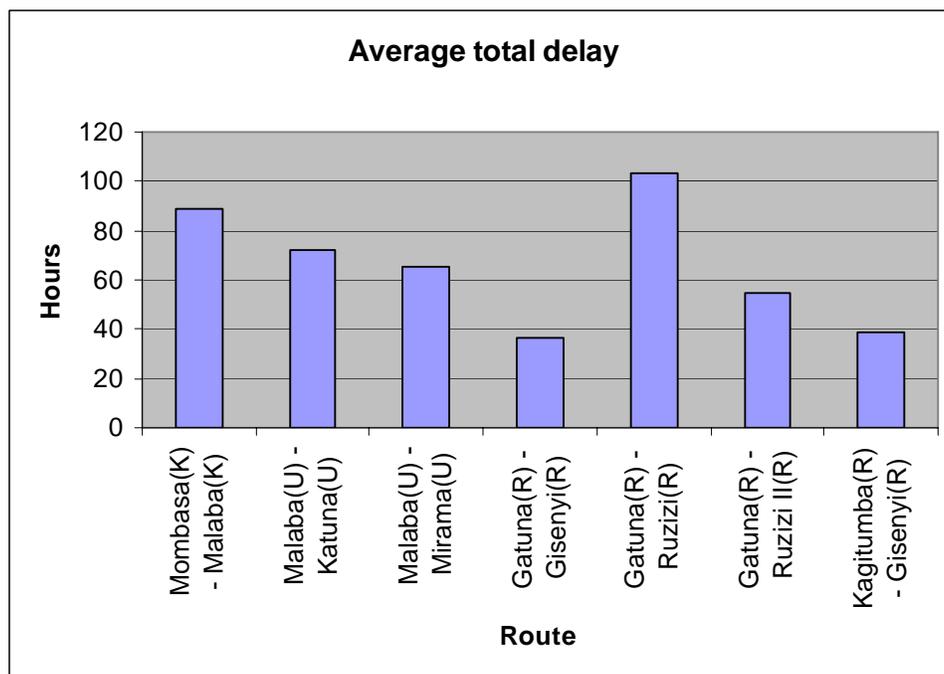
The comparison is depicted below.



- x. The average total delay in Kenya is 88 hours 59 minutes; while in Uganda it ranges from 65 hours 06 minutes on the Mirama Hills bound traffic, to 72 hours 03 minutes on the Katuna bound traffic. In Rwanda, the longest delays are on the Gatuna- Ruzizi

route (total 103 hours 28 minutes), while the shortest delays are on the Gatuna-Gisenyi route (36 hours 47 minutes) (**Table 9**)

The comparison is depicted below.



- xi. Customs checks were most common in Uganda (13), followed by Rwanda (10). This is out of a total of 27 reported. However, out of the 21 reported Police/Security checks, 13 were in Kenya, and six were in Uganda. And out of 10 weighbridges reported, 8 were in Kenya (**Table 11**).
- xii. Paucity of data does not allow for meaningful comparison of delays by stoppage period. However, it can be noted that arrival at weighbridges and border posts in the period 6.00 am to 12.00 noon results in reduced delays (**Table 12**).
- xiii. Semi-trailers seem to experience longer delays than Truck-trailers in Rwanda, and especially DR Congo, but not in Kenya and Uganda (**Table 13**).
- xiv. Goods experiencing least delays in Kenya are Fruits, Petroleum Products, Iron and Steel; while goods experiencing longest delays are Cooking Oil, Tobacco leaf, and Machinery.

Goods experiencing least delays in Uganda are Tobacco Leaf, Cooking Oil, Grains ; while goods experiencing longest delays are Personal & Household Items, Fabrics and Garments, Machinery.

Goods experiencing least delays in Rwanda are Building Materials, Cosmetics, Grains; while goods experiencing longest delays are Tobacco Leaf, Iron and Steel, Tyres and Tubes (**Table 15**).

- xv. Comparison of delays by vehicle country of registration is not possible as all responding vehicles were registered in Kenya (**Table 17**).
- xvi. The rate of containerization of traffic is 47%.

(b) Data Quality

The Secretariat was only able to receive a total of 120 completed questionnaires out of the expected 500, representing a 24% response rate. This response was far below what was expected considering that sufficient sensitization and consultation had been made followed by engaging a research assistant to follow up data collection.

Besides the low response rate, the data came in after over 12 months, against the expected 2 months, from the time data forms were distributed to transport firms in March 2004. This made the planned activity schedule unattainable, considerably delaying completion of the Study.

The quality of the responses received was generally not very good, and suggests that perhaps drivers are not the best persons to use for this kind of exercise. As an example, some drivers were recording 'border post procedures' as the reason for stopping at locations which were not border points. However, data from one transporter who was more enlightened and who afforded us about 85% of the response was of good quality.

(c) Validation of Survey Results

i. Approach to Data Collection

The Consultant carried out ten (10) additional journeys to validate the survey results. Two Kampala-based transport firms were identified and selected and close relations established with the Operations Officers. The Operations Officers were not to give the data collection forms to drivers at random but rather select dedicated literate ones able to comprehend the forms and accurately and comprehensively fill them in.

Reality on the ground is that the Operations Officers who have control of, and contact with, the drivers, are extremely busy and always on the move either within the company yard or in the field, including border posts. Completing data forms not being part of their routine work, they are over ninety percent of the time likely to forget all about them. The Consultant had therefore, to keep very close contact with them making several telephone calls a week to remind them and paying physical visits to make sure that drivers have been selected and instruct them on completing the forms.

There is also a high probability of the drivers receiving the data forms returning them blank, if not for lack of understanding them, for lack of motivation. The Consultant had therefore to motivate the drivers with a remuneration for each set of forms (outward and inward) returned duly completed.

The Consultant collected the completed forms from the Operations Officers with whom accuracy of data and completeness of the data form were ascertained.

It is note-worthy that the two firms that co-operated with the Consultant on collection of data are relatively small. One big multi-national operator contacted for the exercise had to

consult and seek permission from the firm's regional headquarters in Mombasa. The results of this consultation have to the time of writing of this report not been received.

As may be appreciated, the above process is quite involving and time consuming. In this exercise, contact with the transport firm started on 12/08/2005, the first journey commencing on 17/08/2005. The tenth and last journey ended on 10/10/2005, the Consultant receiving the completed forms on 18/10/2005. This is a time span of two months.

Out of the above effort, data on ten (10) journeys was collected – five (5) journeys on the Kampala-Mombasa axis, four (4) journeys on the Mombasa-Kampala axis and one (1) journey on the Mombasa-Kigali/Rwanda axis. Of the ten data forms, eight (8) were of good quality while two (2) were unsatisfactory and unusable.

ii. Analysis of Validation Runs' Findings

Data from the validation runs has been tabulated and is in **Appendix III** of this Report.

Tables giving detailed information by Stoppage Place, Cause of Stoppage, Period of Day, Vehicle Type, and Goods Carried, respectively, have been suppressed because of the sparseness of the data.

- The average transit time within the port of Mombasa in the validation runs is 36 hours 45 minutes compared to 64 hours and 49 minutes in the main survey (**Table A1**). As is evident, average transit time has reduced substantially. The change is probably due to the new procedures introduced at the Port in June 2005.
- While Transit time in Kenya, excluding the port of Mombasa in the main survey was approximately 7 days, in the validation run it is 4.5 days. The transit time for Uganda is roughly the same (approximately 4 days) (**Table A4**).
- Journey times in the validation runs compare well with those of the main survey. For example 154 hours versus 129 hours for Mombasa to Kampala and 195 hours versus 255 hours for Mombasa to Kigali. (**Table A5**).
- The causes of the longest delays in Kenya in the validation runs were Port Procedures, Escorts, and Border Post Procedures, in that order (**Table A7**), while in the main survey it was Port Procedures, Border Post Procedures, and Insecurity.

The causes of the longest delays in Uganda in the validation runs were Border Post Procedures, Personal Reasons, and Customs Checks (**Table A7**), while in the main survey it was Border Post Procedures, Inland Terminal Procedures, and Insecurity.

- While the average duration of the delay per stoppage was 8 hours 41 minutes in Kenya, 10 hours 34 minutes in Uganda, and 12 hours 49 minutes in Rwanda during the main survey; the corresponding times in the validation survey were 2 hours 54 minutes in Kenya, 11 hours 27 minutes in Uganda, and just 55 minutes in Rwanda (**Table A8**).
- In spite of the foregoing, the average total delay in Kenya of 88 hours 59 minutes in the main survey compares well with 72 hours 21 minutes in the validation runs. Similarly in

Uganda 72 hours 03 minutes on the Katuna bound traffic in the main survey compares well with 79 hours 31 minutes in the validation runs. **(Table A9)**

- Customs checks in the validation runs were most common in Kenya and Uganda (rather than Uganda and Rwanda in the main survey). This is probably because this time the traffic did not go beyond Kigali. The majority of reported Police/Security checks are still in Kenya, as are the weighbridges **(Table A11)**.
- Semi-trailers are the only vehicles with detailed stoppage information in the validation runs, so there is no comparison of vehicle types. **(Table A13)**.
- The small range of goods carried in the validation runs do not allow any meaningful comparison with the main survey **(Table A15)**.
- Comparison of delays by vehicle country of registration which was not possible in the main survey because all the vehicles were Kenya registered, now the validation runs seem to suggest that Ugandan registered vehicles experience shorter stoppage times than Kenya registered vehicles **(Table A17)**. However, the small number of vehicles in the validation runs makes the difference not statistically significant.
- The rate of containerization of traffic in the validation runs is 80% **(Table A18)**, compared to 47% in the main survey. This difference is however, probably due to the limited cargo mix, as only two firms were used to collect data in the validation runs.

All in all, the delay indicators in the validation runs are consistent with those in the main survey.

CHAPTER 6: CONCLUSION AND RECOMMENDATION

6.1 CONCLUSION

- a) There still exist non-physical barriers along the Northern Corridor which cause lengthy delays in the movement of traffic, increasing the cost of transport. Field data collected and analysed in this survey confirm the Consultant's initial findings on non-physical delays as enumerated in Section 2.3 of this report. The corroborative data was that collected by the Field Assistant in the trial run, by drivers of 16 selected firms in the main survey and by dedicated literate drivers selected from two transport firms for purposes of validation of the survey results.
- b) The majority of truck drivers lack literacy skills to handle the data collection forms. Data forms given to such drivers would therefore, either be inadequately filled or not filled at all. Further, the Operations Officers' work schedule leaves them little room to attend to data collection. When designing data collection methods and procedures and determining the sample size or volume of data to be collected in a given time, the above factors should be taken into account.
- c) In the circumstances therefore, the realized sample of 110 journeys in this survey was much lower than the desired 500. Nevertheless, the survey gives useful information about the delays encountered along the corridor. Further monitoring of delays can be built on this. Further more, contacts with transport firms and other stakeholders have been established and so has been the data-base system. The data-base established can effectively and efficiently be used for future data entry or capture, data analysis and report production.
- d) In this study, a baseline survey of key non-physical barriers to transit movement has been done and a data-base at the NC-TTCA established. Data and information from the survey give a clear understanding of the transit issues and is a basis for informed and effective policy and intervention measures for removal of delays and continued monitoring.
- e) In accordance with the TOR of this Study, the Consultant has prepared a Project Document (**Appendix 4**) and, TOR (**Appendix 5**) for support services for elimination of non-physical barriers along the Northern Corridor.

6.2. RECOMMENDATION

The study identified non-physical causes of delay, their location and associated delay time. Non-physical delays to traffic along the Northern Corridor be eliminated or reduced to a minimum. It is recommended that:

- a) The NC-TTCA Secretariat vigorously pursue securing of support services for elimination of non-physical barriers along the Northern Corridor as prescribed in the Project Document at Appendix 4 of this report.

- b) Monitoring of the effects of the policy and intervention measures be continuous.
- c) For data collection the Authority zeros on a few carefully selected sound and reliable transport firms who would identify and engage dedicated educated drivers. Close weekly contact with firms should be maintained during data collection and completed forms collected from the firms. The drivers engaged in data collection should be motivated with an appropriate remuneration. Data collected by selected drivers should be supplemented by dedicated trial runs by Field Assistants.
- d) The NC-TTCA Secretariat acquires a multi-user data-base system, such as ORACLE, on which an enhanced Transport Data-base should be based.

ANNEX 1:
TERMS OF REFERENCE

Terms of Reference for a Baseline Survey of Key Non-Physical Barriers to Transit Traffic Along the Northern Corridor and Establishment of a Database at the TTCA Secretariat

I. Background

1. The Northern Corridor Transit Agreement (NCTA) is a multilateral treaty, which provides the legal framework for cooperation among the contracting states of Burundi, Democratic Republic of Congo, Kenya, Rwanda and Uganda in the facilitation of transit transport and trade.
2. The Northern Corridor itself is defined as transport infrastructure and facilities in Eastern Africa served by the port of Mombasa. The infrastructure comprises of rail, road and pipeline networks and routes, which are detailed in Protocol No. 2 of the Transit Agreement. The rail/road routes radiate from Mombasa in Kenya, through Kampala in Uganda to Bujumbura in Burundi, Kigali in Rwanda, Goma, Bukavu, Bunia, and Kisangani in the Democratic Republic of Congo.
3. The Corridor provides the most cost effective link to and from the sea, for the conveyance of the international trade of the contracting states. The main tenet of the transit agreement is that the contracting states guarantee each other free passage through their respective territories, of transit traffic and trade. In this regard, there are nine protocols attached to the transit agreement, which set out the modus operandi in the various aspects of transit transport operations namely:
 - Use of maritime port facilities
 - Designation of transit routes and facilities
 - Customs control
 - Documentation and procedures
 - Transportation by Road
 - Transportation by Rail
 - Transportation of Dangerous Goods
 - Facilities for Transit Operators and their employees
 - Motor Third Party Insurance
4. In order to facilitate the realization of the objective set out in the Transit Agreement and the Protocols, an Authority (a council of Ministers responsible for transportation) was set up. The Authority (formally referred as the Transit Transport Co-ordination Authority – TTCA) is assisted by an Executive Board of senior officials and private sector stakeholders. The other organ is the Secretariat with its headquarters in Mombasa, Kenya.
5. The vision of the TTCA is to make the Northern Corridor the most cost effective route in East-Central Africa to enhance the sub-region's competitiveness in the global market. In order to achieve this vision the Authority's mission is centred on the reduction of transportation costs through undertaking the following measures:
 - (1) Streamlining customs documentation and procedures.
 - (2) Harmonization of technical standards and traffic regulations.
 - (3) Harmonization of transit charges and the elimination of unnecessary charges imposed on transit traffic and cargo.
 - (4) Improvement of transport infrastructure and the removal of all non-tariff barriers.
 - (5) Adoption of modern information and communications technology.
6. Substantial progress has been made in the above areas of intervention. The proliferation of national customs documents has virtually been eliminated through the introduction of a single transit document, which is now being replaced by a single goods declaration document. Working hours of customs administrations of the five contracting States have also been harmonized. Transit charges have been harmonized, in lieu of various national charges. There is mutual recognition of truck

operator licences issued by the appropriate Licensing Authorities of the contracting parties, as opposed to previous requirement of road service permits to be purchased by foreign registered vehicles. A regional motor third party insurance scheme is in place to facilitate inter-State movement of vehicles. In addition Kenya Railways and Uganda concluded a working agreement, within the NCTA framework, to facilitate their operations, including the operation of block trains.

7. Furthermore, the Northern Corridor Stakeholders Consultative Forum, for the facilitation of the movement of goods along the corridor has been established. This Forum is an example of private/public sector partnership which is being promoted.
8. Whereas the above achievements have resulted in the substantial reduction of transport costs along the corridor, there are still some impediments requiring further policy development and implementation initiatives. Such initiatives will lead to further reduction of costs.

II. Objectives of the Survey

9. The Secretariat of the NC-TTCA, amongst its other tasks, continuously seeks to provide sound advice to the Authority and its Board concerning policy development and implementation initiatives which will facilitate cost-effective transport operations along the Northern Corridor.
10. In order to enhance this function, and to enhance its service to public and private sector stakeholders, the Secretariat wishes, in due course, to establish practicable transit traffic monitoring and tracking systems. This will entail the undertaking of a baseline survey and monitoring exercise of key non-physical barriers to transit movements so as to better understand the priority needs of such tracking systems.
11. A significant barrier to cost effective operations is related to time delays. Time delays along the Northern Corridor are caused by a host of factors including official regulatory actions (eg. convoy systems, night transport bans, axle load controls, border crossing formalities, road blocks) and unofficial regulatory interventions (eg ad hoc road blocks, “rent seeking” by officials, etc). The baseline survey will, as a first step, attempt to provide valid measurements of these delays related to a number of criteria including location, and type.
12. The objective of the program is to establish a partnership with road transporters engaged in transit traffic operations so as to measure time delays caused by formal and informal regulatory activities along the road components of the Northern Corridor, to establish travel time performance indicators, and to raise the awareness of public and private sector institutions as to the cost and efficiency impacts of these delays.
13. The Secretariat has applied to the Sub-Saharan Transport Policy Program (SSATP), managed by the World Bank, for assistance in this initiative. The Secretariat is, therefore, seeking the services of a consultant to undertake the baseline survey in accordance with the tasks outlined below.

III. Scope of Work

14. The Consultant is required to undertake the following tasks:
 - (1) Undertake consultations with private sector transporters and associations based in NC member states and who are engaged wholly or partly in transit traffic operations.
 - (2) Define desirable survey outputs in terms of total time delays from all causes, and time delays disaggregated by cause, location, date, time of day.
 - (3) Define parameters of reports so as to capture data related to direction of travel, “nationality” of vehicle, type of cargo (container, bulk, refined petroleum products, etc).
 - (4) Conduct workshops/seminars in one or more locations along the Northern Corridor to sensitise transporters and drivers to the objective and outputs of the work, and to define the format of data sheets to be carried and completed by drivers during the course of their

journey. These must be simple enough so as not to impose undue burdens on drivers, but adequate enough to capture good data. The data sheets will need to be provided in both English and French.

- (5) Calculate the required size of the sample journeys to be surveyed so that outputs are statistically valid¹.
- (6) Agree with transporters arrangements for certifying and collecting completed data sheets at the termination of journeys and transferring them to the offices of the Secretariat in Mombasa.
- (7) Undertake trial runs with data sheets on actual journeys and making changes, revisions as may be required.
- (8) Set up a database or spread sheet in the offices of the Secretariat in Mombasa and inputting data.
- (9) Generate monthly reports which should include a full account of average total time delays per journey, and average time delays by individual causes disaggregated by date, “nationality” of vehicle, country (and location), type of cargo (bulk, container, POL, etc).
- (10) Disseminate monthly reports to all stakeholders by as many means as possible.
- (11) Train TTCA Secretariat to sustain the database, report generation and dissemination.
- (12) Prepare a project document, TOR for further support services, cost estimates, and a time-bound implementation plan for the remedial measures aimed at policy improvement, reduction of costs along the corridor, including the establishment of a fully-fledged Database, Website and tracking system.

IV. Methodology

15. The approach will likely entail the following steps:

- Workshop/Seminar with a representative group of transporters and associations to achieve formal agreement on partnership arrangements for data collection by drivers;
- Definition of data to be collected bearing in mind the capacity of drivers and the needs to ensure statistically valid sampling of transit traffic;
- Identifying arrangements for certifying and forwarding data sheets to the offices of the Secretariat in Mombasa;
- Defining the parameters of reports to be generated and designing a simple spread sheet capable of providing the required analyses;
- Identifying data input services required;
- Identifying means of publication of monthly reports, including the internet.

V. Qualifications of the Consultant

16. The individual required for this assignment should have post graduate qualifications in Statistics and Computer Science. He/She should have a working experience of at least ten (10) years and should have carried out similar surveys in the past. Proficiency in English or French, with working knowledge of the other, is essential. Knowledge of Kiswahili will be an added advantage.

VI. Timeframe

17. The study requires 3 person-months input and would take 3 calendar months if undertaken by a single consultant or one and a half calendar months if carried out by two persons. It is anticipated that the survey can commence before the end of June 2002.

¹ It is of vital importance that the reports generated are based on statistically valid data. Confidence in the outputs must be beyond doubt if they are to achieve the awareness raising impacts desired. At the same time the integrity of the Secretariat and the SSATP must be preserved.

**ANNEX 2:
ACTIVITY SCHEDULE**

**ANNEX 3:
TEAM COMPOSITION AND TASK ASSIGNMENT**

ANNEX 4:
LIST OF PARTICIPANTS FOR STAKEHOLDERS WORKSHOPS

List of Participants for Stakeholder Workshops on Baseline Survey of Key Non-Physical Barriers along the Northern Corridor

A. Stakeholders' Consultation Workshop on the Baseline survey of Non Physical Barriers along the Northern Corridor held in Kampala at Hotel Africana on 19 February 2004.

Name	Organisation	Address/Phone
Ms. Annette Mutaawe Ssemuwemba	Ugand Revenue Authority (URA)	077423947
Eunice Kisembo Ssebunya	Department of Immigration	077612337
Mr. Patrick Okalangole	Ministry of Trade & Industry	071803206
Mr. Collin Twino	Ministry of Trade & Industry	077854255
Mr. Steven Tashobya	Uganda Commercial Truck Owners Association	077798459
Dr. C.K.Kaira	Dr. CK Kaira Associates Ltd	077852756
Mr. Joseph K.Nduru	PROME Consultants	077611676
Mr. L.K.Atuhaire	PROME Consultants	077433134

B. Stakeholders' Consultation Workshop on the Baseline survey of Non Physical Barriers along the Northern Corridor held in Kampala at Hotel Africana on 1st March 2004

Name	Organisation	Address/Phone
Mr. Mugarura	Mjomba Enterprise	077704504
Mr. Charles Kawalya	Multiple Inland Container Depot (MICD)	077511952
Mr. Mande Mutebi	Multiple Inland Container Depot (MICD)	077852281
Mr. Solomon T. Kaddu	Uganda Transport Agencies	07437691
Mr. Geoffrey Mukasa	Interfreight (U) Ltd.	077457582
Mr. David Naamara	Uganda Cooperative Transport Union Ltd (UCTU)	041-567506
Mr. Joseph K.Nduru	PROME Consultants	077611676
Mr. L.K.Atuhaire	PROME Consultants	077433134

C. Stakeholders and Transport Managers Workshop on Key held at Whitesands Hotel, Mombasa on 24th March 2004.

Mr. G. M. Onyango	Executive Secretary, NC-TTCA
Mr. J. K. Kabanguka	Transport Economist, NC-TTCA

Mr. V. Ntahosingaye	Highway Engineer, NC-TTCA
Mr. Louis Burakuvye	Translator, NC-TTCA
Mr. J. K. Nduru	Consultant, PROME
Dr. L. K. Atuhaire	Consultant, Prome
Mr. Meetal Mehta	P N Mashru Ltd
Mr. F. Mulili	P N Mashru Ltd
Mr. P. J. Shah	Committee Member, KIFWA
Mr. D. M. Imathi	PC's Office
Mr. D. Munyao	PC's Office
Mr. R. Mwaniki	Motrex Ltd
Mr. P. Kiyemba	Rakai Clearing and Forwarding Co Ltd
Mr. G. T. Kapila Ebondo	OGEFREM Resident Representative
Mr. M. Mahmoud	Awale Transporters Ltd
Mr. Abdi Awale	Awale Transporters Ltd
Ms. I. Maila	ICRC
Mrs. E. U. Mwamure	Kenya Ports Authority
Mr. C. Otory	Kenya Ports Authority
Mr. J. F. Dawai	Ag Nat Exec Officer, KTA
Mr. L P. Wakise	Signon Freight Ltd
Mr. J. Ngetich	National Chairman, KIFWA
Mr. A. Yankurije	Musthafa Enterprises LTD
Mr. B. Ngala	M A Bayusuf & Sons Ltd

D. Stakeholders' Consultation Workshop on the Baseline survey of Non Physical Barriers along the Northern Corridor held in Kigali at Novotel Kigali Umubano on 14 April 2004.

Name	Address
Mr. Mr. Philippe Munyaruyenzi	Directeur des Transports Ministry of Infrastructure, Rwanda, PO Box 24 Kigali Tel: 250 08589299, Fax: 250 582971 Email : minitraco@rwanda1.com
Mr. Mazambi M.M	Chef de transport, JAMBO SAFARI BP 231 Goma, DRC, Tel: +250 08301098, 250 08533416, Fax: 250 543030/543030, Email: Makabuza@yahoo.fr
Mr Tshana Paul Mbaya	Inspecteur Provincial des Douanes et Accises, Office Des douanes accises (OFIDA), BP 640 Goma/Nord-Kivu, Tel:+243 813179089/98666619, 250 08419057, Email : ptshama@yahoo.fr
Mr. Theobald Byaraje	Secretary Association des Transports du Rwanda (ATAR), BP 3425, Kigali, Fax: 250 571150, Email: tbyaraje@yahoo.fr

Mr. Faustin Munyeshuli Transit Expert, Ministry of Infrastructure, Rwanda, PO Box 24 Kigali Tel: 250 08589299, Fax: 250 582971, Mobile: 250 08484574
Email: minitraco@rwanda1.com or shulifau@yahoo.fr

Mr. Sentama Gasore Head of Central Operations Division, Rwanda Revenue authority/Customs Department, BP 718 Kigali, Tel: 250 516296, Fax: 250 518535,
Email: gasantos2002@yahoo.com

Mr. Jean Bahizi Head of Licenses & Taxation, Rwanda Coffee Board (OCIR), PO Box 104 Kigali, Rwanda, Tel: 250 575398, 08303712, Fax: 250 573992,
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Mr. Godfrey Kabera Head of Department Associations, Rwanda Private Sector Federation Rwanda, BP 319 Kigali, Tel: 250 08307167/593538/583541, Fax: 250 583532,
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Email: innovations@infocom.co.ug

**ANNEX 5:
E-MAIL MESSAGE TO TRANSPORT FIRMS**

E-mail Message to Firms which had been given Data Collection Forms

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

From: ckkaira

To: mabayusuf@africaonline.co.ke ; aob@africaonline.co.ke ; roadtainers@africaonline.co.ke ; transpires@transpares.com ; pnmashru@pnmashru.com ; rakai@africaonline.co.ke ; trucking@africaonline.co.ke ; saleinfo@multiplehauliers.com ; awalettransporters@africaonline.co.ke ; transeast@wananchi.co.ke ; tramom@transami.co.ke ; info@highwaycarriers.com ; Makabuza@yahoo.fr ; tmkgoma@hotmail.com

Cc: jmarteau@worldbank.org ; [TTCA of the Northern Corridor](#) ; [PROME Consultants](#)

Sent: Monday, May 31, 2004 2:20 PM

Subject: Follow up of Data Collection by Drivers - Non-Physical Barrier Delays Northern Corridor

Dear Partners in Data Collection,

You may please recall a visit to your firm by our Experts Mr. Nduru and Dr. Atuhaire 25/26th March 2004 regarding collection of data on non-physical barrier delays along the Northern Corridor.

As you are an important Partner in this exercise we request you to update us by e-mail on the progress you have made in collection of data, specifically: (1) How many forms have been given to your drivers so far, (2) how many have been completed by your drivers so far, (3) how many forwarded to the NC-TTCA Secretariat so far, (4) when do you think the last form will be collected from the drivers, (5) are there any obstacles you are facing and, if so what assistance would you require from us. This information will assist us to speed up the process of data collection and to review the exercise if necessary.

Please attached is the information regarding the contact person for each Transport Firm and also current information regarding the exercise as of 28th May 2004.

Your cooperation in this will be highly appreciated. Please send us the required information by 5th June 2004 to allow us review the exercise.

Regards,

Dr. Charles K Kaira,