



## **TRANSPORT OBSERVATORY PROJECT**

RELIABLE NORTHERN CORRIDOR PERFORMANCE DATA

**EVIDENCE-BASED POLICY DECISIONS FOR A COMPETITIVE CORRIDOR**



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# FOREWORD

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The TTCA-NC is delighted to present the first Transport Observatory Project (TOP) report outlining the results and findings from the analysis of data collected the project challenges and

perspectives. Identifying the key causes of bottlenecks on the Northern Corridor is a major stepping-stone for Members States and decisions makers towards enhancing the ease of doing business in the region; it is, therefore, the main objective of the TOP as per the TTCA-NC's mandate is to monitor and improve the corridor performance.

The TOP is indeed a vivid operational tool for the region that will monitor the Northern Corridor performance and provide information on delays, transport cost and capacity and infrastructure quality. Once proper analysis of the collected data has been done, the information can be used effectively to formulate a framework of evidence-based policy decisions that will make the Northern Corridor more efficient and competitive.

Further data analysis will help to understand whether the policy decisions have resolved the problem or moved it from one point to another on the logistics chain so that iterative policy decisions can be made for an ideal desired seamless corridor.

The TOP is consequently a “never-ending” project as long as the northern corridor is still the lifeline of the region economies.

With the support of our cooperating and implementing partners, the Kenya Transporters Association and TradeMark East Africa, and building on the initial support of the SSATP form 2003, I am pleased to announce that much progress has been made towards the development of the TOP. But there is still much more to achieve.

Currently, the TOP incorporates data ranging from various stakeholders' ICT systems and Roads Surveys and the results can now be disseminated by an online web based system (<http://top.ttcanc.org>) as well as quarterly

reports (like this one) so that key issues can be identified, discussed and be resolved in a timely and effective manner. The established TOP framework is presently capable of monitoring, measuring and tracking up to 25 key performance indicators related on volume and capacity, transit time and delays, rates and costs, efficiency and productivity. In line with the Northern Corridor Strategic Plan 2012-2016 targets and for this achievement, I am very excited and thankful for the cooperation received from valuable stakeholders and transporters for providing data required to feed the TOP. However, many challenges still slowing down the data collection and thus, I encourage our stakeholders and partners to participate in this initiative by providing the data required in order to foster trade facilitation and reduce the transport cost in the region.

I urge our Member states, through the relevant Ministries, to strengthen the focal point network adopted for the TOP with the aim of enhancing the data collection mechanism. Lastly, as a result, the success of the TOP project will in many ways minimize the risks of misleading and lack of decisions implementation by bringing better policy consistency and highlight the role of everyone in the region, so that together we can make the Northern Corridor one of the most efficient transport corridor in the Africa.

A handwritten signature in blue ink, appearing to read 'Donat M. Bagula', written over a set of horizontal lines.

**Donat M. BAGULA**  
*Executive Secretary*

# ACKNOWLEDGEMENT

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The Permanent Secretariat of the Transit Transport Coordination Authority of the Northern Corridor (TTCA-NC) wishes to acknowledge with great appreciation the assistance provided by TradeMark East Africa (TMEA) for the development of the Northern Corridor Transport Observatory Project.

In this regard, TTCA-NC Secretariat expresses personal gratitude to Mr. Frank Matsaert, the Chief Executive Officer of TradeMark, East Africa and his entire staff for the invaluable role they played since the beginning of the project in March 2011 up to now.

TTCA-NC also wishes to acknowledge contributions of key partners such as SSATP-WB, Kenya Transporters Association (KTA) who have very closely worked with the Secretariat in the execution of the project through facilitation of various facets of the project over the years.

Our sincere gratitude further goes to all TTCA-NC Policy Organs namely the Council of Ministers, the Executive Board which has continued to play a critical role of facilitating activities of the project especially in data collection through the respective designated focal points.

As the success of the TOP primarily depends on data, the Secretariat would like to extend its sincere appreciation to various stakeholders who have gone out of their way to provide the data. These include, all Revenue Authorities, Ports Authorities, Authorities in Charge of Road Development, Authorities in Charge of Road Maintenance Funding, Pipeline Corporations, Authorities in charge of Railways, Transport Associations, Transport companies, Clearing and Forwarders, etc.

In writing this report special acknowledgement goes to TTCA-NC, KTA and TMEA experts as well as consultants who have continued to work tirelessly to contribute in this activity.

TTCA-NC acknowledges the candid and very valuable contributions from everyone in supporting the development of the Northern Corridor Transport Observatory.

## LIST OF ACRONYMS

ADR	Association des Agences en Douane du Rwanda
ASYCUDA	Automated SYstem for CUstoms Data
BI	Burundi
CD	Democratic Republic of Congo
CFS	Container Freight Station
CIRGL/ICGLR	Conférence Internationale pour la Région des Grands Lacs
DGDA	Direction Générale Des Douanes Et Accises -
DRC	Democratic Republic of Congo
DWT	Dead Weight Tonne
EAC	East African Community
EPB	Société Concessionnaire de L'exploitation du Port de Bujumbura
ES	Executive Secretary
FEAFFA	Federation of East Africa Freight Forwarders Associations
FRN	Fonds Routier National
GPS	Global Positioning System
ICD	Inland Container Depot
ICT	Information Communication Technology
IPOU	Import Pick Up Order process
IRI	International Roughness Index
KE	Kenya
KeNHA	Kenya National Highway Authority
KMA	Kenya Maritime Authority
KPA	Kenya Ports Authority
KPC	Kenya Pipeline Corporation
KRA	Kenya Revenue Authority
KRC	Kenya Railways Corporation
MAGERWA	Magasins Généraux du Rwanda
NC	Northern Corridor
NCP	Number of check points
NCTA	Northern Corridor Transit Agreement
NTB	Non-Tariff Barriers
OBR	Office Burundais des Recettes
ODR	Office des Routes
OGEFREM	Office de Gestion du Fret Multimodal
PSF	Private Sector Federation

RADEX	Revenue Authorities Data Exchange
RcTT	Rate of containerization of transit traffic in percentage
RDB	Rwanda Development Board
RFDD	Rate of Fraud or Declared Damage for goods in transit
RMF	Road Maintenance Fund
RRA	Rwanda Revenue Authority
RTDA	Rwanda Transport Development Authority
RVR	Rift Valley Railways
RW	Rwanda
SSATP	Sub Saharan Africa Transport Policy Program
TC	Total Cargo
TF	Total Fleet
TMEA	Trade Mark East Africa
TO	Transport Observatory
TOP	Transport Observatory Project
TTCA-NC	Transit Transport Coordination Authority of the Northern Corridor
UG	Uganda
UNECA	UN Economic Commission for Africa
UNRA	Uganda National Roads Authority
URA	Uganda Revenue Authority
URC	Uganda Railways Corporation

# 1. INTRODUCTION

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## 1.1 How to Read This Report

This report has been organized such that each chapter covers a specific aspect of the subject and can be read either in seclusion or as part of the wider report.

Technical details have been moved to the appendices to allow for ease of reading and the sections of the main report are organized as follows:

- a) The first section is this introduction detailing the background and the objectives of the Transport Observatory Project (TOP). This section also explains the problem statement and laying out the environment and facts that make the TOP a necessary tool for measuring and monitoring the Northern Corridor performance.
- b) The next section is an update on the status of the components of the observatory project, how the different components interface, who the main actors are and how they relate to each other in collecting, analyzing and disseminating the data from the TOP project.
- c) The third section details results and findings from the analysis of data collected through the various components of the TOP so far, including detailing indicators for monitoring the corridor performance that have been generated from the collected data.
- d) The fourth section details the work plans for the various TOP components going forward into 2013 and to be implemented by the main actors.
- e) The annexes detail the history of the TOP project from inception in 2003, the list of main participants and data donors currently, indicators developed for monitoring the corridor performance including which ones have data and which ones do not currently, the terms of references for the development of the TOP web-based system and the road surveys and the agreed work plans for the various components going forward.

## 1.2 Background

Growth of international and intra-regional trade is recognized as one of the key factors towards achieving greater economic growth and regional integration for the Northern Corridor Member States.

However, this growth in the TTCA-NC member states is hampered by high costs of doing business, high costs of transportation, numerous non-tariff barriers, delays and associated administrative costs on the transit logistics chain, the costs of which are all passed down eventually to the end consumer of the goods of the member states. This has a direct negative impact on the quality of lives for citizens of the TTCA-NC member states.

Given that the region is a net importer, this is also a factor that makes the region very uncompetitive compared to other world markets and economies. Up to 37 % of total logistics costs in land-linked countries of the TTCA-NC Member States are attributable to Road transport costs for importing goods. Delays on the transport corridors have been estimated to cause a loss of an estimated \$800 per day of delay per truck, hence increasing the cost of doing business in the region. Identification of the causes of these delays (at ports, borders, weighbridges and the transit route) will provide informed and evidence-based opportunities for the development of and putting policies in place towards resolving these causes of delays.

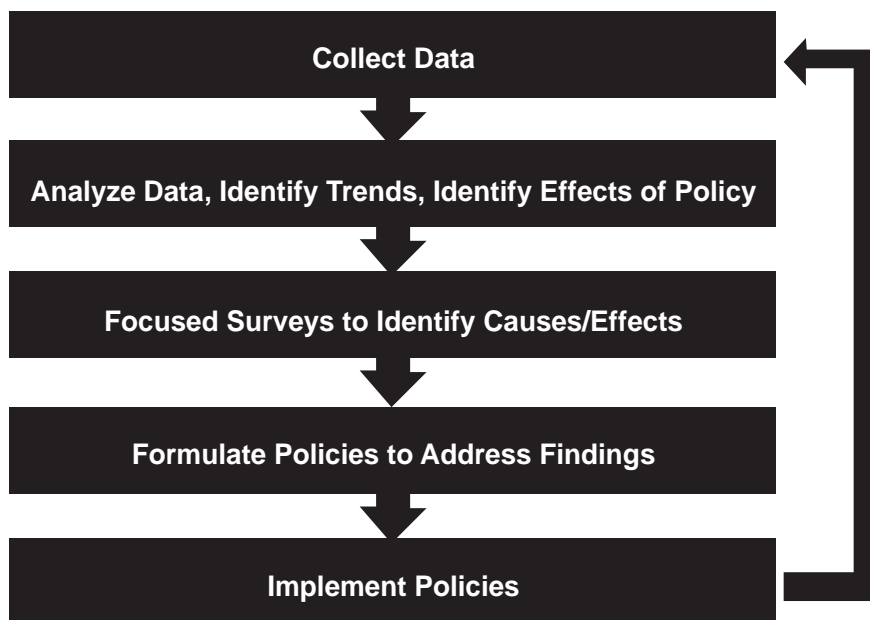
The TOP is therefore developed as a high impact and key tool in the improvement of the performance of the Northern Corridor, leading to reduced costs of transportation and of doing business with the direct impact of reduction in the costs of goods in the land-linked countries.

Apart from many other responsibilities, the Northern Corridor Transit Transport Coordination Authority (TTCA-NC) is mandated to contribute to sustainable social and economic development of its member states through an integrated transport system that promotes national, regional and international trade.

In this regard, the TTCA-NC Secretariat continuously seeks to provide sound advice to the Authority and its Board as well other regional and national policy-making bodies on policy development and implementation initiatives that facilitate cost-effective transport operations along the Northern Corridor.

In order to enhance this role and function and to enhance its service to public and private sector stakeholders, the TTCA-NC is establishing a corridor performance monitoring system (the Transport Observatory Project (TOP)) by defining and tracking a set of indicators measuring the performance of the Northern Corridor. The TOP will assist in the:

- a) Identification of areas for improvement in relation to targets (or benchmarks).
- b) Provision of a set of tools for diagnosing problems/bottlenecks on the corridor.
- c) Measuring the evolution of the corridor leading to the measurement of the effectiveness of programs designed to address problems/bottlenecks identified during the diagnostic phase.
- d) Provision of key reliable information to policy makers in the region to facilitate formulation of policies that lead to better transit and trade facilitation and cooperation between TTCA-NC member states.



**FIGURE 1: THE TOP AS A POLICY-MAKING TOOL**

The major direct beneficiaries of the TOP are the TTCA-NC, governments and policy makers as well as the trade and transport fraternity in general.



## 2. CURRENT STATUS OF IMPLEMENTATION

The rationale of the observatory project is outlined in detail in the Annexes. With continued support from TradeMark East Africa (TMEA), the TOP is currently being implemented by the TTCA-NC in collaboration with the KTA through the following activities:

- The implementation of a web-based system at the TTCA-NC to host and disseminate corridor performance indicators online.
- The undertaking of data collection activities and enforcement of data exchange agreements with participating stakeholders.
- The cleaning up of collected data and creation of data sets that are useful to develop the agreed indicators necessary for corridor performance.
- The undertaking of periodic road surveys to validate the findings of the computerized data and to identify the causes of choke points evident in the computerized data.
- With the assistance of the KTA, to undertake data collection using the Global Positioning System (GPS) devices to collect more accurate data over a wider sample of transporters.
- The preparation of quarterly reports to be discussed at least once a year in a stakeholder's forum as the first step towards harmonizing the TOP tool in to the policy discussions.

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- Provision of key reliable information to policy makers in the region to facilitate formulation of policies that lead to better transit and trade facilitation and cooperation between TTCA-NC member states.

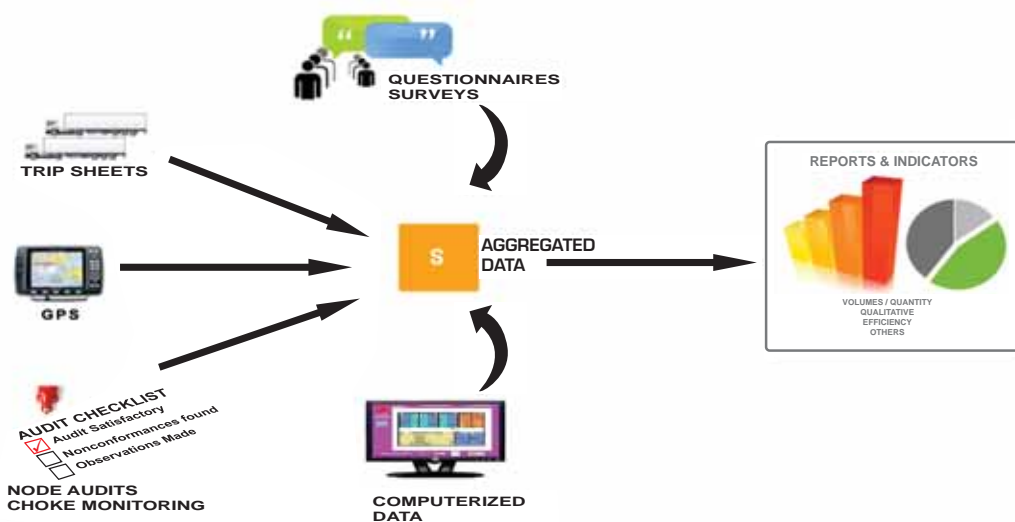


FIGURE 2: THE TOP HIGH LEVEL OPERATION

The following sections briefly outline the rationale and the current status of each of these components.

## 2.1 The TOP Computerized Data Component

Typically, the movements of goods in transit are as in the following diagram. Transit goods move along designated and gazetted routes on the transit corridor and pass through specific points that include the port gates, weighbridges, border points, ICDs and CFSs and at some point the goods are cleared at final destination. The operators of these points on the logistics chain capture data on the goods in various formats ranging from manual registers to capturing the data in their automated systems.

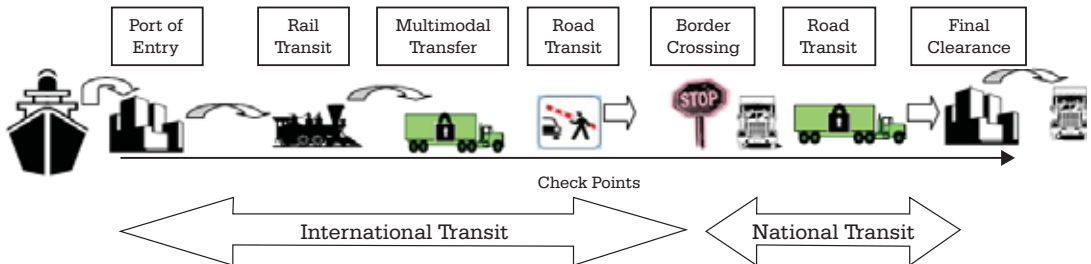


FIGURE 3: TYPICAL MOVEMENT OF TRANSIT GOODS ON THE NORTHERN CORRIDOR.

The key premise of the data collection from computerized systems of the stakeholders is that this data can be linked using unique fields to form a seamless view of the transit goods as they move from the point of entry to the point of destination. These unique fields include manifest numbers at the port, gate pass and release orders from the port, customs declaration numbers of the transit documents, container numbers, bill of lading numbers etc.

The premise is also that if the data collected from these stakeholder systems has time stamps and if we collect 100% of all data on transit goods, combining the data sets will result in some loss of data (due to incorrect entries for example) but the data set will be sufficiently large enough to provide a snapshot of where the bottlenecks are recurring on the corridor



FIGURE 4: COMPUTERIZED DATA COLLECTION YIELDING INDICATORS AND REPORTS

Once the bottlenecks have been identified, focused questionnaire surveys or choke monitoring audits at those points will help to identify the causes of the problems and provide information to push for policy changes by decision makers. Hence the observatory becomes a policy-informing tool as was intended.

So far, the current phase of data collection has yielded the following data sets and indicators. More needs to be collected and this is the focus of the current ongoing observatory activities. Refer to attached Annex 5: Data collected and Indicators Generated for details.

Two field Missions to Kenya, Uganda, Rwanda and Burundi were conducted in 2011-2012 and stakeholders met included Ministries of Transport, Revenue Authorities, Ports Authorities, Roads Authorities, the Kenya Pipeline Corporation, the railways represented by the Rift Valley Railways, numerous transporters & clearing and forwarding agents and others. The full list is attached in the annexes.

The first field mission targeting historical data for period 2009 – 2010 successfully collected data from only three stakeholders namely the Kenya Port Authority, the Kenya Revenue Authority and the Rwanda Revenue Authority. This first set of data collected could only generate 6 out of the defined 25 indicators required for the TOP.

The second field mission targeted data for 2011-2012 but also 2009 – 2010 data from stakeholders that had not provided the same during the first mission. The data successfully collected and currently available online was from 8 stakeholders' namely the KPA and the KRA from Kenya, the UNRA from Uganda, the RRA and MAGERWA from Rwanda and the OBR, the Roads Authority and the Transporters' Association from Burundi. This second set of data was able to generate 12 indicators out the 25 indicators required for the TOP.

The analysis of this data has yielded some interesting information on the trends and problems of the Northern Corridor already and this analysis is outline and discussed in Chapter 3 of this document.

The key challenges in data collection remain as:

1. Key stakeholders not providing the data requested even after agreeing to do so.
2. The data collected have gaps and errors that have so far led to a loss of about 30% of the information that was given. For example, key data like container numbers remain optional/not captured in Revenue Authorities' systems leading to such gaps when attempting to link the data sets across multiple stakeholder data sets.
3. Some stakeholders are not advanced in the use of the ICTs in managing their data and thus are relying on manual data capture which is extremely difficult and expensive to convert into the digital data format required for the TOP.
4. There are capacity issues within the stakeholders who are using ICTs for data capture that need to be addressed. For example, remote points in the stakeholder networks might remit their data to the central database of their organization way after the event due to network failures, hence distorting the time-stamps required for the TOP.

The web-based system has been developed and is currently hosted at the TTCA-NC with all the data collected so far generating online indicators. The observatory is currently accessible at <http://top.ttcanc.org>.

The online web-based system has a section on relevant news pertaining to the Northern Corridor, an events calendar and documents relating to events and reports on the Northern Corridor performance as well as a section of dashboards on indicators generated based off the data collected so far.

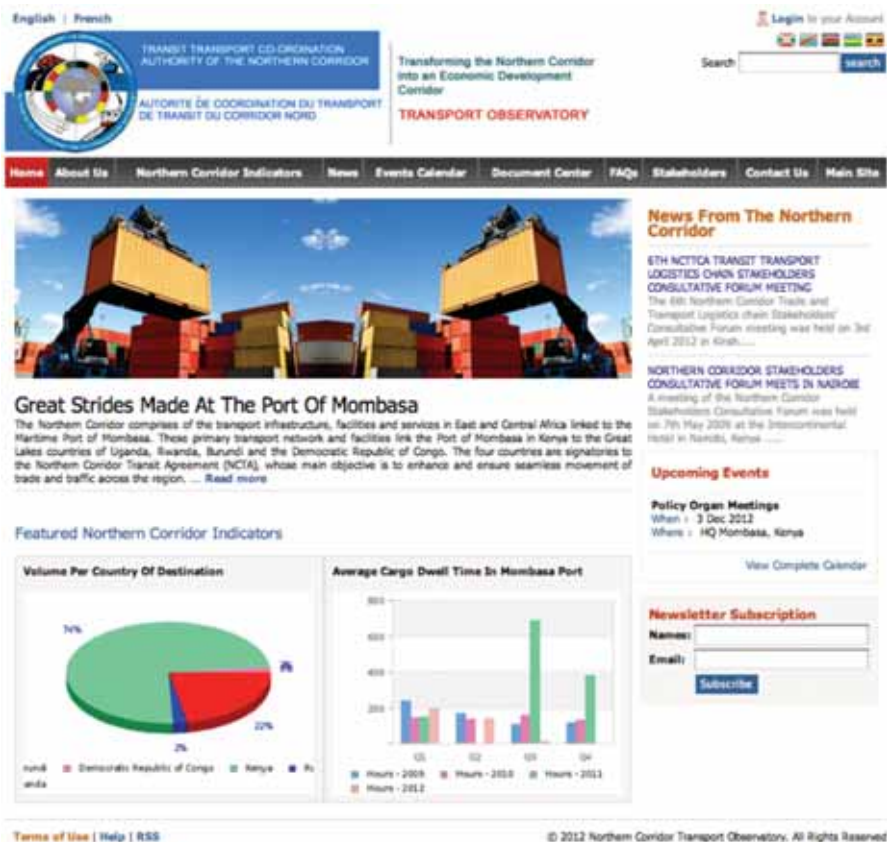


FIGURE 5: THE NORTHERN CORRIDOR TRANSPORT OBSERVATORY

## 2.2 The TOP Road Surveys

The TOP road surveys are to be undertaken once every quarter of the year. The first TOP road survey was conducted in the month of August and September 2012 and this was through the questionnaire attached in the annexes being administered to 25 transport companies.

The work was outsourced to a consultant under contract to the TTCA-NC to do the field supervision and manage the handing out and collection of the questionnaires. The intention of the survey was to establish the delay times by location and cause across all the border posts.

The KTA provided a members list from which transporters were to be selected, but a few non-KTA members also sampled. Only companies operating transit trucks were covered and a convenient random sampling method was adopted where the questionnaire was administered to available and willing firms.

Letters of introduction were issued by TTCA-NC and the KTA to the consultant and a reconnaissance visit was done to get the transporters reaction to the questionnaire. The transport managers in the companies agreeable to participate did a driver identification exercise and training sessions to the drivers and the transport managers were undertaken. The selection of the drivers was also based on their level of literacy, professionalism and the routes.

The questionnaires were then issued to the transport managers of the various companies and the completed questionnaire forms returned by the drivers were collected from the same focal point.

The data captured included cargo information as well as drivers/vehicles details, departure and arrival dates from transport company premises, drivers ages, vehicle type, number of axles, cargo origin and destination, the cargo form and weights as well dates and times of various stoppages of the truck including the reason and if there was any cost associated with the stops.

The routes covered in the road survey were the Mombasa – Kampala route section (which was well covered by the questionnaires), the Mombasa-Bujumbura route section (which had low activity), the Mombasa-Kigali route section (which had moderate activity) and the Mombasa –DRC route section (which also had moderate activity).

The road survey was successfully completed, though the target number of questionnaires to be handed out and to be collected filled in was not achieved 100%. A number of questionnaires still remained with the transporters by the time the project contract period for the consultant had elapsed.

The target was to issue 500 questionnaires out to 50 transport companies, with the error rate expected to be that half the questionnaires and half the transporters identified would be willing to participate.

In total, 25 transport companies participated in the road survey and a total of 347 questionnaires were distributed with only 141 questionnaires returned well filled. About 28 questionnaires returned were not well filled.

The key challenges were:

- a) All the route sections on the Northern Corridor were not covered.
- b) The respondents on routes with low activity over the period were few in number due to seasonal and trade reasons; most of the transporters during the period of the road survey were not transporting cargo from Mombasa any further up than Kampala as part of their own operational strategies.
- c) The number of round trips per truck was not captured by the currently designed questionnaire.
- d) There was a lot of unwillingness to participate due to many reasons, the key one being that the transporters could not see the value addition to their current operations and looked at it as an extra task.
- e) There was a lot of suspicion from the drivers with regards to the questionnaires, also a lot of forgetfulness and failures to record short stoppages. Literacy on the part of the drivers was also a key challenge.

From the data collected, the road survey activity was able to generate 11 out of 18 indicators and the data analysis of the same is outlined in detail in Chapter 3 of this report.



**FIGURE 6: THE ROAD SUPERVISOR TOGETHER WITH THE TRANSPORTER'S STAFF HANDS A QUESTIONNAIRE TO A DRIVER.**

## 2.3 The TOP GPS Data Collection

To boost the quality of data collected through road surveys, it was proposed that the use of the Global Positioning System (GPS) could provide more accurate data to supplement the road surveys. Further, the intention was to come up with a data collection scheme that would be operational all-year round as opposed to road surveys that are done once every quarter.

The Kenya Transporters association (KTA), as collaboration on the TOP project and with the support of the TMEA, has set-up a web-based GPS tracking system that can be used to monitor transit trucks in an offline manner. The GPS data monitors, among other things, the number of round trips in a given period, the number of stops as well as the lengths of these stops.

The KTA GPS is designed to generate various reports about trips based on data samples collected which are then used to monitor the performance of the various routes (which are mapped on digital maps on the web based system) while noting where the choke and cost points on the transit route are. The GPS data is then into the TTCA-NC TOP web-based platform and aggregated with the other types of TOP data for analysis.

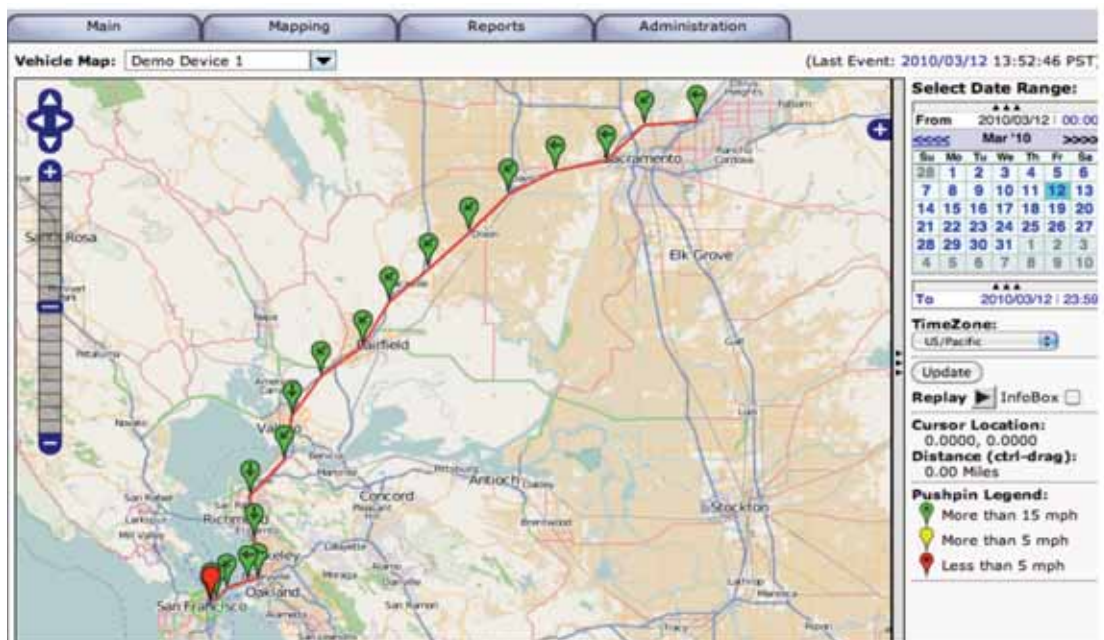


FIGURE 7: THE KTA GPS.

The GPS devices used, 100 so far procured with TMEA's support, are of the data logger type; which means that they do not transmit the GPS location of the trucks in a real-time fashion but rather save data on its onboard memory for use later. No human intervention is required once the unit has been placed within the truck and the driver needs only to take care that the unit is not lost. The GPS data collection is then combined with the road survey questionnaire so that the data can be validated and the data is retrieved on the truck's return.

The KTA will manage the 100 insured GPS kits that will be issued out to a set of participating transporters; preferably those with trucks that don't have a GPS set up. The identification of the transporters will be done in a manner to ensure there are adequate participating transporters moving cargo to all TTCA-NC countries at an equal proportion. Also, the transporters will be selected both from those with small and large fleets proportionately.



FIGURE 8: THE TRACKING KEY PRO DATA LOGGER BEING USED FOR THE PROJECT



Upon receiving full authorization by KTA and the owner of the transport company, the transporter's assigned staff will issue a fully charged kit to a driver on or the previous day of departure. The driver will be briefed on the use of the kit and will also be trained on how to complete the simple GPS based questionnaire for the survey.

On the expected date of return the KTA staff managing the inventory will organize with the transport company on how to retrieve the unit for data extraction, cleaning, recharging and for any maintenance work. A set minimum inventory level at KTA will be maintained to ensure that there is continuity in the issuing of the kits. This will ensure that the GPS data collection works all year round.

During the test phase in the second and third quarter of 2012, four GPS units were used and some data was collected from trucks carrying goods to South Sudan, Nairobi, and Meru. Other data collected for testing was on local movement within Mombasa.

The main challenges identified during the testing period were that:

- a) Transport companies already having GPS devices are reluctant to have additional GPS devices on their trucks for fear of interference of the signals between the two. This is an unfounded fear as GPS units are rarely known to interfere with each other unless, in rare cases, both units are real-time monitors transmitting the location at the same time. In this, the KTA units being data loggers and not transmitters, this is not a possible occurrence.
- b) Lack of proper awareness of the GPS data collection objectives among transporters. Adequate sensitization, which has already commenced, as a way forward will be able to address this issue.
- c) Some companies without GPS units are still reluctant to participate as they feel the real value of such a scheme would be when the GPS units have real-time transmission capabilities. Options in this regard are being explored. The GPS system gathers data on date and time for each stop of the journey, geo-point locations for each stop of the journey, durations of driving and stoppage times, distance covered and driving speed.

A questionnaire (form) accompanies the GPS kit on the field. The primary information collected on the forms is location and stop reason to be able to explain why the driver stopped at specific points during a journey. The GPS data therefore corroborates the information gathered by the road survey questionnaire.

**Indicators that can be generated from the data collected include:**

- Average annual distance per truck in km per year.
- Number of check points, NCP (Weighbridge, Police, Customs, Road Toll) per country per route. – With the assistance of the coupled questionnaire.
- Transit Time per route per mode of transport (by country).
- Transit time origin to destination by country.
- Border Post Crossing Time.
- Transit time within the ICD/Inland Port.
- Weighbridge crossing time.

Table 1: The table below shows a sample of data retrieved from GPS kit during the testing period

	Name of Place	Location	Date	Arrival	Departure	Stop Duration	Distance after Previous Stop	Maximum after Previous Stop
A	Voi, KE	3.406432s 38.567705 E	Monday, October 15, 2012		16:53:33			
B	Mtito-Adei, KE	2.692443 S 38.165343 E	Tuesday, October 16, 2012	2:45:11	05:46:55	3h:01m:44s	104.4 km	84.0 km/h
C	Nakuru, KE	0.477207 S 36.294818 E	Wednesday, October 17, 2012	6:12:12	06:27:08	14m:56s	353.5 km	84.0 km/h
D	Rongo, KE	0.758285 S 34.602792 E	Thursday, October 18, 2012	2:36:24	06:03:00	3h:21m:31s	274.2 km	92.0 km/h
E	Isibania, KE	1.250100 S 34.475588 E	Friday, October 19, 2012	4:01:13	06:07:53	2h:06m:38s	65.5 km	78.0 km/h
F	Kemambo, TZ	1.428654 S 34.187733 E	Friday, October 19, 2012	22:06:16			149.8 km	97.0 km/h



FIGURE 9: THE TRACKING MAP SHOWING THE ROUTE USED BY THE SAMPLED TRUCK

Performing route analysis and generating dynamic graphs based on the data collected can provide comprehensive information to monitor route performance and inform policy measures.

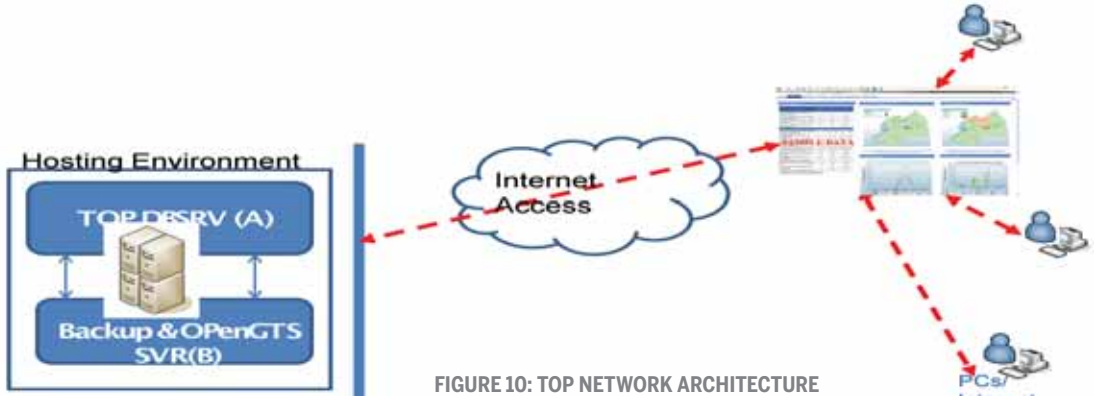
The first phase of GPS data collection is scheduled for December-January 2013 and the framework for its operation has been agreed between the KTA and the TTCA-NC



## 2.4 Infrastructure

TTCA-NC with the support of TMEA acquired a set of ICT equipment that included servers, switches and PIX firewall with support from TMEA.

The setup was installed at TTCA-NC premises while ensuring that the equipment and data collected from stakeholders is stored securely and but still accessed remotely based on authentication processes. Two servers were installed, the first hosting the web-based observatory system for computerized data while the other was for the KTA-operated GPS.



## 2.4 Infrastructure

The current bandwidth at the TTCA-NC was upgraded from 1Mbps to 2Mbps duplex and migration from wireless to fiber optics is ongoing. This was to ensure that the observatory database could manage incoming traffic from its users. For redundancy purposes, dual Internet links (the new fiber optics and the old wireless setup) will be maintained. The maintenance, repair and warranty services for all hardware and software have been established and a 24/7 onsite standard HP care pack service has been procured for the servers to ensure adequate support for the server operations is installed.



FIGURE 11: TTCA-NC EXECUTIVE SECRETARY MR. DONAT M. BAGULA SHOWING KTA CEO MS. JANE NJERU TOP INFRASTRUCTURE DURING HER COURTESY VISIT TO THE SECRETARIAT

### 3. RESULTS AND INDICATORS

Performance indicators are critical for the design of trade facilitation interventions, and equally to measure the impact of current and future initiatives.

Transit Transport Coordination Authority of the Northern Corridor observatory project tracks information that is useful in monitoring the indicators measuring the performances of the Northern Corridor. This monitoring process can identify areas where improvements are required, provide diagnosis analysis as well as measure the efficiency of programmes designed to address identified bottlenecks in the corridor performance.

#### 3.1 Overview of Indicators Identified

The performance of a corridor can be evaluated from the infrastructure perspective which considers the physical capacity of the links and nodes in the corridor and the utilization of these components. It can also be evaluated by the quality of the services provided for the goods moving on the corridor. The last perspective focuses on the movement of cargos in the corridor which can be measured in terms of cost and time. Based on these perspectives, a total of 25 Indicators were selected for the Northern Corridor and data obtained from key stakeholders as well as surveys. These indicators are categorized based on costs, delays and reliability and the calculation methodology developed.

A micro-level disaggregated data produced the Corridor Performance Indicators on Volume and Capacity, Transit Time and Delays, Rates and Costs, efficiency and productivity as shown below.

Volume and capacity	Rates (or Price) and Costs	Efficiency and productivity	Transit time and Delays
<ul style="list-style-type: none"> <li>Total cargo throughput of the port of Mombasa</li> <li>Volume per country of destination</li> <li>Volume of containerized and general cargo</li> <li>Licensed fleet of transit trucks per country</li> <li>Average annual distance per truck</li> <li>Transport capacity by rail</li> </ul>	<ul style="list-style-type: none"> <li>Transport costs per route and per mode</li> <li>Rail Freight</li> <li>Road Freight</li> <li>Port Transit Charges</li> <li>Return of empty containers</li> </ul>	<ul style="list-style-type: none"> <li>Number of check points</li> <li>Rate Of Fraud Or Declared Damage For Goods In Transit</li> <li>Quality of the transport infrastructure</li> <li>Rate of containerization of transit traffic</li> <li>Number of accidents per route</li> </ul>	<ul style="list-style-type: none"> <li>Transit time origin to destination by country</li> <li>Average cargo dwell time in Mombasa port</li> <li>Time for Customs Clearance in Mombasa Long Room</li> <li>Transit time within the port (Import Pick Up Order Process)</li> <li>Border Post Crossing Time</li> <li>Time for Customs procedures at destination</li> <li>Transit time within the ICD/Inland Port</li> <li>Weighbridge crossing time</li> <li>Transit Time per route per mode of transport</li> </ul>

### 3.2 Overview of Data Collection Methodology

Data used in the observatory is either from computerized or non-computerized sources. Computerized sources include electronic data, mainly, from revenue authorities, ports authorities among others while Non-computerized data include data from Road Surveys and specialized node audits like Border Audits. Computerized data was provided by various stakeholders who completed a dedicated survey (road delays).

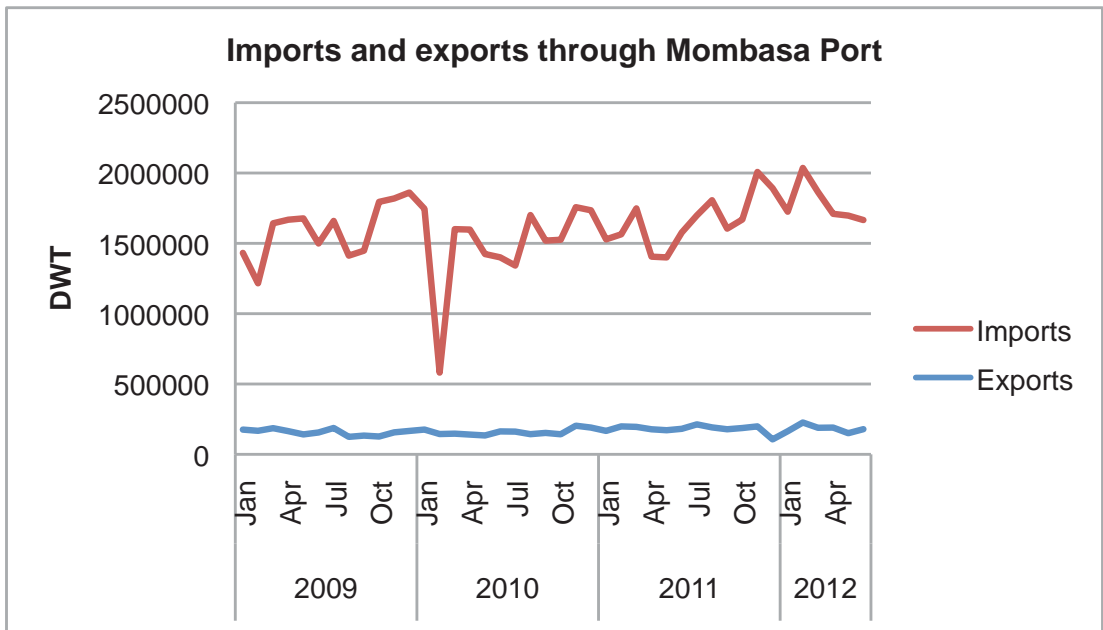
For computerized (electronic data) raw data is collected then cleaned with the purpose of developing the various indicators. The surveys use classical approaches like use of questionnaires and interviews.

### 3.3 Volume and capacity indicators

Volume and capacity indicators can be used to evaluate the corridor performance through an infrastructure perspective. Tracking these can inform requirements for additional capacity at the ports, rails and roads.

#### 3.3.1 Imports and exports through Mombasa Port

This graph shows the total volume of imports and exports for the period 2009 – June 2012.

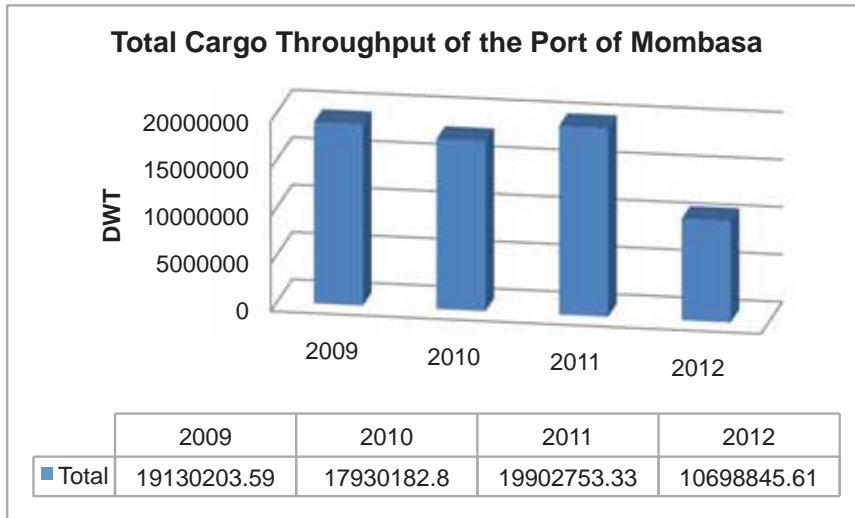


SOURCE: ELECTRONIC, ELECTRONIC DATA SOURCE, KENYA PORTS AUTHORITY (KPA), 2009 – JUNE 2012.

Imports are increasing over time while exports are fairly constant. Need to address trade imbalance.

### 3.3.2 Total Cargo Throughput of the Port of Mombasa

The graph indicates total volume through the Port of Mombasa.

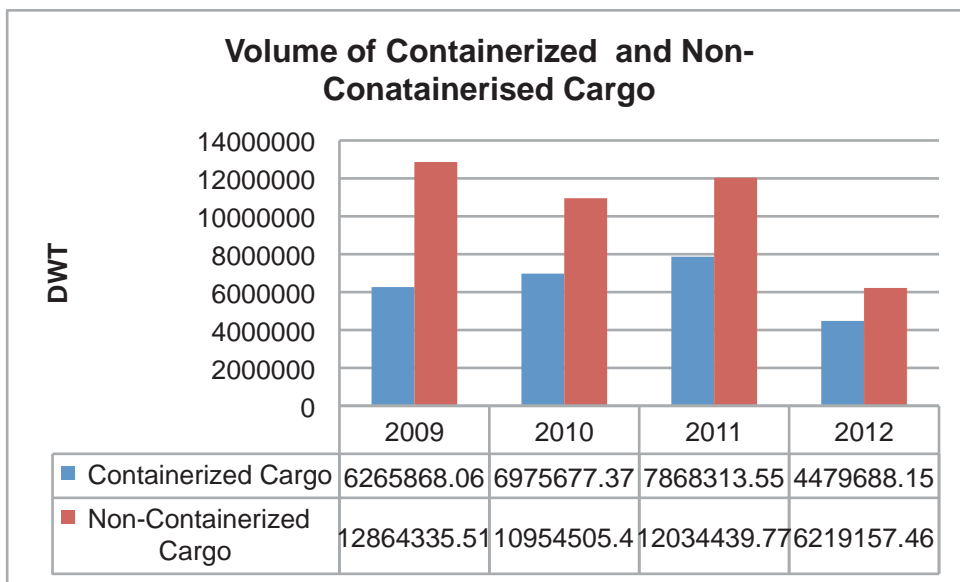


SOURCE: ELECTRONIC DATA SOURCE, KENYA PORTS AUTHORITY (KPA), 2009 – JUNE 2012.

From the year 2010 to 2011, the throughput increased marginally.

### 3.3.3 Volume of Containerized and Non- containerized Cargo.

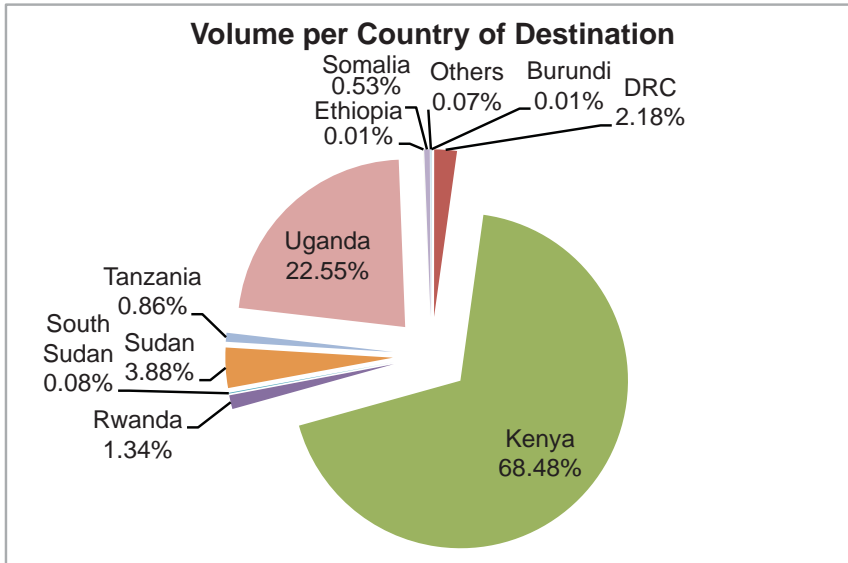
This indicator compares containerized cargo and Non-Containerised cargo through the port of Mombasa.



SOURCE: ELECTRONIC DATA SOURCE, KENYA PORTS AUTHORITY (KPA), 2009 – JUNE 2012.

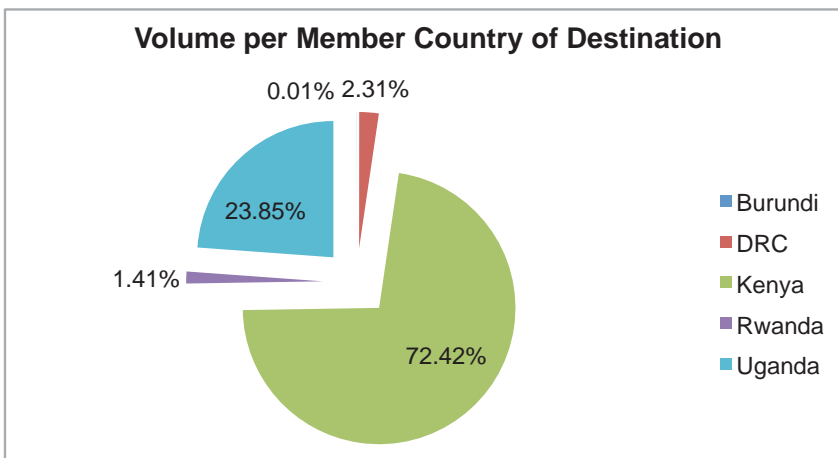
Containerized cargo has been increasing overtime. However, Non-containerized cargo is higher than Containerised cargo in the whole period.

### 3.3.4 Volume per Country of Destination.



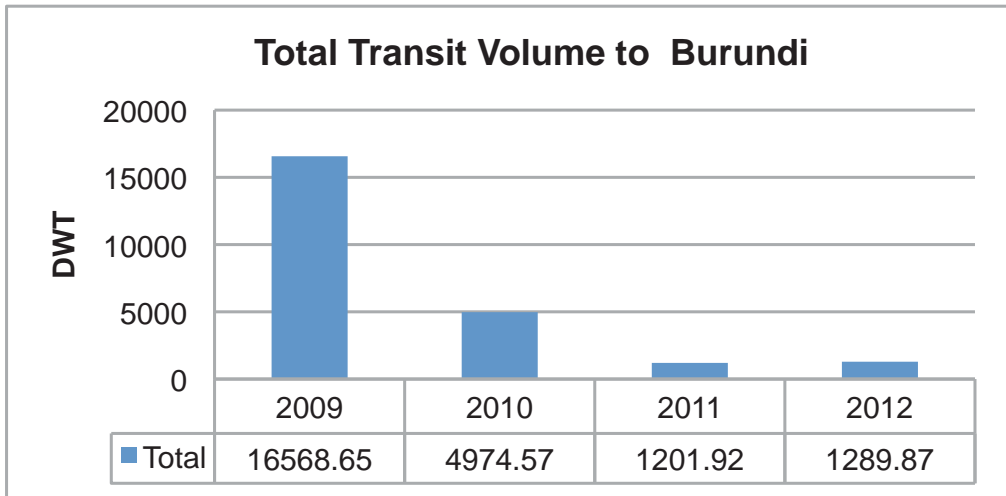
SOURCE: ELECTRONIC DATA, KENYA PORTS AUTHORITY (KPA), JANUARY – JUNE 2012.

Kenya accounts for 68.48% of the imports through the port of Mombasa. Uganda, DRC, Rwanda and Burundi account for 22.5 %, 2.18%, 1.34 % and 0.01% respectively.



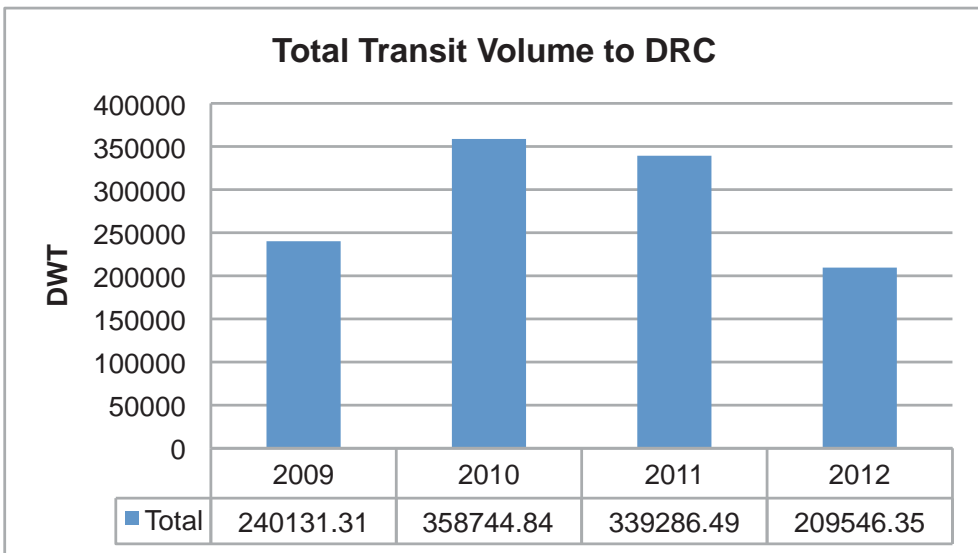
SOURCE: ELECTRONIC DATA, KENYA PORTS AUTHORITY (KPA), JANUARY – JUNE 2012.

In the year 2012, about 72.42% of the total cargo to member countries through Mombasa port is destined to Kenya. Uganda accounts for 23.85 % while DR of Congo, Rwanda and Burundi account for 2.31%, 1.41% and 0.01% respectively.



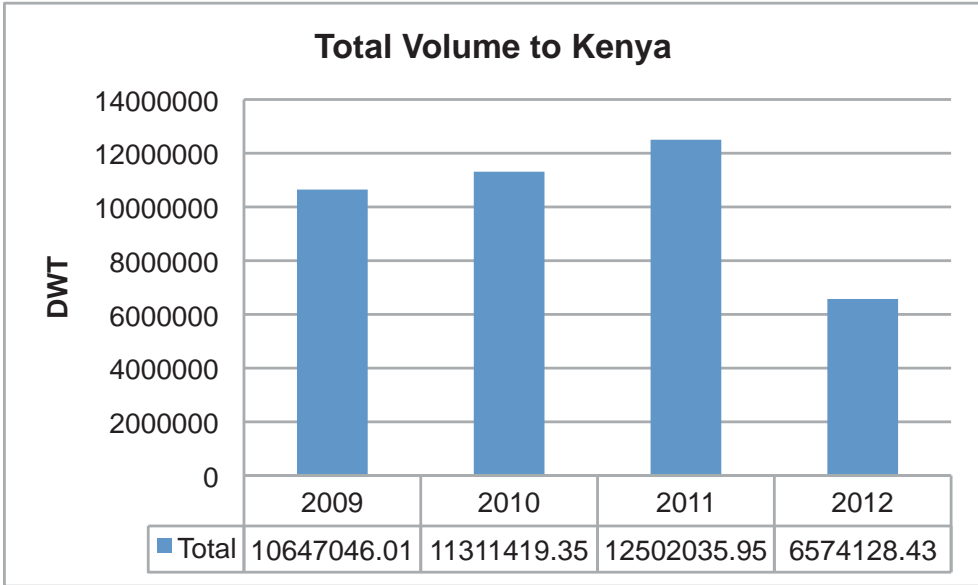
SOURCE: ELECTRONIC DATA, KENYA PORTS AUTHORITY (KPA), 200-JUNE, 2012.

Transit cargo to Burundi has been reducing from 2009 to 2011. The first six months of 2012 has registered a higher volume compared to the total of previous year



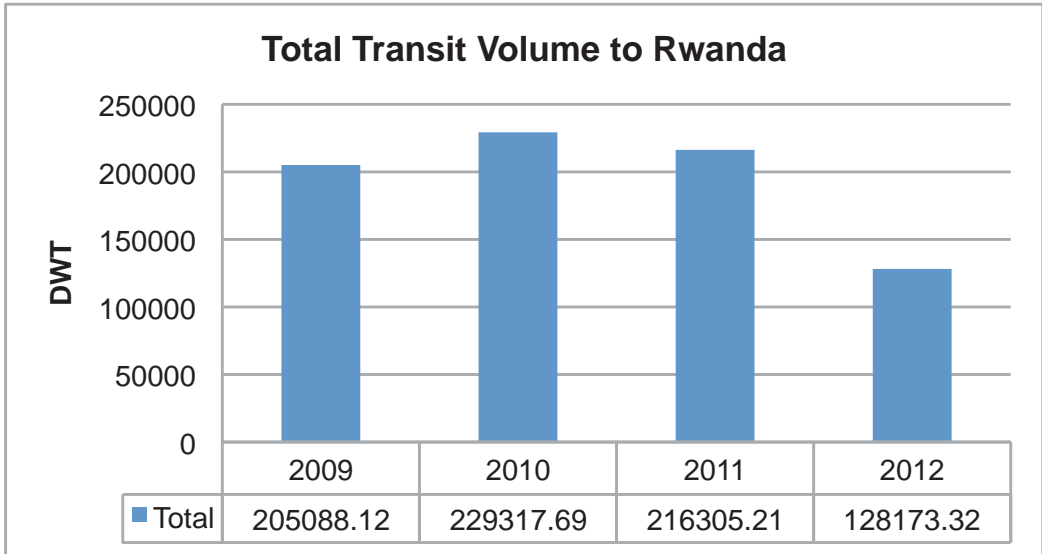
SOURCE: ELECTRONIC DATA SOURCE, KENYA PORTS AUTHORITY (KPA), 2009 – JUNE 2012.

Total Transit cargo to DRC reduced between the year 2010 and 2011. The data on 2012 is up to June



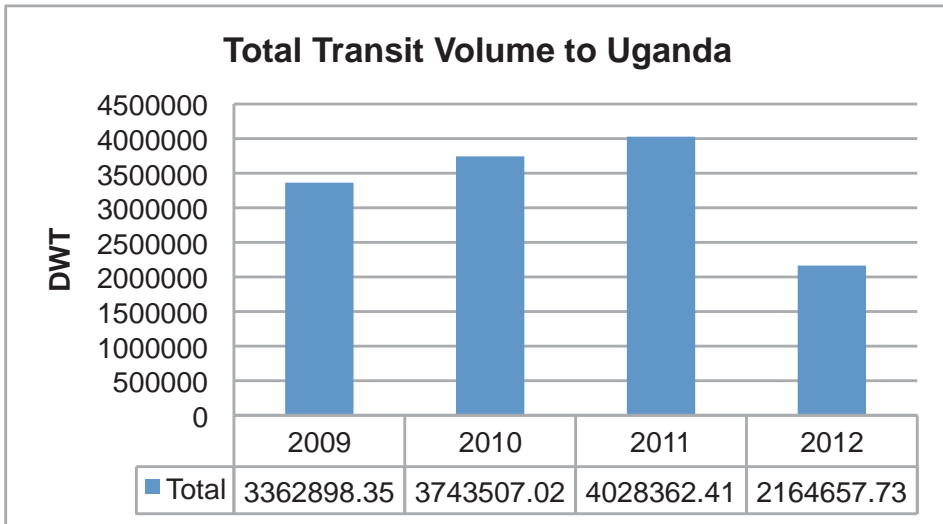
DATA SOURCE: ELECTRONIC DATA SOURCE, KENYA PORTS AUTHORITY (KPA), 2009-JUNE 2012.

Domestic cargo to Kenya has been increasing for the last three years.



DATA SOURCE: ELECTRONIC DATA SOURCE, KENYA PORTS AUTHORITY (KPA), 2009 – JUNE 2012.

Transit cargo to Rwanda reduced marginally in the year 2011.



SOURCE: ELECTRONIC DATA SOURCE, KENYA PORTS AUTHORITY (KPA), 2009-JUNE, 2012

Transit cargo to Uganda has been increasing steadily over the years

### 3.3.5 Rate of Containerization of Transit Cargo

This indicator compares the transit containerized cargo weight to the total transit cargo.

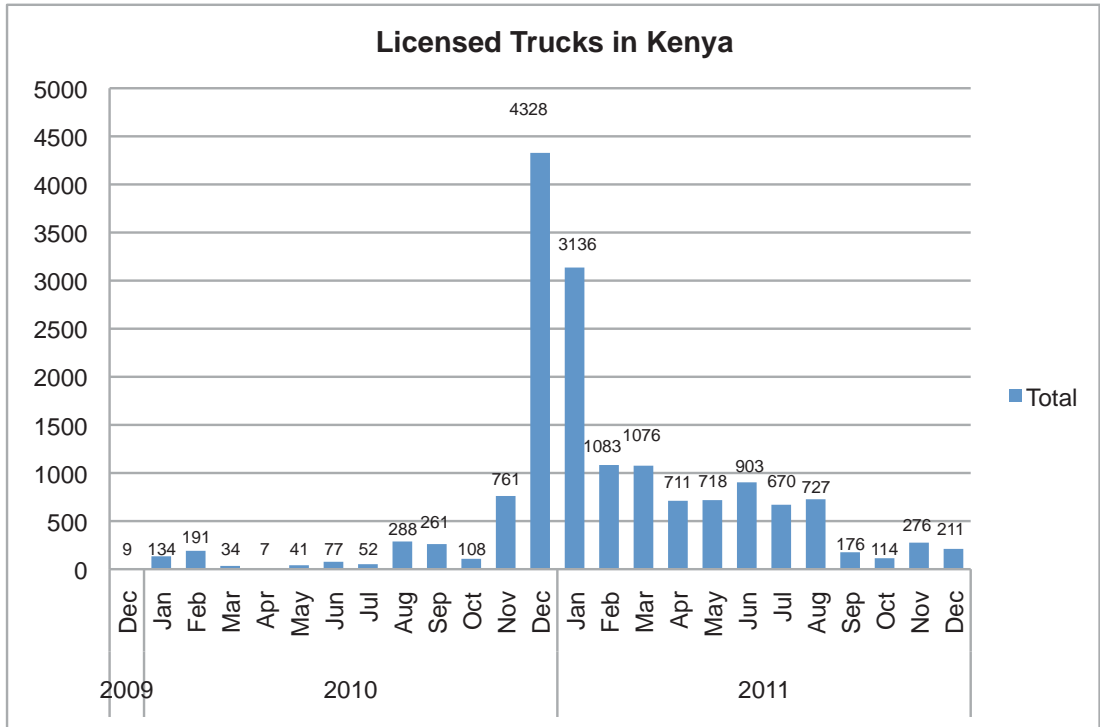
YEAR	CONTAINERIZED WEIGHT (T)	TOTAL WEIGHT (T)	RATE OF CONTAINERIZATION
2009	3150040	6597505.54	47.75
2010	3491232	4719669.1	73.97
2011	4028401	5234237.88	76.96
2012	2218226	3025791.46	73.31

SOURCE: ELECTRONIC DATA SOURCE, KENYA PORTS AUTHORITY (KPA), 2009-JUNE, 2012

The rate has been increasing from 2009 to 2011.



### 3.3.6 Licensed Fleet of Transit Trucks per Country



SOURCE: ELECTRONIC DATA SOURCE, KENYA REVENUE AUTHORITY (KRA), DECEMBER 2009 - 2011

December and January experience high number of truck registration. This is because registration validity is one year from January to December. The number of registered trucks in Kenya increased from a total of 6,282 in the year 2010 to 9801 in the year 2011.

Data from other member countries (Burundi, DR Congo, Rwanda and Uganda) was not available.

### 3.3.7 Transport Capacity by Rail (locomotives And Wagons)

This indicator so far only provides information relating to the infrastructure in terms of number of passenger locomotives, freight wagons and passenger coaches. The intention is to develop in the future, more indicators suitable for the observatory from the rail tracker system which is the railway operation cargo and rolling stock tracking system.

Infrastructure	Total	Uganda	Kenya
Number of Freight and Passenger Locomotives	78	43	35
Number of Freight wagons	2250	1447	803
Number of Passenger Coaches	92	6	86

### 3.4 Rates and Costs Indicators.

These indicators track the cost of doing business along the northern corridor. Performance is measured in terms of cost for transport units moving through the corridor. These may be broken down into cost for specific links and nodes. The cost is disaggregated for the transport services on the links and the processing services at the nodes.

#### 3.4.1 Transport costs per route and per mode

The figure below summarizes the average transport cost for moving a container (20' or 40' not exceeding 27 tonnes ) from Mombasa to main destinations along the Northern Corridor.

Route	Distance (km)	Average Road Transport Tariff (US\$) Year 2010 <sup>(a)</sup>	Average Road Transport Tariff (US\$), Year2012 <sup>(b)</sup>	Variance
Mombasa –Nairobi	430	1,300	1,118	(182)
Mombasa – Kampala	1,170	3,400	3,070	(330)
Mombasa-Kigali	1700	6,500	4,650	(1850)
Mombasa-Bujumbura	2000	8,000	7,000	(1000)
Mombasa –Goma	1880	9,500	6,500	(3000)
Mombasa-Juba	1,750	9,800	6,250	(3300)

(A): ANALYTICAL COMPARATIVE TRANSPORT COST STUDY ALONG THE NORTHERN CORRIDOR REGION, 2010.

(B): INDICATIVE TARIFF, ROAD TRANSPORTER SURVEYS, MOMBASA, NOVEMBER 2012.

Transport costs have reduced considerably in all the 6 destinations with Juba recording the highest decrease.

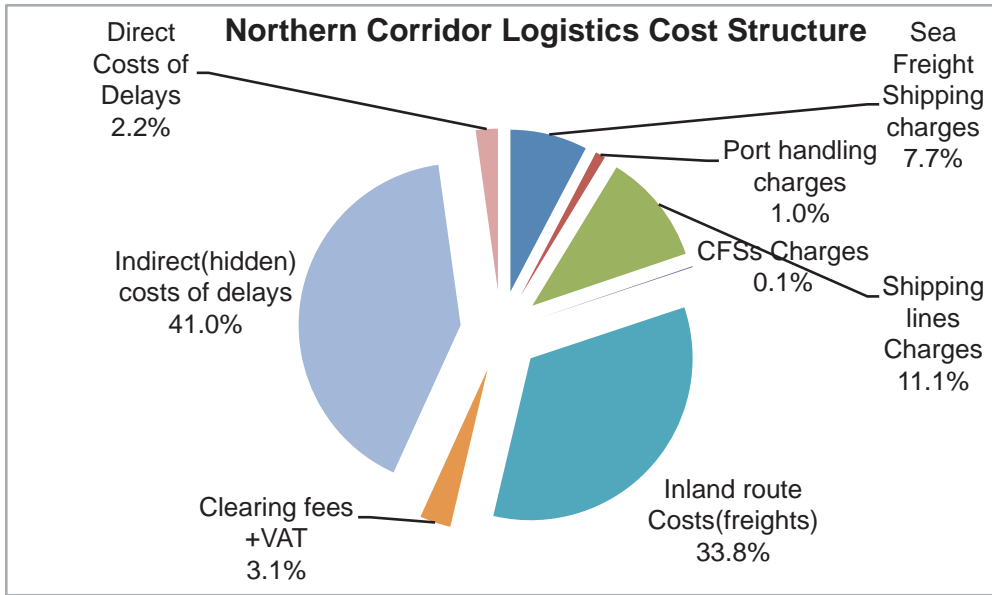
#### 3.4.2 Operating cost per tonne by mode (2010)

	Road	Rail	Pipeline
Operating Cost Per Tonne-KM(US\$)	0.112	0.068	0.042
Difference in % compared to Pipeline	260%	158%	N/A
<b>Difference in % compared to Rail</b>	<b>165%</b>	<b>N/A</b>	<b>63%</b>

SOURCE: ANALYTICAL COMPARATIVE TRANSPORT COST STUDY ALONG THE NORTHERN CORRIDOR REGION (2010).

The pipeline mode is the cheapest mode of transport, followed by rail and road respectively

### 3.4.3 Northern Corridor Logistics Cost Structure



SOURCE: ANALYTICAL COMPARATIVE TRANSPORT COST STUDY ALONG THE NORTHERN CORRIDOR REGION, CPCS, (2010).

Cost associated with direct and indirect delay costs accounts for an average of 43% of total logistic costs, of which hidden costs account for 41%. The hidden costs include the costs related to additional cargo dwell time and the opportunity cost of extra inventory held due to unreliability of the transport chain.

Therefore delays for the whole export or import process should be addressed, because they account for the largest proportion of the total logistic costs.

### 3.5 Efficiency and Productivity Indicators

These indicators track the number of checkpoints and the quality of the road infrastructure.

#### 3.5.1 Number of Check Points

Country	Specific location	Number of Check Points	NC Road (Km)	Type/Services
	Sections: Mombasa-Malaba			
	Mombasa (Port)	1	Mombasa - Malaba, 963 Kms	Customs, Police & Immigration
	Mariakani	1		Weighbridge
	Mlolongo	1		Weighbridge
	Mai Mahiu	1		Weighbridge
	Embakasi (ICD)	1		Customs,
	Gilgil	1		Weighbridge
	Eldoret	1		Weighbridge
	Bungoma	1		Weighbridge

1. Kenya	Amagoro	1	Kisumu - Busia Boarder, 140 Kms	Weighbridge	
	Malaba (Border Post)	1		Customs, Police & Immigration	
	Sections: Kisumu - Busia				
	Kisumu (ICD)	1		Customs, ICD & Standards Agencies	
	Luanda	1		police checkpoint	
	Maseno	1		police checkpoint	
	Yala	1		police checkpoint	
	Busia/Lwero	1		weighbridge	
	Busia (Border Post)	1		Customs, Police & Immigration	
<b>Total</b>		<b>16</b>	<b>1,103 Kms</b>		
2. Uganda	Sections: Busia- Kampala - Mbarara- Katuna				
	Busia (Border Post)	1	Busia - Kampala - Mbarara- Katuna, 659 Kms	Customs, Police, Immigration & weighbridge	
	Busitema	1		Weighbridge	
	Iganga	1		Customs & Police	
	Jinja	1		Customs & Police	
	Kampala	1		Customs Checkpoint	
	Nakawa (Icd)	1		(Customs (for local & Transhipment bound Goods)	
	Lukaya	1		weighbridge	
	Mbarara	1		Weighbridge	
	Katuna (Border Post)	1		Customs, Police & Immigration	
	Section: Mbara - Ishaka- Mpondwe				
	Kasese	1		Mbarara - Ishaka - Mpondwe 210 Kms	Mobile Weighbridge
	Mpondwe (Border Post)	1			Customs, police & Immigration
<b>Total</b>		<b>11</b>		<b>869 Kms</b>	
3. Rwanda	Sections: Gatuna-Kigali-Rubavu				
	Gatuna (Boarder Post)	1	Kigali - Gatuna 80 Kms	Customs, police, Immigration, Automated weighbridge	
	Gatsata	1		Police & Customs	
	Rubavu	1	Kigali - Rubavu – 145 Kms	Customs, Police, and Immigration	
	Akanyaru-Haut	1	Kigali- Akanyaru Haut, 156 Kms	Customs, Police, and Immigration	
	Rusizi	1	Kigali - Rusizi, 270 Kms	Customs, Police, and Immigration	
<b>Total</b>		<b>5</b>	<b>651 Kms</b>		

Section: Kanyaru-Bujumbura				
4. Burundi	Kanyaru Border Post	1	Kanyaru - Bujumbura , 115 Kms	Customs, Police, Immigration, Anti-Corruption
	Mparamirundi	1		Police
	Kayanza	1		Police
	Bandaga	1		Police
	Banga	1		Police
	Bukeye	1		Police
	Bugarama	1		Police
	Kinama	1		Police
	Kwa Muswahili (Carriere)	1		Police
	Kamenge	1		Customs, Police, Anti-Corruption
	<b>Total</b>			<b>10</b>

SOURCE: CORRIDOR ROAD SURVEY, AUGUST - OCTOBER 2012

Country	Total No of checkpoints	Distance (km)	Checkpoints /100km
Kenya	16	1103	1.5
Uganda	11	869	1.3
Rwanda	5	651	0.8
<b>Burundi</b>	<b>10</b>	<b>115</b>	<b>8.7</b>

SOURCE: CORRIDOR ROAD SURVEY, AUGUST 2012  
DATA FROM DRC IS NOT AVAILABLE AT THE MOMENT.

Most of the checkpoints are either police checks or weighbridges.

### 3.5.2 Quality of the Transport Infrastructure

This indicator tracks the physical status of the links in a corridor. Improved quality of the transport infrastructure will reduce transit time and cost of shipment hence enhancing the regions' competitiveness in trade.

Year	Month	Country	Transport mode	Route	Section	Section distance(km)	State distance(km)	State	State %
2012	July	Burundi	Road	Akanyaru Haut-Gatumba	Akanyaru Haut-kayanza	145	15	Average	10
2012	July	Burundi	Road	Akanyaru Haut-Gatumba	Kayanza-Bujumbura	94	94	Average	100
2012	July	Burundi	Road	Gisenyi -	Gisenyi I-	311	35	Average	11

				Bujumbura	Kirundo				
2012	July	Burundi	Road	Gisenyi - Bujumbura	Muyange-Kayanza	73	73	Average	100
2012	July	Burundi	Road	Akanyaru Bas-Gitega	Rugombo-Bujumbura	73	30	Average	41
2012	July	Burundi	Road	Akanyaru Bas-Gitega	Akanyaru Bas-Ngozi	114	23	Poor	20
2012	July	Burundi	Road	Akanyaru Bas-Gitega	Ngozi-Gitega	84	30	Good	36
2012	July	Burundi	Road	Akanyaru Bas-Bitega	Ngozi-Gitega	84	50	Proposed	60
2012	July	Burundi	Road	Ruhwa-Bujumbura	Ruhwa-Bujumbura	105	50	Good	48

DATA SOURCE: ODR BURUNDI, 2012

In Burundi, out of the total 1083 kms reported, 80 kms are in good condition and 247 kms are at an average condition.

Route	Length	Good	Fair	Poor	Bad
Kampala to Malaba(Uganda/Kenya Border)	224.512	153.93	40.61	0.37	6.01
Kampala-Masaka-Katuna	421.253	164.22	116.55	70.09	
Kampala-Mubende-Kasese-Mpondwe	418.399	170.04	89.55	47.32	
Kampala-Gulu-Nimule Uganda/Sudan Border	328.162	274.8	50.06		3.26
Tororo- Mbale- Soroti- Lira- Kamdini	240.74	71.04	46.74	48.52	19.15
Karuma-Pakwach-Arua-Koboko-Uganda/Sudan Border	239.936	131.85	102.13		

SOURCE: UNRA, 2011

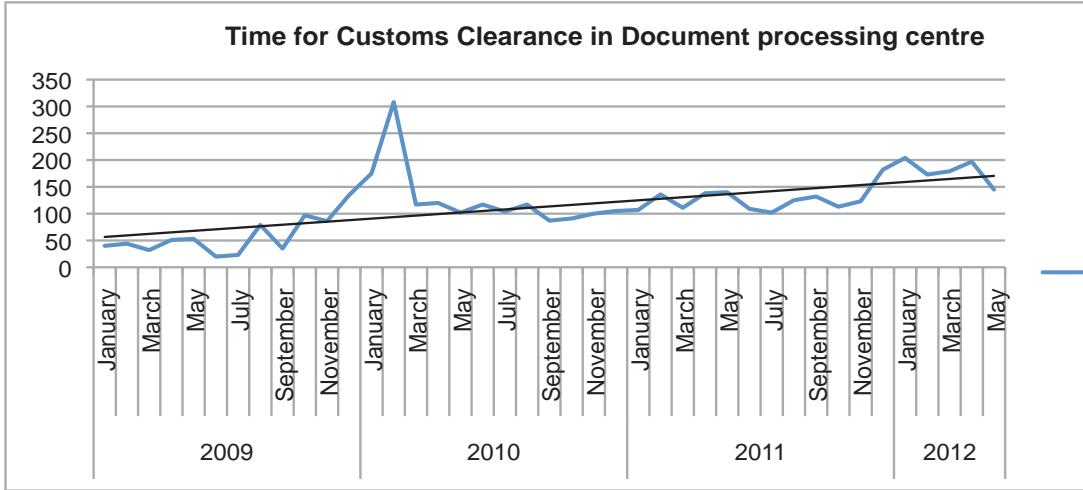
Out of all the 1873 km of Northern Corridor routes surveyed in Uganda, 51.6%, 23.8%, 8.9% and 1.5% are in good, fair, poor and bad state respectively.

### 3.6 Transit time indicators

This indicator measures the time it takes for a cargo in transit to pass through a process before getting clearance to continue the way.

### 3.6.1 Time for Customs Clearance in Document Processing Centre

The indicator measures the time taken by the Customs to assess and approve the declarations.

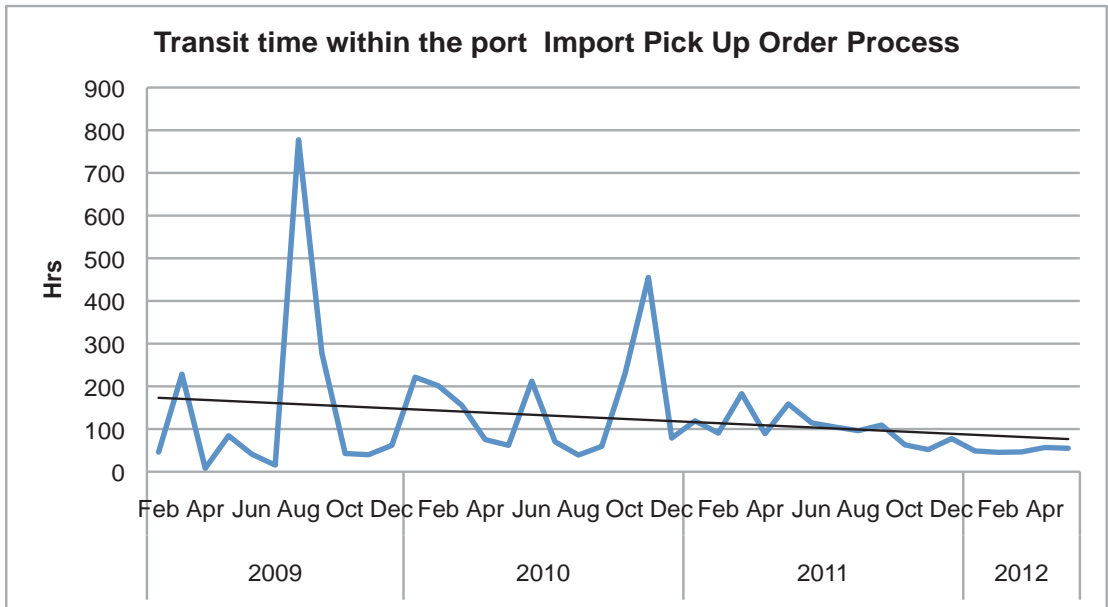


SOURCE: ELECTRONIC DATA SOURCE, KENYA REVENUE AUTHORITY (KRA), 2009-MAY, 2012

The clearance time in the document processing centre is increasing steadily

### 3.6.2 Transit time within the port Import Pick up Order Process

These indicator tracks the duration from the time when the release order is issued to the time the cargo leaves the Port.

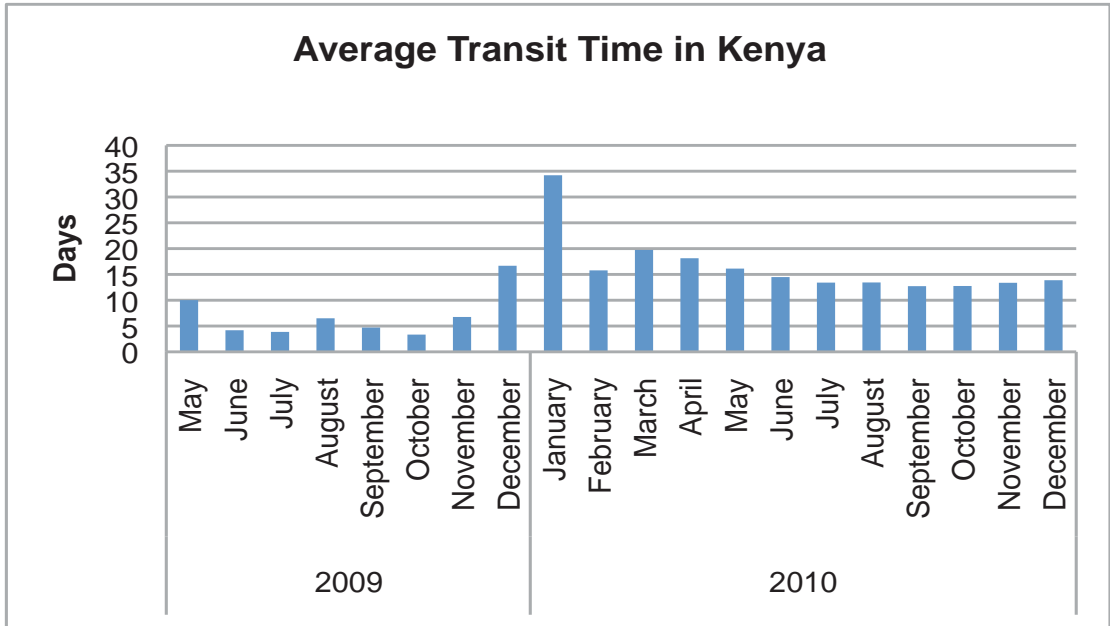


SOURCE: ELECTRONIC DATA SOURCE, KENYA REVENUE AUTHORITY (KRA), 2009-MAY, 2012

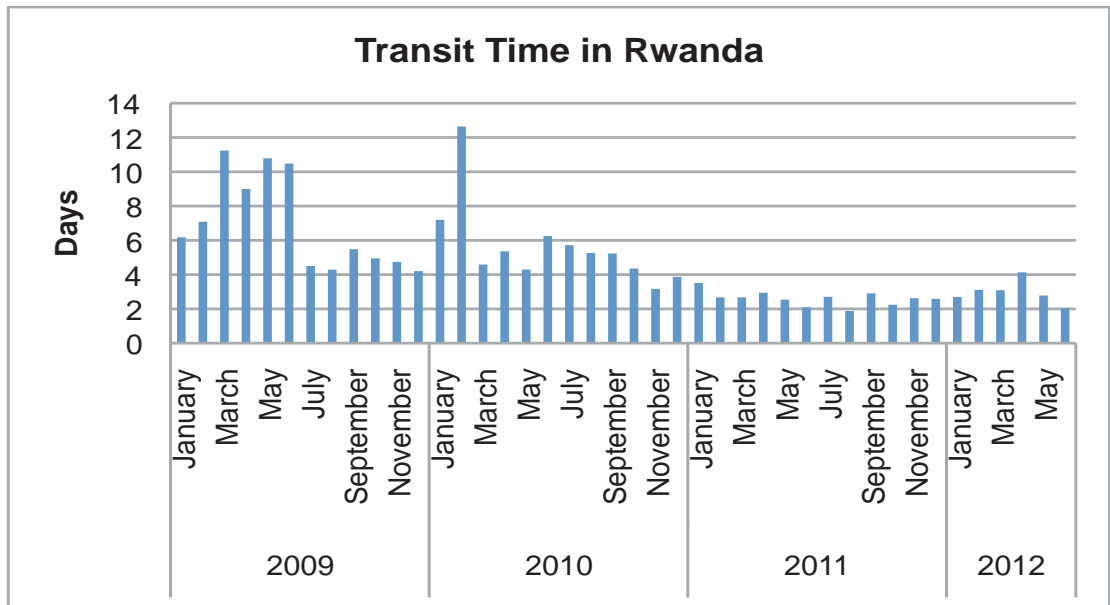
The graph shows a decline in import pick up order processing time. During this process, the cargo is in the hands of the owners.

### 3.6.3 Country Transit Time .

This indicator measures the time (in hours) it takes for cargo to enter and exit through a specific country.



SOURCE: ELECTRONIC DATA SOURCE, KENYA REVENUE AUTHORITY (KRA), 2009-2010

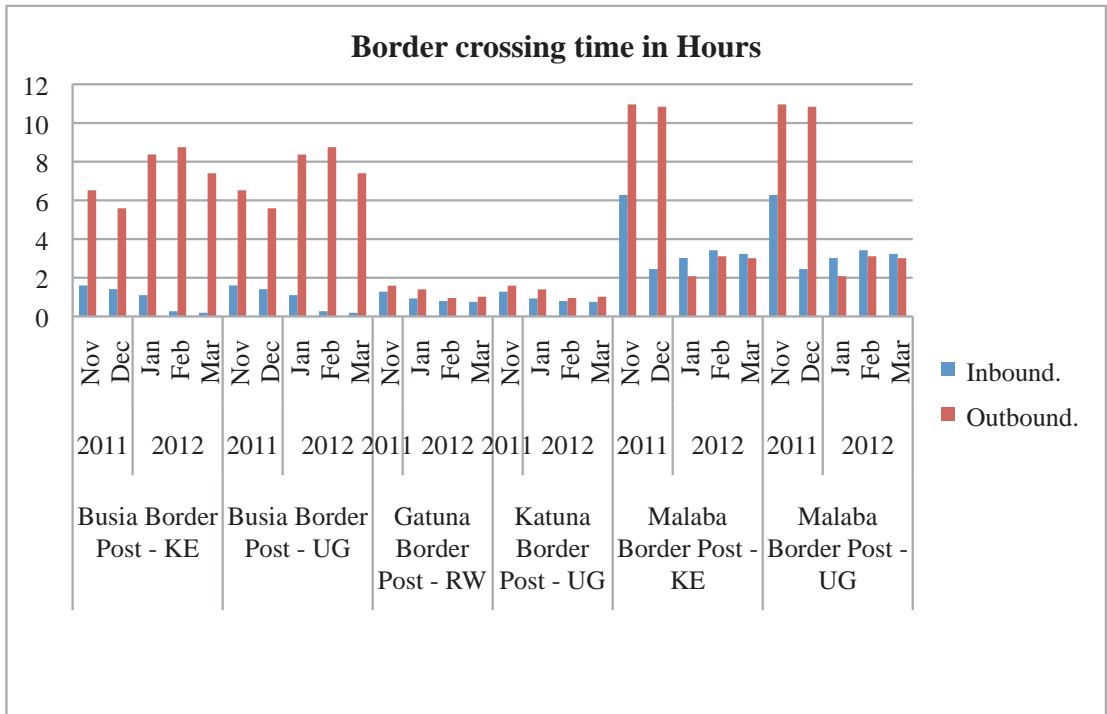


SOURCE: ELECTRONIC DATA SOURCE, RWANDA REVENUE AUTHORITY (RRA), 2009-2012

Transit time in Rwanda is reducing while in Kenya is increasing.



### 3.6.4 Border crossing time in Hours.



SOURCE: NODE AUDITS, NOVEMBER 2011 – MARCH 2012

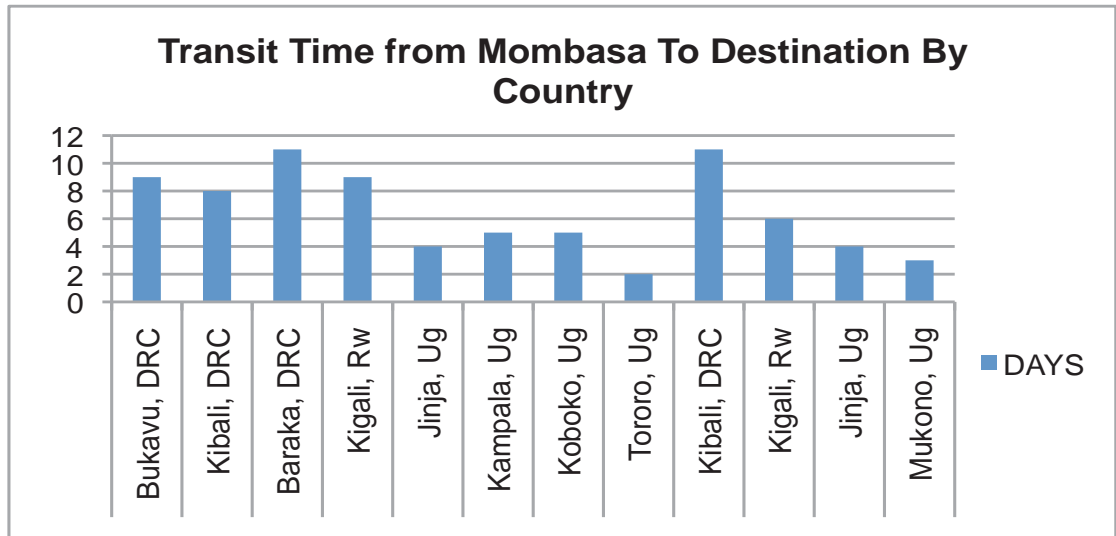
Generally there has been a decline in transit time at Busia, Gatuna and Katuna border posts for both inbound and outbound. This is attributed to measures that have been introduced to reduce border transit time.

Malaba border post shows higher transit times for both inbound and outbound.

Outbound on all the border posts is more since there are more imports than exports and when the tracks come empty the custom checks are faster since they are empty.



### 3.7.2 Transit Time Origin to Destination by Country



SOURCE: ROAD SURVEYS, AUGUST – SEPTEMBER 2012

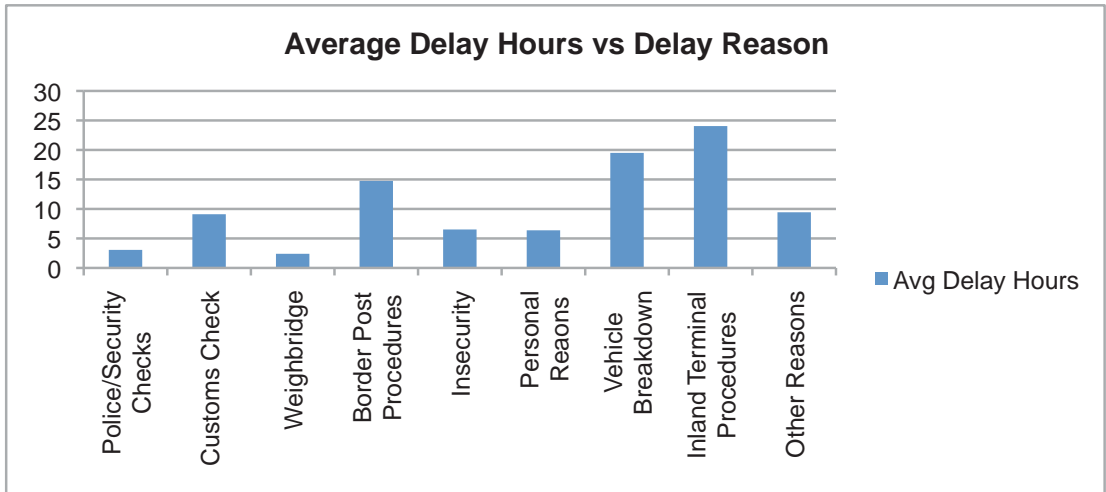
Transit time from Mombasa to Kibali in DRC increased from an average of 8 days in august 2012 to 11 days in September. Kigali and Jinja have recorded a decline in transit times.

### 3.7.3 Various causes /duration of Delays

STOP REASON CODE	DELAY TIME (HRS)		
	Minimum	Average	Maximum
Inland terminal Procedure	0.50	24.05	262.33
Vehicle Breakdown	0.05	19.50	70
Border Post Procedures	0.15	14.75	138
Other Reasons	0	9.43	97
Customs Checks	0.03	9.10	108.5
Custom Checks/Border Post procedures	0.08	7.62	24.33
Insecurity	0.67	6.52	12.28
Personal Reasons	0	6.38	48.42
Police/Security Checks	0	3.06	25
Weighbridge	0.02	2.40	129

SOURCE: ROAD SURVEYS, AUGUST – SEPTEMBER 2012

Inland terminal procedures have recorded highest average delay time (24hrs) while weighbridges have the least. At the inland terminal, here is offloading and servicing vehicles hence more time Weighbridge time includes queuing time



**SOURCE: ROAD SURVEYS, AUGUST – SEPTEMBER 2012**

Most delays are associated with inland terminal procedures followed by vehicle breakdown and Border Post Procedures respectively. Weighbridges and Security checks are least contributors to the total delays.

## 4 MOVING FORWARD - 2012 AND BEYOND

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### 4 MOVING FORWARD - 2012 AND BEYOND

The key focus of all activities on the TOP after the launch are geared towards making operational the routine collection of data from stakeholders through the computerized data approach, the road survey and the GPS data collection. The main activities to be undertaken with TMEA support are therefore:

- a) The enhancement of the focal point structure to ensure the timely collection of data from the participating stakeholders.
- b) Making operational the GPS data collection activity.
- c) Continued road surveys every quarter.
- d) Analyzing and developing quarterly reports to be disseminated to stakeholders and to stakeholder forums.
- e) Targeted sensitization and results dissemination workshops for policy makers, the trade and transport fraternity and other interested parties to promote the use of the observatory as a decision-making tool.

The work-plan for 2013 in this regard is attached in the appendices.

Key issues to consider for the success of the TOP project and to make sure it meets the needs of every stakeholder are as follows:

- a) Continued data provision by stakeholders on a possibly real-time basis is critical for the sustainability of the transport observatory.
- b) Stakeholders Awareness campaign on the benefit, access and use of the transport observatory is a necessity.
- c) Automatic data exchange/sharing and real time indicator processing.
- d) Establishing contact and engaging in technical discussion between the ICT experts at partner organizations knowledgeable with the needs and functioning of their systems.

## 5 ANNEXES

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### 5.1 Annex 1: History of the Transport Observatory Project

As a continuation of the work done on the collaboration with the Sub-Saharan Africa Transport Policy Programme (SSATP), a pilot TOP database unit was developed in 2002. The first phase of this project was completed in 2003. In August 2003, the first version of the transport observatory was set up with the support of the SSATP. The activities supported were a baseline survey of the key non-physical barriers on the Northern Corridor and the development of the first TOP database containing road survey data from the study. The results were disseminated and discussed in a stakeholders' workshop held in Entebbe (Uganda) in March 2006.

In 2006, the SSATP Program provided technical assistance to the TTCA-NC Secretariat to set up a sustainable performance monitoring and evaluation scheme for its programs and for the efficiency of the Northern Corridor, based on the results of the baseline survey on non-physical barriers along the corridor. The objectives of the technical assistance were more specifically:

- a) To assist the TTCA-NC Secretariat to set up a sustainable performance monitoring and evaluation scheme for its programs and the efficiency of the corridor, using a Transport Observatory
- b) To assist the TTCA-NC Secretariat to start the implementation of the activities under the East Africa Trade and Transport Facilitation project.

This resulted in the following being achieved:

- a) The definition of a framework of indicators to be use to monitor the Northern Corridor performance.
- b) Identification of the sources of data for the production of the defined; these included computerized data from stakeholders and road surveys.
- c) Templates for the collection of data from the computerized data sources were defined and some data collected.
- d) A revised questionnaire was developed for the road surveys.

In 2007 through 2008 to early 2009, a pilot-run was undertaken and a prototype of an online, web-based system database was developed. Computerized data for 2007-2009 to further test the indicators database was collected from the stakeholders and a road survey was undertaken. The results were disseminated in a pan-African workshop organized by the SSATP in April 2009.

To put the TOP into operation, an Aide Memoire between TradeMark East Africa (TMEA) and the TTCA-NC was agreed upon with the specific activities to be funded from 2010 to 2014 as outlined in this report. The activities are currently ongoing and this report is one of the outputs of this collaboration. Work is still being undertaken with close collaboration between the TTCA-NC, TMEA, the Kenya Transporters Association (KTA) and the SSATP.

## 5.2 Annex 2: List of Data Providers and Participating Stakeholders

The TOP implementation team at the TTCA-NC and the KTA are grateful to the following organizations that participated in the observatory work so far.

**Table 1: List of Data providers and Participating Stakeholders**

Country	Organization	Expected Data
Burundi	Ministry Of Transport, Public Works And Equipment - Burundi	Data on safety and security
	Office Burundais Des Recettes (OBR)	Data on volume, and transit & processing time
	Port Of Bujumbura	Volume , port dwelt time and rate of fraud with the port
	Office De Routes - Burundi	Description of the Route section , weighbridges and quality of infrastructure
	National Road Fund	Funding availability and sources
	International Association of Burundi Transporters	Road freight charges, Annual distance covered in Km per truck
Rwanda	Ministry Of Infrastructure - Rwanda	Data on safety and security
	Rwanda Transport Development Authority (RTDA)	Description of the Route section , weighbridges and quality of infrastructure
	Rwanda Revenue Authority (RRA)	Data on volume, and transit & processing time
	Magasins Généraux Du Rwanda - (MAGERWA)	Volume , port dwelt time and rate of fraud with the port
	Road Maintenance Fund	Funding availability and sources
Uganda	Ministry Of Public Works - Uganda	Data on safety and security
	Uganda Revenue Authority (URA)	Data on volume, and transit & processing time
	Uganda National Roads Authority (UNRA)	Description of the Route section, weighbridges and quality of infrastructure
	Uganda Road Fund	Funding availability and sources
Kenya	Ministry Of Transport - Kenya	Data on safety and security
	Kenya Revenue Authority (KRA)	Data on volume, and transit & processing time
	Kenya Ports Authority (KPA)	Data on Volume, dwelt time and rate of fraud with the port
	Kenya Pipeline Corporation (KPC)	Volume, oil freight charges and time delays
	Rift Valley Railways (RVR)	Rail freight charges, volume and processing time

DRC	Kenya National Highway Authority (KeNHA)	Description of the Route section, weighbridges and quality of infrastructure
	Ministère des Transports et Voies de Communication.	Data on safety and security
	Ministère des Infrastructure et Travaux Publics.	Description of the Route section
	Direction Générale des Douanes et Accises (DGDA)	weighbridges and quality of infrastructure
	Fédération des Entreprises Congolaises (FEC) OGEFREM	Data on volume, and transit & processing time

The secretariat is grateful to the following stakeholders who have so far provided the data to the Secretariat for feeding the transport Observatory Database;

**Table 2: List of stakeholders who provided Data.**

Country	Organization	Data Collected & Received by Secretariat
Burundi	Office Burundais des Recettes (OBR)	Transit Time and Volume related data for the period 2012
	Office des Routes Burundi	Infrastructure quality data for the period 2012
Kenya	Kenya Revenue Authority	Transit Time and Volume related data for the period 2009 to 2012
	Kenya Ports Authority	Volume related data and time cargo stay within the port for the period 2009 -2012
	Kenya National Roads Authority	Description of various route sections along the corridor
Rwanda	Rwanda Revenue Authority	Transit Time and Volume related data for the period 2009 to 2012
	MAGERWA	Data relating to Cargo and truck clearance/processing for the period 2009 to 2012
Uganda	Uganda National Roads Authority	Description of various route sections, weighbridges and crossing time for 2012.



### 5.3 Annex 3: List of Indicators for Monitoring the Northern Corridor Performance

**Table 3: Indicators adopted by the TTCA-NC Board in 2003**

	<b>Indicator</b>	<b>Parameter</b>	<b>Source</b>	<b>Frequency</b>
1	Time for Customs procedures in Mombasa	Hours/Customs Declaration	KPA/KRA	Monthly
2	Transit Time/Route/Mode of transport	Day/Journey	Investigation	Monthly
3	Transit Time per Border post	Hours/Border Post	Investigation	Monthly
4	Journey Time Origin/Destination by country	Day/Journey	Investigation	Quarterly
5	Rate of Fraud/Declared Damage for goods in transit	Percentage of traffic in transit	KPA/KRA	Quarterly
6	Rate of containerization of transit traffic	Percentage of transit traffic	KRA	Annual
7	Transport costs per route and by mode (including transit charges)	Cost by T/Km	Investigation	Semester
10	Level of handling productivity (containers and general cargo / KPA and PI)	Tonnes/ Equipment/Hour	KPA/Inland Ports	Annual
11	Density of traffic by network (Road/Rail)	Vehicles/Day/ Section	Investigation	Monthly
12	Number of accidents per vehicle/per route	Number/Year	Police	Annual
13	Number of check points (Weighbridge, Police, Customs, Road Toll) per country /per route	Number per 100 Km	Investigation	Annual
14	Transport capacity by Railway	No. of locomotives/ wagons	KRC/URC	Annual
15	Evolution of fleet of trucks per country	No. of trucks/country	Transporters' Association	Annual
16	Return of empty containers (grace period, penalties, deposit)	Time allowed and cost in USD	Shipping Lines	Annual
17	Transit time within the port	Day/hours	KPA	Monthly
18	State of the transport infrastructure	Quality	Ministry/KRC & URC	Annual

**Table 4: Indicators selected in 2006 Phase 2 of the TOP Project**

<b>General indicators for the Northern Corridor</b>	
1)	Transit Time (quarterly frequency suggested)
2)	Mombasa to Kampala and Kampala to Mombasa
3)	Mombasa to Kigali and Kigali to Mombasa
4)	Traffic flows from Mombasa
5)	Daily flows out of the gates of the port of Mombasa
6)	Monthly traffic flows to landlocked countries (inbound and outbound)
7)	Weighbridge crossing time:
8)	Mariakani weighbridge
9)	Transport tariffs on the Northern Corridor (from Mombasa to landlocked countries, and from landlocked countries to Mombasa, for containerised and non-containerised cargo)
10)	Annual distance per truck (Mombasa to Kampala route, Mombasa to Kigali route)
<b>Country specific indicators</b>	
1)	Border crossing time, at quarterly frequency suggested (Malaba inbound and outbound, Gatuna / Katuna inbound and outbound)
2)	Dwell time of cargo in the port of Mombasa (local cargo, transit cargo)
3)	Traffic flows (daily crossings at the Northern Corridor borders)
4)	Transit time (through transit, between entry point and destination)

**Table 5: Indicators recommended in the Analytical Comparative Cost Study**

<b>Port Indicators</b>	
1)	Time at anchorage before unloading
2)	Time for Customs release
3)	Total time within the port complex (including CFS and other extensions – i.e. discharge of vessel to handing over to line-haul carrier)
4)	Indicators for additional port service providers (shipping companies, clearing agents)
5)	Service indicators could form part of new KMA regulations
<b>Line-Haul Transport Indicators</b>	
1)	Average transit time by route and mode of transport
2)	Average transit time by major origin-destination
3)	Number of checkpoints (Customs, Police, weigh stations) between major origin-destination pairs
4)	Average transit time by border post
<b>Transit Time Indicators</b>	
1)	Average total transit time by vehicle type
2)	Average total transit time by country
3)	Average total transit time by commodity
4)	Average total transit time by country of vehicle registration

**Table 6: Classification of CPIs**

Indicator Classification	CPI	Actual Indicator
Volume and capacity	1.1	Total cargo throughput of the port of Mombasa (TCPMSa) vs. transit traffic (TTPMSa), in tonnes

Indicator Classification		Actual Indicator
	1.2	Volume per country of destination (TC per Country of destination).
	1.3	Rate of containerization of transit traffic in percentage (RcTT), annual basis
	1.4	Evolution of fleet of trucks per country (TF)
	1.5	Average annual distance per truck in km per year (AvanDist)
	1.6	Transport capacity by rail (locomotives and wagons)
Rates (or Price) and Costs	2.1	Transport costs per route and per mode (including transit charges)
	2.2	Rail Freight (Information contained in the KRC and URC tariffs, and in future, in the GRVR tariffs).
	2.3	Road Freight
	2.4	Port Transit Charges
	2.5	Return of empty containers (grace period, penalties, deposit)
Efficiency and productivity	3.1	Number of check points, NCP (Weighbridge, Police, Customs, Road Toll) per country per route
	3.2	Rate of Fraud or Declared Damage for goods in transit, RFDD (percentage of total transit)
	3.3	Quality of the transport infrastructure
	3.4	Volume of containerized and general cargo handled per day/month/quarterly
	3.5	Number of accidents per route
Transit time and Delays	4.1	Transit Time per route per mode of transport
	4.2	Transit time origin to destination by country
	4.3	Average cargo dwell time in Mombasa port
	4.4	Time for Customs Clearance in Mombasa Long Room
	4.5	Transit time within the port (IPUO: Import Pick Up Order process)
	4.6	Border Post Crossing Time
	4.7	Time for Customs procedures at destination
	4.8	Transit time within the ICD/Inland Port
	4.9	Weighbridge crossing time

**Table 7: Disaggregation of CPIs**

Indicator	Frequency	Unit	Possible Disaggregation							
			Global	Country (Origin)	Country (Destination)	Node	Mode	Route	Route Sec	
1	Total cargo throughput of the port of Mombasa (TCPMSa) vs. transit traffic (TTPMSa), in tonnes	Monthly	Tonne	X	X	X	X			
2	Volume per country of destination (TC per Country of destination).	Monthly	Tonne	X	X	X	X	X		

Indicator		Frequency	Unit	Possible Disaggregation						
				Global	Country (Origin)	Country (Destination)	Node	Mode	Route	Route Sec
3	Rate of containerization of transit traffic in percentage (RcTT), annual basis	Monthly	%	X	X	X	X	X		
4	Evolution of fleet of trucks per country (TF)	Annual	Unit	X			X			
5	Average annual distance per truck in km per year (AvanDist)	Annual	Km	X	X	X	X	X	X	
6	Transport capacity by rail (locomotives and wagons)	Annual	Unit	X	X		X	X		
7	Transport costs per route and per mode (including transit charges)	Quarterly	\$	X	X	X	X	X	X	X
8	Rail Freight (Information contained in the KRC and URC tariffs, and in future, in the GRVR tariffs).	Quarterly	\$	X	X	X	X	X	X	X
9	Road Freight	Quarterly	\$	X	X	X	X	X	X	X
10	Port Transit Charges	Quarterly	\$	X	X	X	X	X	X	X
11	Return of empty containers (grace period, penalties, deposit)	Quarterly	day/\$/\$	X	X	X	X	X		
12	Number of check points, NCP (Weighbridge, Police, Customs, Road Toll) per country per route	Quarterly	Unit	X	X	X	X		X	X
13	Rate of Fraud or Declared Damage for goods in transit, RFDD (percentage of total transit)	Semi-annual	%	X			X	X		
14	Quality of the transport infrastructure	Annual					X	X	X	X
15	Number of accidents per route	Semi-annual	Case	X			X	X	X	X
16	Transit Time per route per mode of transport	Monthly	Hour	X			X	X	X	X
17	Transit time origin to destination by country	Monthly	Hour	X			X	X	X	X
18	Average cargo dwell time in Mombasa port	Monthly	Hour	X		X	X	X		
19	Time for Customs Clearance in Mombasa Long Room	Monthly	Hour	X		X	X	X		
20	Transit time within the port (IPUO: Import Pick Up Order process)	Monthly	Hour	X			X			

Indicator	Frequency	Unit	Possible Disaggregation							
			Global	Country (Origin)	Country (Destination)	Node	Mode	Route	Route Sec	
21	Border Post Crossing Time	Monthly	Hour	X			X	X	X	
22	Time for Customs procedures at destination	Monthly	Hour	X		X	X			
23	Transit time within the ICD/Inland Port	Monthly	Hour	X		X	X			
24	Weighbridge crossing time	Monthly	Hour	X			X	X	X	X
25	Volume of containerized and general cargo handled per day/month/quarterly	Monthly	Tonne per Hour (or Tonne per day)	X			X			

**Table 8: Type and Sources of data**

Indicator		Data Source					
		Computerized Data	General Survey	Road Survey	GPS Survey	GPS + Road Survey	Node Audit (Border)
1,1	Total cargo throughput of the port of Mombasa (TCPMSa) vs. transit traffic (TTPMSa), in tonnes	KPA✓					
1,2	Volume per country of destination (TC per Country of destination)	KPA✓					
1,3	Rate of containerization of transit traffic in percentage (RcTT), annual basis	KPA✓					
1,4	Evolution of fleet of trucks per country (TF)		✓				
1,5	Average annual distance per truck in km per year (AvanDist)		✓		✓	✓	
1,6	Transport capacity by rail (locomotives and wagons)		✓				
2,1	Transport costs per route and per mode (including transit charges)		✓				
2,2	Rail Freight (Information contained in the KRC and URC tariffs, and in future, in the GRVR tariffs)		✓				
2,3	Road Freight		✓				
2,4	Port Transit Charges		✓				
2,5	Return of empty containers (grace period, penalties, deposit)		✓				
3,1	Number of check points, NCP (Weighbridge, Police, Customs, Road Toll) per country per route		✓				
3,2	Rate of Fraud or Declared Damage for goods in transit, RFDD (percentage of total transit)		✓				
3,3	Quality of the transport infrastructure		✓				
3,4	Number of accidents per route		✓				

Indicator		Data Source					
		Computerized Data	General Survey	Road Survey	GPS Survey	GPS + Road Survey	Node Audit (Border)
4,1	Transit Time per route per mode of transport	✓		✓	✓	✓	
4,2	Transit time origin to destination by country	✓		✓	✓	✓	
4,3	Average cargo dwell time in Mombasa port	✓					
4,4	Time for Customs Clearance in Mombasa Long Room	✓					
4,5	Transit time within the port (IPUO: Import Pick Up Oder process)	✓					
4,6	Border Post Crossing Time	✓		✓	✓	✓	✓
4,7	Time for Customs procedures at destination	✓				✓	
4,8	Transit time within the ICD/Inland Port	✓		✓	✓	✓	
4,9	Weighbridge crossing time	✓		✓	✓	✓	
5,1	Volume of containerized and general cargo handled per day/month/quarterly	✓					

## 5.4 Annex 4: The TOP Design Approach – Current Status

The TOP project implementation under the current TMEA support was developed using the following approach:

### Needs Analysis

Need analysis was done to understand the current situation; this included a review of the previously developed solutions, the existing data sources and the kinds of data that is available in the stakeholder systems. The needs of the stakeholders vis-a-vis the indicators proposed were also investigated.

A web-based platform was proposed, with a more robust database that would handle the huge amount of cargo information from various stakeholders, and this was to be implemented using technology options of either MySQL and PHP or ASP and SQL Server. This was a discussion on whether to use free and open source software for implementation or to use a custom built solution based on off the shelf commercial software.

The solution was proposed to be multi-user and to be accessible 24/7 365 days a year. Hosting considerations in terms of data security meant that the system had to be physically hosted at the TTCA-NC Secretariat.

Roles of the TTCA-NC, the KTA and TMEA were adequately discussed and defined and the roles and types of data required from specific key stakeholders (mainly the ports and revenue authorities) were outlined. This included not only defining the data elements required from each stakeholder system but also the data exchange agreements which proposed the frequency at which this data should be donated. A system of focal points in relevant stakeholder organization was also designed to assist in the data collection.

### Development

The actual development of the web based system was outsourced to a firm who did the design off a functional specifications documented that was an output of the needs analysis. The relevant technical expertise was transferred to the TTCA-NC specialists and the KTA. Both systems for the GPS and the web-based observatory reporting are currently hosted on a server within the TTCA-NC that provides the relevant access to the users and the KTA administration as the KTA runs the GPS data collection system.

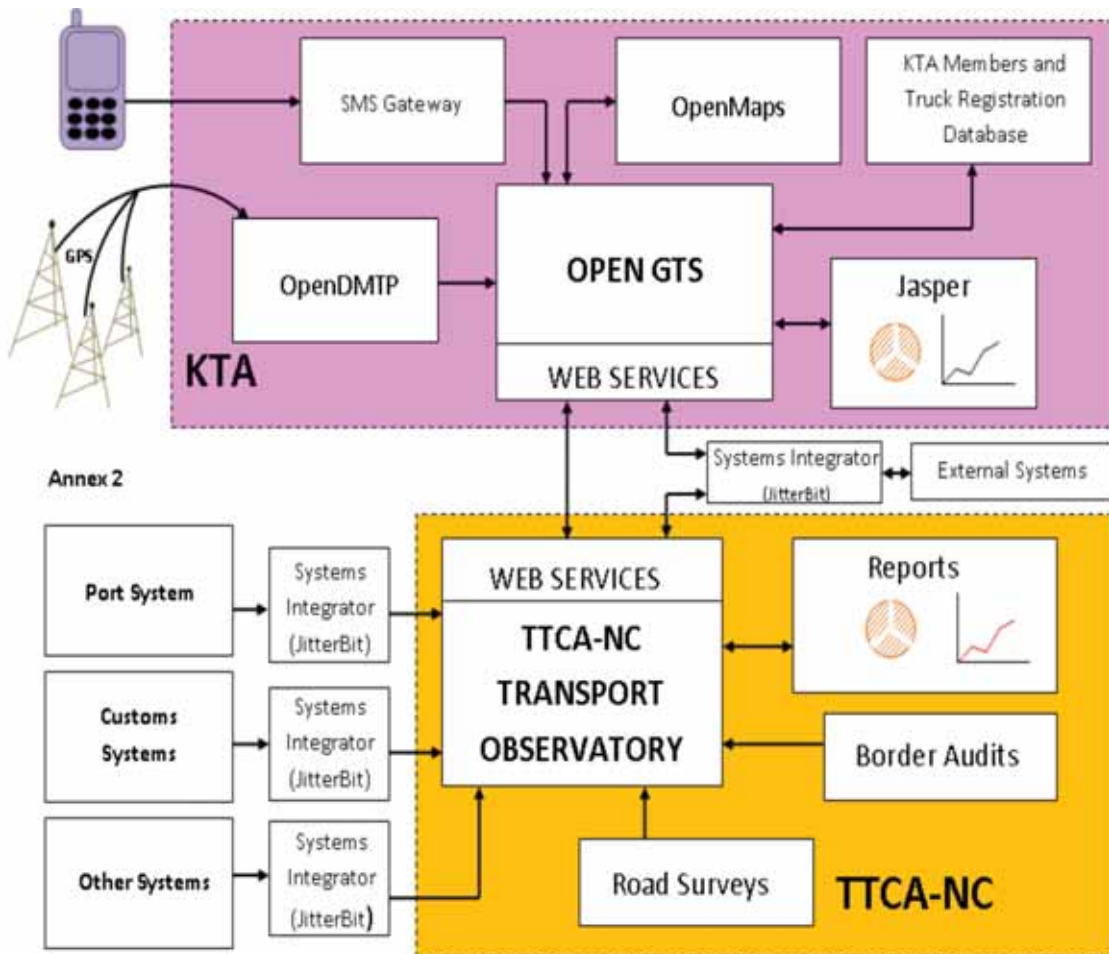


FIG. 2: OVERALL DESIGN OF THE TOP SYSTEM (SOME COMPONENTS NOT YET IMPLEMENTED E.G. SMS DATA)

## Implementation

25 indicators were defined as well as and providing stakeholders identified. This was followed by the collection of data from stakeholders for the period 2009 - 2010. The database was then developed in a scalable design to incorporate future growth.

## Deployment

The actual hosting environment was setup in the second quarter of the 2012 and the Transport Observatory web application was made accessible online at <http://top.ttcanc.org> with as much data as possible. 17 of the 25 indicators had some data from the computerized data collection as well as the road surveys.

### Launch and Moving Forward

The TOP was launched in the first week of December 2012 and all the data collected up to that point was uploaded into the web-based system and indicators are available.

Going forward, the plan is to implement the rest of the observatory activities with specific focus on data collection from stakeholder systems, the GPS data collection overseen by the KTA as well as continued road surveys.



## 5.5 Annex 5: Data Collected and Indicators Generated (2009 – 2012 data)

**Table 9: Data Collected and Indicators Generated (2009 – 2012)**

Indicator Category	Indicator Generated	Data Providers	Data Collected	Reporting Period
Volume and Capacity	Total cargo throughput of the port of Mombasa vs. transit traffic in tones.	Kenya Ports Authority (KPA)	Volumes related data	2009 - June 2012
	Volume per country of destination.	Kenya Ports Authority (KPA)	Volumes related data	2009 - June 2012
	Rate of containerization of transit traffic in percentage , annual basis at the Port of Mombasa	Kenya Ports Authority (KPA)	Volumes related data	2009 - June 2012
	Evolution of licensed fleet of trucks per country.	Kenya Revenue Authority (KRA)	Registered and Cancelled Trucks and Trailers	2010 - 2011
	Transport capacity by rail (locomotives and wagons)	Rift Valley Railways	Capacity summary	March 2012
Rates and Cost	Transport costs per route and per mode (including transit charges).	Analytical Comparative Cost Study Along the Northern Corridor	Logistics Cost Breakdown Mombasa - Nairobi	October 2010
	Road Freight	Transporters	Common Tariff	2012
Efficiency and Productivity	Number of check points, NCP (Weighbridge, Police, Customs, Road Toll) per country per route	TTCA-NC Corridor Survey	Number of Checkpoints by Category	October 2012
	Rate of Fraud or Declared Damage for goods in transit (percentage of total transit)	Kenya Ports Authority (KPA)	Volumes related data	2011
	Quality of the transport infrastructure	Kenya National Highway Authority (KeNHA), Office des Routes (Burundi)	Description of various route sections along the corridor	2009, 2012
	Volume of containerized and general cargo handled per day/month/quarterly at the Port of Mombasa	Kenya Ports Authority (KPA)	Volumes related data	2009 - 2012
Transit time and Delays	Transit Time per route per mode of transport (by country)	Kenya Revenue Authority (KRA), Rwanda Revenue Authority (RRA), Office Burundais des Recettes (OBR)	Transit Time related information based on customs documentation	2009 - June 2012
	Transit time origin to destination by country	Road Survey	Journey durations	October 2012
	Average cargo dwell time in Mombasa port	Kenya Ports Authority (KPA)	Time related information for Cargo	2009 - June 2012
	Time for Customs Clearance at the Document Processing Center	Kenya Revenue Authority (KRA)	Transit Time related information	2009 - June 2012

			documentation	
	Transit time within the port (IPUO: Import Pick Up Order Process)	Kenya Revenue Authority (KRA)	Transit Time related information based on customs documentation	2009 - June 2012
	Border Post Crossing Time	Road Survey	Stop Durations	October 2012
	Transit time within the ICD/Inland Port	Magasins Généraux du Rwanda (MAGERWA)	Time related information for Trucks and Cargo	2009 - August 2012
	Weighbridge crossing time	Road Survey	Stop Durations	October 2012

5.6 Annex 6: Road Survey Questionnaire



THE PERMANENT SECRETARIAT OF  
THE TRANSIT TRANSPORT  
COORDINATION AUTHORITY OF THE  
NORTHERN CORRIDOR

(TTCA-NC)

**Road Survey**  
DATA COLLECTION FORM  
(IN-BOUND/OUTBOUND)

COMPANY ISSUED TO: \_\_\_\_\_

FORM NUMBER: \_\_\_\_\_

DATE ISSUED: \_\_\_\_\_

DEPARTURE DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

ARRIVAL DATE: TIME: \_\_\_\_\_ TIME: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

## **WHAT IS THE TTCA-NC**

The Northern Corridor comprises of the transport infrastructure, facilities and services in East and Central Africa linked to the Maritime Port of Mombasa. These primary transport network and facilities link the Port of Mombasa in Kenya to the Great Lakes countries of Uganda, Rwanda, Burundi and the Democratic Republic of Congo.

The five countries are signatories to the Northern Corridor Transit Agreement (NCTA), whose main objective is to enhance and ensure seamless movement of trade and traffic across the region.

The Transit Transport Coordination Authority of the Northern Corridor TTCA-NC, whose Secretariat is based in Mombasa, Kenya, was established to oversee the implementation of the NCTA provisions and to safeguard the interests of the member States and corridor users.

The programmes and activities of the TTCA-NC includes encouraging cost effective services by the major transport service providers through private investments, monitoring inefficiencies along the Northern Corridor and providing policy guidelines to improve the same, provide an efficient mechanism for exchanging information and monitoring the performance of the corridor as well as monitoring regional transport and trade Implementation Projects.

## **ABOUT THE TRANSPORT OBSERVATORY PROJECT**

The TTCA-NC Transport Observatory seeks to establish a practical method of monitoring transit traffic by using existing computerized data and by undertaking surveys of this kind from time to time to validate the findings and the indicators yielded from the computerized data.

The scope of work includes identifying total time delays from all causes and time delays disaggregated by cause, location, date, and time of day, to define parameters and reports to capture direction of travel, "nationality" of vehicle, and type of cargo and to setup a database for analysing and disseminating this information.

## **WHAT ARE THE OBJECTIVES OF THE ROAD SURVEY?**

The objective is to collect enough data and information to identify the root causes of delays for transit traffic on the Northern Corridor and also to understand the associated costs. This will enable the TTCA-NC to develop indicators to monitor the performance of the Corridor and to analyze the effects of the implementation of various policies of the TTCA-NC member states with a view of providing guidance and recommendation for improvement of the same.

## **INSTRUCTIONS**

### **COVERAGE OF THIS SURVEY.**

This survey is to be completed to cover the entire round trip (going and coming) while the vehicle and goods are travelling on the Northern Corridor. The intention is to collect enough data on the round-trip with regards to each and every stop that the vehicle makes with the aim of analyzing this information to generate statistics on the main reasons that cause delays on the transit Corridor.

### **PERSON RESPONSIBLE FOR FILLING OUT THE FORM.**

The Survey Form is to be filled by the driver and or turn-boy of the vehicle under instructions from the Transport Manager of the organization or a Senior Manager in the organization (Focal Point).

Parts I (Driver Details), II (Vehicle Details), III (Departure and Arrival Details) and IV (Cargo Details) will be completed at commencement of the journey while the stoppage information in the remaining sections will be completed en-route to and coming back from the destination as per the instructions above (Person Responsible for filling in the Survey Form).

Once completed, the forms should be returned to the office of the focal point for collection by the TTCA-NC as will be arranged.

### **SURVEY METHODOLOGY**

The Survey will be undertaken by the methodical noting of all reasons for stoppage, times and dates of the stop, times and dates of the resuming of the journey after the stop, where the stop occurred and including any costs incurred during the stop.

### **FILLING OUT OF THE FORM**

The Survey form must be completed legibly using uppercase capital letters if possible. Appropriate care should be taken to note down the route section codes and the stop reason delay codes where applicable. Where the data is captured by ticking a box, the other boxes must be left clear so as to leave no doubt as to the option being indicated for the answer.

If the survey question is confusing, kindly look at the section marked definitions (inner back cover page of this booklet) for the exact definition of what that particular response entails and what is expected in that regard.

## DEFINITIONS

The following are the expected inputs for each of the survey form fields which should be completed in UPPERCASE and legibly:

1. Driver's Name: This is the name of the driver for the vehicle for the entire journey. If there is more than one driver, both names will be noted alongside each other separated by a comma.
2. Age: This is the age of the driver.
3. Vehicle Registration Number (Tractor Head): The registration number of the pulling part of the vehicle.
4. Vehicle Registration Number (Trailer(s)): The registration numbers for all the trailers attached to the vehicle.
5. Vehicle Type: The type of configuration for the vehicle.
6. Vehicle Make: The make of the vehicle e.g. Mercedes, Mitsubishi etc.
7. Vehicle Model: The model of the vehicle
8. No. of Axles on Vehicle: How many axles the vehicle has.
9. Origin: Where the cargo originated from.
10. Destination: where the cargo is being taken to.
11. Loading Permit Received on (dd/mm/yyyy): Date when the loading permit was received in the format 20/12/2012.

Time (hh:mm): time loading permit was received in 24hrs format.

12. Loading Date (dd/mm/yyyy): Date when the loading was done.

Loading Time (hh:mm): Time when the actual loading was done.

13. Departure date (dd/mm/yyyy): Date when the journey started.

Departure Time (hh:mm): Time when the journey started.

14. Date Arrived at Destination (dd/mm/yyyy): Date when the vehicle arrives at destination in 10 above.

Time Arrived at Destination (hh:mm): Time of arrival at destination in 10 above.

15. Cargo Form: How the cargo is packed and is being conveyed.

16. Weight of Goods Carried: The weight of the goods carried in tonnes.

17. Container Numbers: If the goods are in container form then the container numbers that the goods are carried in.

18. Kinds of Good Carried: What types of goods are carried.

19. Stop Location:

- Name of Place: Where the stop occurred
- Route Section Code: Which route section the location is in. The code is in the route section code tables.

20. Stop Details:

- Departure Date: Date of resuming of the trip in the format 20/12/2012.
- Departure time: the time of resuming of the trip in 24 hour format

21. Fees and Payments Made:

- Fee Amount: How much was paid.
- Services Fees Paid for Code: What services were paid for. The code is in the fees code tables.

(PLEASE PRINT IN UPPERCASE FOR ALL RESPONSES)

**I. DRIVER DETAILS**

1. Driver's Name ..... 2. Age .....

**II. VEHICLE DETAILS**

3. Vehicle Registration Number (*Prime mover*):.....

4. Vehicle Registration Number (*Trailer(s) end*):.....

5. Country of Registration: .....

6. Vehicle Type (*tick one below*):

Truck-Trailer     Semi-Trailer     Rigid Truck

7. Vehicle Make: .....

8. Vehicle Model: .....

9. No. of Axles on Vehicle (*tick one below*):

2 axles     3 axles     4 axles     5 axles     6 axles     7 axles

**III. DEPARTURE AND ARRIVAL DETAILS**

10. Origin: ..... 11. Destination: .....

14. Loading Permit / Loading Slip/Authority to load On Date (*dd/mm/yyyy*)..... Time (*hh:mm*)  
.....

15. Loading Date (*dd/mm/yyyy*)..... Loading Time (*hh:mm*).....

13. Departure Date (*dd/mm/yyyy*)..... Departure Time (*hh:mm*).....

14. Date Arrived At Destination (*dd/mm/yyyy*): ..... Time (*hh:mm*)..... (*The arrival date and time in item 14 above will be filled at arrival at the destination*)

#### IV. CARGO DETAILS

1. Cargo Form (*tick one below*)

Container                     Loose Cargo                     Tanker

2. Weight of goods carried. ....

.....

3. Container Numbers. ....

.....

4. Kind of goods carried (please tick appropriate ones from the table below):

- |  |   |
|--|---|
| <input type="checkbox"/> Tea                               | <input type="checkbox"/> Cigarettes                               |
| <input type="checkbox"/> Coffee                            | <input type="checkbox"/> Used Clothes                             |
| <input type="checkbox"/> Hides and Skins                   | <input type="checkbox"/> Cooking Oil                              |
| <input type="checkbox"/> Tobacco Leaf                      | <input type="checkbox"/> Cosmetics                                |
| <input type="checkbox"/> Beans and other Legumes           | <input type="checkbox"/> Building materials                       |
| <input type="checkbox"/> Fish                              | <input type="checkbox"/> Machinery                                |
| <input type="checkbox"/> Sesame                            | <input type="checkbox"/> Motor Vehicles                           |
| <input type="checkbox"/> Cocoa                             | <input type="checkbox"/> Footwear                                 |
| <input type="checkbox"/> Pepper                            | <input type="checkbox"/> Flour                                    |
| <input type="checkbox"/> Vanilla                           | <input type="checkbox"/> Pulp and Paper                           |
| <input type="checkbox"/> Fruits                            | <input type="checkbox"/> Books and other printed materials        |
| <input type="checkbox"/> Live animals                      | <input type="checkbox"/> Iron and Steel                           |
| <input type="checkbox"/> Ground/Cashew Nuts                | <input type="checkbox"/> Medical and Pharmaceutical products      |
| <input type="checkbox"/> Timber                            | <input type="checkbox"/> Petroleum Products and related materials |
| <input type="checkbox"/> Minerals                          | <input type="checkbox"/> Dry Cells                                |
| <input type="checkbox"/> Cotton                            | <input type="checkbox"/> Foodstuff and Beverages                  |
| <input type="checkbox"/> Grains (Maize, Rice, Wheat, etc.) | <input type="checkbox"/> Utensils                                 |
| <input type="checkbox"/> Sugar                             | <input type="checkbox"/> Fabrics and Garments                     |
| <input type="checkbox"/> Tyres & Tubes                     | <input type="checkbox"/> Personal and Household Items             |
| <input type="checkbox"/> Vehicle Spares                    | <input type="checkbox"/> Safety Matches                           |
| <input type="checkbox"/> Electronics                       | <input type="checkbox"/> Others                                   |



V. STOP DETAILS – KENYA OUTBOUND

STOP NO.	STOP LOCATION		STOP DETAILS			DEPARTURE DETAILS		FEES/PAYMENTS MADE	
	NAME OF PLACE	ROUTE SECTION CODE	STOP REASON CODE	STOP DATE	STOP TIME	DEPARTURE DATE	DEPARTURE TIME	FEE AMOUNT	SERVICE FEES PAID FOR CODE
1.									
2									
3									
4									
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6									
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8									
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KENYA ROUTE SECTION CODES		
Code	Route Section	Code
KE01	Mombasa-Mariakani	KE05
KE02	Mariakani-Arthi River	KE06
KE03	Arthi-River-Nakuru	KE07
KE04	Nakuru-Eldoret	

STOP REASONS CODES		
Code	Reason/Cause	Code
D01	Police/Security Checks	D05
D02	Customs Check	D06
D03	Weighbridge	D07
D04	Escorts	D08
		D09
		D10
		D11

SERVICES FEES PAID FOR CODES		
Code	Service	Code
S01	Police Fees/Fine	S06
S02	Customs Charges	S07
S03	Weighbridge Charges	S08
S04	Port Charges	S09
		S05
		S10

VI. STOP DETAILS – UGANDA OUTBOUND

STOP LOCATION		STOP DETAILS			DEPARTURE DETAILS		FEES/PAYMENTS MADE		
STOP NO.	NAME OF PLACE	ROUTE SECTION CODE	STOP REASON CODE	STOP DATE	STOP TIME	DEPARTURE DATE	DEPARTURE TIME	FEE AMOUNT	SERVICE FEES PAID FOR CODE
1.									
2.									
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UGANDA ROUTE SECTION CODES		
Code	Route Section	Route Section
UG01	Malaba-Jinja	Ntungamo-Kabate
UG02	Busia-Jinja	Ntungamo-Isasha
UG03	Jinja-Kampala	Kabate-Bunagana
UG04	Kampala-Mbarara	Kabate-Katuna

STOP REASONS CODES			
Code	Reason/Cause	Code	Reason/Cause
D01	Police/Security Checks	D05	Port Procedures
D02	Customs Check	D06	Border Post Procedures
D03	Weighbridge	D07	Insecurity
D04	Escorts	D08	Personal Reasons
		D09	Vehicle Breakdown
		D10	Inland Terminal Procedures
		D11	Other Reasons

SERVICES FEES PAID FOR CODES			
Code	Service	Code	Service
S01	Police Fees/Fine	S06	Border Post Charges
S02	Customs Charges	S07	Repair Charges
S03	Weighbridge Charges	S08	Personal Charges
S04	Port Charges	S09	Other Charges

VII. STOP DETAILS – RWANDA/BURUNDI OUTBOUND

STOP NO.	STOP LOCATION		STOP DETAILS			DEPARTURE DETAILS		FEES/PAYMENTS MADE	
	NAME OF PLACE	ROUTE SECTION CODE	STOP REASON CODE	STOP DATE	STOP TIME	DEPARTURE DATE	DEPARTURE TIME	FEE AMOUNT	SERVICE FEES PAID FOR CODE
1.									
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3.									
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8.									
9.									
10.									

RWANDA/BURUNDI ROUTE SECTION CODES		
Code	Route Section	Code Section
RW01	Kagitumba-Kigali	BU01 Akanyaru-Bujumbura
RW02	Katuna-Kigali	
RW03	Kigali-Gisenyi	
RW04	Kigali-Kanyaru	
RW05	Kigali-Cyangungu	

STOP REASONS CODES					
Code	Reason/Cause	Code	Reason/Cause	Code	Reason/Cause
D01	Police/Security Checks	D05	Port Procedures	D09	Vehicle Breakdown
D02	Customs Check	D06	Border Post Procedures	D10	Inland Terminal Procedures
D03	Weighbridge	D07	Insecurity	D11	Other Reasons
D04	Escorts	D08	Personal Reasons		

SERVICES FEES PAID FOR CODES					
Code	Service	Code	Service	Code	Service
S01	Police Fees/Fine	S06	Border Post Charges		
S02	Customs Charges	S07	Repair Charges		
S03	Weighbridge Charges	S08	Personal Charges		
S04	Port Charges				

VIII. STOP DETAILS – DRC OUTBOUND

STOP NO.	STOP LOCATION		STOP DETAILS			DEPARTURE DETAILS		FEES/PAYMENTS MADE	
	NAME OF PLACE	ROUTE SECTION CODE	STOP REASON CODE	STOP DATE	STOP TIME	DEPARTURE DATE	DEPARTU RE TIME	FEE AMOUNT	SERVICE FEES PAID FOR CODE
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DRC CONGO ROUTE SECTION CODES		
Code	Code	Route Section
DRC01	Kasindi-Beni	Beni-Kisangani
DRC02	Kasindi-Butembo	Bunagana-Goma
DRC03	Beni-Bunia	Ishasha-Goma

STOP REASONS CODES		
Code	Reason/Cause	Reason/Cause
D01	Police/Security Checks	Port Procedures
D02	Customs Check	Border Post Procedures
D03	Weighbridge	Insecurity
D04	Escorts	Personal Reasons
D05		Vehicle Breakdown
D06		Inland Terminal Procedures
D07		Other Reasons
D08		
D09		
D10		
D11		

SERVICES FEES PAID FOR CODES		
Code	Service	Code
S01	Police Fees/Fine	S06
S02	Customs Charges	S07
S03	Weighbridge Charges	S08
S04	Port Charges	S09
		S05
		S10
		S11
		S12
		S13
		S14
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		S95
		S96
		S97
		S98
		S99
		S100



X. STOP DETAILS – RWANDA/BURUNDI INBOUND (RETURN TRIP)

STOP NO.	STOP LOCATION		STOP DETAILS		DEPARTURE DETAILS		FEES/PAYMENTS MADE		
	NAME OF PLACE	ROUTE SECTION CODE	STOP REASON CODE	STOP DATE	STOP TIME	DEPARTURE DATE	DEPARTURE TIME	FEE AMOUNT	SERVICE FEES PAID FOR CODE
1.									
2									
3									
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RWANDA/BURUNDI ROUTE SECTION CODES

Code	Route Section	Code	Section
RW01	Kagitumba-Kigali	BU01	Akanyaru-Bujumbura
RW02	Katuna-Kigali		
RW03	Kigali-Gisenyi		
RW04	Kigali-Kanyaru		
RW05	Kigali-Cyangungu		

STOP REASONS CODES

Reason/Cause	Code	Reason/Cause	Code	Reason/Cause
Police/Security Checks	D05	Port Procedures	D09	Vehicle Breakdown
Customs Check	D06	Border Post Procedures	D10	Inland Terminal Procedures
Weightbridge	D07	Insecurity	D11	Other Reasons
Escorts	D08	Personal Reasons		

SERVICES FEES PAID FOR CODES

Code	Service	Code	Service
S01	Police Fees/Fine	S06	Border Post Charges
S02	Customs Charges	S07	Repair Charges
S03	Weightbridge Charges	S08	Personal Charges
S04	Port Charges		

XI. STOP DETAILS – UGANDA INBOUND (RETURN TRIP)

STOP NO.	STOP LOCATION		STOP DETAILS			DEPARTURE DETAILS		FEES/PAYMENTS MADE	
	NAME OF PLACE	ROUTE SECTION CODE	STOP REASON CODE	STOP DATE	STOP TIME	DEPARTURE DATE	DEPARTURE TIME	FEE AMOUNT	SERVICE FEES PAID FOR CODE
1.									
2.									
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UGANDA ROUTE SECTION CODES		Code	Route Section
UG01	Malaba-Jinja	UG09	Ntungamo-Kabale
UG02	Busia-Jinja	UG10	Ntungamo-Ishasha
UG03	Jinja-Kampala	UG11	Kabale-Bunagana
UG04	Kampala-Mbarara	UG12	Kabale-Katuna
UG06	Mbarara-Mpondwe	UG13	Katunguru-Mpondwe
UG07	Mbarara-Katunguru	UG14	Katunguru-Ishasha
UG08	Ntungamo-Kagitumba		

STOP REASONS CODES			
Code	Reason/Cause	Code	Reason/Cause
D01	Police/Security Checks	D05	Port Procedures
D02	Customs Check	D06	Border Post Procedures
D03	Weighbridge	D07	Insecurity
D04	Escorts	D08	Personal Reasons
		D09	Vehicle Breakdown
		D10	Inland Terminal Procedures
		D11	Other Reasons

SERVICES FEES PAID FOR CODES			
Code	Service	Code	Service
S01	Police Fees/Fine	S06	Border Post Charges
S02	Customs Charges	S07	Repair Charges
S03	Weighbridge Charges	S08	Personal Charges
S04	Port Charges	S09	Other Charges

**XII. STOP DETAILS – KENYA INBOUND (RETURN)**

STOP NO.	STOP LOCATION		STOP DETAILS			DEPARTURE DETAILS		FEES/PAYMENTS MADE	
	NAME OF PLACE	ROUTE SECTION CODE	STOP REASON CODE	STOP DATE	STOP TIME	DEPARTURE DATE	DEPARTURE TIME	FEE AMOUNT	SERVICE FEES PAID FOR CODE
1.									
2.									
3.									
4.									
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7.									
8.									
9.									
10.									

KENYA ROUTE SECTION CODES		
Code	Route Section	Code Section
KE01	Mombasa-Mariakani	KE05 Nakuru-Kisumu
KE02	Mariakani-Arthi River	KE06 Kisumu-Busia
KE03	Arthi-River-Nakuru	KE07 Eldoret-Malaba
KE04	Nakuru-Eldoret	

STOP REASONS CODES		
Code	Reason/Cause	Code Reason/Cause
D01	Police/Security Checks	D05 Port Procedures
D02	Customs Check	D06 Border Post Procedures
D03	Weightbridge	D07 Insecurity
D04	Escorts	D08 Personal Reasons
		D09 Vehicle Breakdown
		D10 Inland Terminal Procedures
		D11 Other Reasons

SERVICES FEES PAID FOR CODES		
Code	Service	Code Service
S01	Police Fees/Fine	S06 Border Post Charges
S02	Customs Charges	S07 Repair Charges
S03	Weightbridge Charges	S08 Personal Charges
S04	Port Charges	S09 Other Charges





For further information, kindly get in touch with us at:  
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