

April 2014

Northern Corridor Transit and Transport Co-ordination Authority



*Improved Partnerships
for effective Monitoring*



**TRANSPORT
OBSERVATORY**
RELIABLE NORTHERN CORRIDOR PERFORMANCE DATA



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FOREWORD

In order to facilitate trade movement of persons and goods, stimulate economic and social development, the NCTTCA established the Transport Observatory to monitor the corridor performance. This crucial tool plays a key role in informing policy and decision makers on areas of concern along the logistical chain; whether it relates to time, delays, costs, volumes or efficiency.

Over the last two years, the NCTTCA under the Transport Observatory project has continued to implement various initiatives to ensure that data for the Transport Observatory is effectively sourced. During the past six months, The Secretariat, through the Road Transport surveys managed to collect data from all the Northern Corridor member states using GPS, Classical questionnaires and to electronic data from various stakeholders to facilitate the preparation of this report

This report has identified improvements made in the recent years such as the reduction in Port Dwell time, Transit time, the border and weighbridge crossing time as well as better quality of infrastructure.

During the survey period, truckers moving along the corridor crossed Mariakani and Athiriver weighbridges within half an hour to slightly above two hours. This has been attributed to the initiatives implemented in the quest to improve the performance of these nodes notably the High Speed Weigh in Motion. They subsequently spent about 8 to 26 hours crossing Malaba border post after transiting in Kenya for about 50 to 60 hours.

However, several points of concern along the Corridor logistics chain still hamper the overall performance of the corridor. The NCTTCA Secretariat, the Member States, Regulators and Private Sector shall continue to work together to improve the transport and the logistics value chain.

It was observed that most of the stops along the corridor are due to personal reasons. As per the Transport Observatory data, it takes above 100 hours for transporters to commence the journey after custom release is issued taking 60 - 90 hours before transporters to pick their cargo after customs release; almost the same time it takes to process an entry at one stop centre.

In the recent past, the NCTTCA has worked closely with the Mombasa Port Community to develop a dashboard that is envisioned to be the monitoring tool for the Port charter that the stakeholders have jointly developed and planned to sign. In the same spirit, the Secretariat also prepares and reports on the Corridor performance on weekly basis. The ultimate goal of all those initiatives is to reduce transit costs along the Northern Corridor and make the Corridor be a seamless economic development Corridor.

It was noticed that the volume of cargo to the various Member States being imported through the Port of Mombasa continues to increase as well as the exports, with South Sudan having the volume of imports doubling between the months of January to December in 2013.

The Transport Observatory's online portal recorded an improvement in the number of users accessing the portal with the number almost doubling to over 670 users monthly by February 2014 compared to 406 in the month of January 2013.

Northern Corridor Member States have put together concerted efforts in improving the Corridor efficiency through political support as well as implementing management reforms. This has been witnessed through the reduction of time taken in clearing cargo at the Port, cross weighbridges as well as transiting the Corridor.

The key lesson learnt is that a lot can be achieved through political commitment and goodwill in leadership as well as partnership and creation of synergies between public and private sector to facilitate trade and foster economic growth.



Donat M. BAGULA
Executive Secretary



ACKNOWLEDGEMENT

The NCTTCA Permanent Secretariat passes its sincere gratitude to the Council of Ministers of the Northern Corridor Member States that has continued to support the Transport Observatory work. Profound appreciation also goes to Executive Committee, the various Specialized Technical Committees of the NCTTCA, the Stakeholders Forums and the Experts involved in drafting and validation of this 4th Quarterly Performance Report. These valuable players have positively impacted the implementation of this key initiative for the corridor right from data collection to dissemination of findings as well as formulation of informed decision and policies.

The support by TradeMark East Africa (TMEA) has immensely contributed in facilitating the implementation of this paramount corridor monitoring tool. Specific appreciation goes to the CEO, Directors in charge and officers who have made this Transport Observatory work the successful.

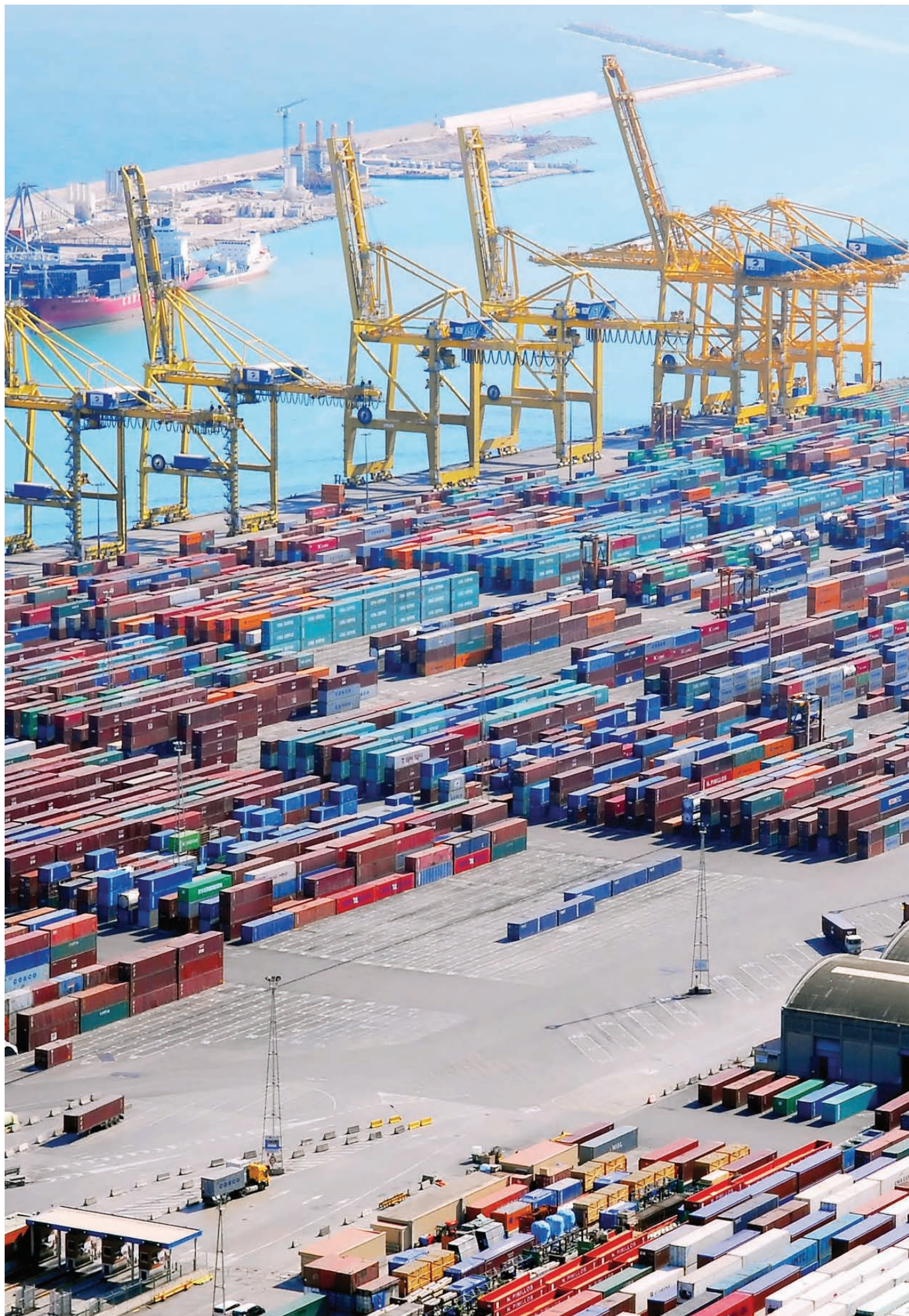
Our sincere appreciation goes to the Kenya Transporters Association has continued to work closely with NCTTCA and TMEA especially on survey work. Through KTA, the secretariat has establishing a sustainable and excellent relationship with transporters and affiliated players in regards to the transport Observatory work.

Special thanks as well goes to all data providers whose participation in the observatory work is critical and primary to the success of the initiative. The efforts put in by designated officers in the various institutions that feed the Observatory with the data is highly acknowledged.

LIST OF ACRONYMS

ABT	Association of Burundi Transporters
ASYCUDA	Automated System for Customs Data
BI	Burundi
CPI	Corridor Performance Indicators
DGDA	Direction Générale Des Douanes Et Accises
DRC	Democratic Republic of Congo
DWT	Dead Weight Tonne
ECTS	Electronic Cargo Tracking System
FEAFA	Federation of East African Freight Forwarders Association
FEC	Federation des Entreprises Du Congo
FERI	Fiche Electronique De Renseignement A L'importation
GPS	Global Positioning Systems
IABT	International Association of Burundi Transporters
ICD	Inland Container Depot
ICT	Information Communication Technology
IPUO	Import Pick Up Order
IRI	International Roughness Index
KE	Kenya
KeNHA	Kenya National Highway Authority
KPA	Kenya Ports Authority
KPC	Kenya Pipeline Authority
KRA	Kenya Revenue Authority
KRB	Kenya Roads Board
KTA	Kenya Transporters Association
KWATOS	Kilindini Waterfront Automated Terminal Operations System

MAGERWA	Magasins Généraux Du Rwanda
NC	Northern Corridor
NCTTA	Northern Corridor Transit and Transport Agreement
NCTTCA	Northern Corridor Transit and Transport Coordination Authority
OBR	Office Burundais des Recettes
OCC	Office Congolais de Contrôle
ODR	Office Des Routes
OGEFREM	Office De Gestion Du Fret Multimodal
OSBP	One Stop Border Post
RRA	Rwanda Revenue Authority
RSS	Road Side Station
RTDA	Rwanda Transport Development Authority
RTOA	Rwanda Truck Owners Association
RVR	Rift Valley Railways
RW	Rwanda
SPSS	Statistical Package for Social Science
SSATP	Sub-Saharan African Transport Policy Programme
TMEA	TradeMark East Africa
TO	Transport Observatory
TOP	Transport Observatory Project or Transport Observatory Portal
UFFA	Uganda Freight Forwarders Association
UG	Uganda
UNRA	Uganda National Roads Authority
URA	Uganda Revenue Authority
URC	Uganda Railways Corporations



1. INTRODUCTION

The Northern Corridor transport System links the NCTTCA Members States of Burundi, Democratic Republic of Congo, Rwanda, Uganda and South Sudan with the sea port of Mombasa in Kenya. The Corridor also creates trade links with other countries in the region namely Tanzania (Northern part) and Ethiopia. The Northern Corridor Transit and Transport Agreement (NCTTA) gives NCTTCA Permanent Secretariat the mandate to coordinate activities along the Corridor in order to facilitate trade, movement of persons, vehicles and goods and hence stimulate regional integration through economic and social development in the territories of the contracting parties. The Northern Corridor has also been mandated to initiate programs aimed at turning the Transport Corridor into an Economic Development Corridor. Apart from many other responsibilities, the Northern Corridor Transit and Transport Coordination Authority (NCTTCA) 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.

The table below shows the percentage GDP growth Projections for the Member states

Table 1: Percentage GDP Growth of NC Member states

Country	2012	2013	2014	2015	2016	2017	2018	2019
Burundi	4.018	4.472	4.737	4.796	5.006	5.19	5.397	5.356
DRC	7.158	8.481	8.683	8.537	7.941	7.261	6.488	5.563
Kenya	4.557	5.56	6.257	6.321	6.378	6.433	6.502	6.546
Rwanda	7.969	5	7.5	7.5	7.5	7.5	7.5	7.5
South Sudan	-47.55	24.402	7.082	17.57	15.737	3.291	5.369	5.81
Uganda	2.776	6.025	6.362	6.766	7.112	7.176	7.274	7.366

(IMF, 2014)

The growth in the NCTTCA Member states has been slowed by high costs of doing business; high costs of transportation, numerous non-tariff barriers, delays and associated administrative costs on the transit logistics chain. This has necessitated various key policy makers to initiate reforms in the corridor logistics chain. Recent initiatives along the corridor has been the issuance of a directive for weighbridges to weigh trucks carrying goods in transit only once at the point of entry and exit, implementation of the single customs territory, removal of police roadblocks etc. The Northern Corridor Transit and Transport Coordination authority endeavours to monitor the impact of the reforms initiated through the Transport Observatory.

In the recent past, the Secretariat has worked closely with the Mombasa port community to develop a dashboard that is envisioned to be the monitoring tool for the Port Charter that the stakeholders have jointly develop and plan to sign.

1.1 Northern Corridor Transit and Transport Coordination Authority objectives

The following are objectives of the NCTTCA:

- To facilitate trade movement of persons, vehicles and goods in domestic, regional and international transport.
- To stimulate economic and social development in the territories of the member States
- To transform the Corridor into Development Corridor which, in addition to offering safe, fast and competitive transport and transit services that secure regional trade, stimulates investment, encourage sustainable development and poverty reduction.
- To implement strategies for accelerating economic and social growth along the Corridor while ensuring environmental sustainability.

NCTTCA with the support of Member States takes measures to expedite the movement of freight along the Corridor, minimize incidence of customs fraud, simplify and harmonize documentation and procedures relating movement of goods in transit, improvement of transport infrastructures and facilities among other initiatives. In order to effectively monitor and evaluate the performance of the Northern Corridor, the NCTTCA Secretariat with the support of TradeMark East Africa launched Observatory to improve exchange of information and monitor movement of cargo along the Corridor.

1.2 Northern Corridor Transport Observatory

The transport observatory helps in identification of the causes of delays (at ports, borders, weighbridges and the transit route). It provides information to support informed decision making by the users of the corridor, regulators and the policy makers which enables putting in place effective measures to address the causes of delays. Furthermore, the observatory measures the impact of measures proposed to solve the bottlenecks.

The Observatory is therefore a key tool in monitoring of the performance of the Northern Corridor, leading to informed interventions towards reducing costs of transportation and related logistics with the direct impact of reduction in the costs of goods in the land-linked countries.

The observatory assists in the:

- *Identification of areas for improvement in relation to targets (or benchmarks).*
 - *Provision of a set of tools for diagnosing problems/bottlenecks on the corridor.*
 - *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.*
 - *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 the secretariat and member states.*
-

The Northern Corridor Transport Observatory results are periodically posted on the transport observatory website (www.top.ttcanc.org). Currently, the Secretariat produces two periodic types of reports. The weekly reports on targeted Performance indicators at the port and the Kenya transit sections and the quarterly reports. These reports are validated by stakeholder before dissemination. The quarterly reports feature the following indicators categorised under Volume and Capacity, Rates and Costs, Productivity and Efficiency and Time and Delays as shown below.

Indicators

Volume and Capacity

1. Total cargo throughput of the port of Mombasa vs transit traffic in tonnes.
2. Volume per country of destination.
3. Rate of containerization of transit traffic in percentage, annual basis at the Port of Mombasa.
4. Evolution of licensed fleet of trucks per country.
5. Average annual distance per truck in km per year.
6. Transport capacity by rail (locomotives and wagons).

Rate and Costs

7. Transport costs per route and per mode (including transit charges).
8. Rail Freight Charge.
9. Road Freight Charge.
10. Port Transit Charges.
11. Return of empty containers (grace period, penalties and deposit).

Productivity and Efficiency

12. Number of check points, NCP (Weighbridge, Police, Customs, Road Toll) per country per route.
13. Rate of Fraud or Declared Damage for goods in transit, RFDD (percentage of total transit).
14. Quality of the transport infrastructure.
15. Gross Moves per ship per hour at the port of Mombasa
16. Volume of containerized and general cargo handled per day/month/quarterly at the Port of Mombasa.
17. Number of accidents per route.
18. Weighbridge Traffic against time
19. Weight compliance

Indicators

Time and Delays

20. Transit Time per route per mode of transport (by country).
21. Transit Time in Uganda, Rwanda, Burundi, DRC (Road).
22. Transit time in Kenya (Road through Malaba or Busia).
23. Transit time origin to destination by country.
24. Ship turnaround time
25. Vessel waiting time before berth
26. Average cargo dwell time in Mombasa port.
27. Time for Customs Clearance at the Document Processing Centre.
28. Transit time at Mombasa One Stop Centre
29. Transit time after Customs Release at the Port of Mombasa
30. Border Post Crossing Time.
31. Time for Customs procedures at destination.
32. Transit time within the ICD/Inland Port.
33. Weighbridge crossing time.

Weekly reports are published every Thursday and discussed at the Friday Port Community Meetings. These “weekly reports” take stock of only seven indicators and the results are posted on the Northern Corridor Observatory website.

Weekly Performance Monitoring indicators for the Corridor

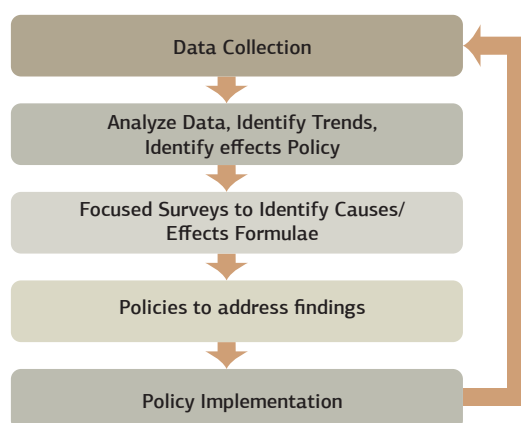
For reporting on what is happening every week, the following indicators are featured:

1. Average port dwell time
2. Time for clearance at the custom processing centre
3. Time for clearance at one stop
4. Time taken after customs release to removal from the port
5. Average weighbridge traffic.
6. Weighbridge Compliance
7. Transit time in Kenya.

The Northern Corridor Dashboard has been developed and will be hosted by the Secretariat and will feature these indicators.

1.3 Transport observatory as a Policy Making tool

The major direct beneficiaries of the TO are the regulators, policy makers and the private sector stakeholders (including among others Shippers & Shipping Agents, Freight Forwarders & Clearing Agents, Transporters) involved in trade and transport along the Northern Corridor.



The NCTTCA continuously seeks to provide sound advice to the 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.

The table below shows the number of visits to TOP website from January, 2013-February 2014.

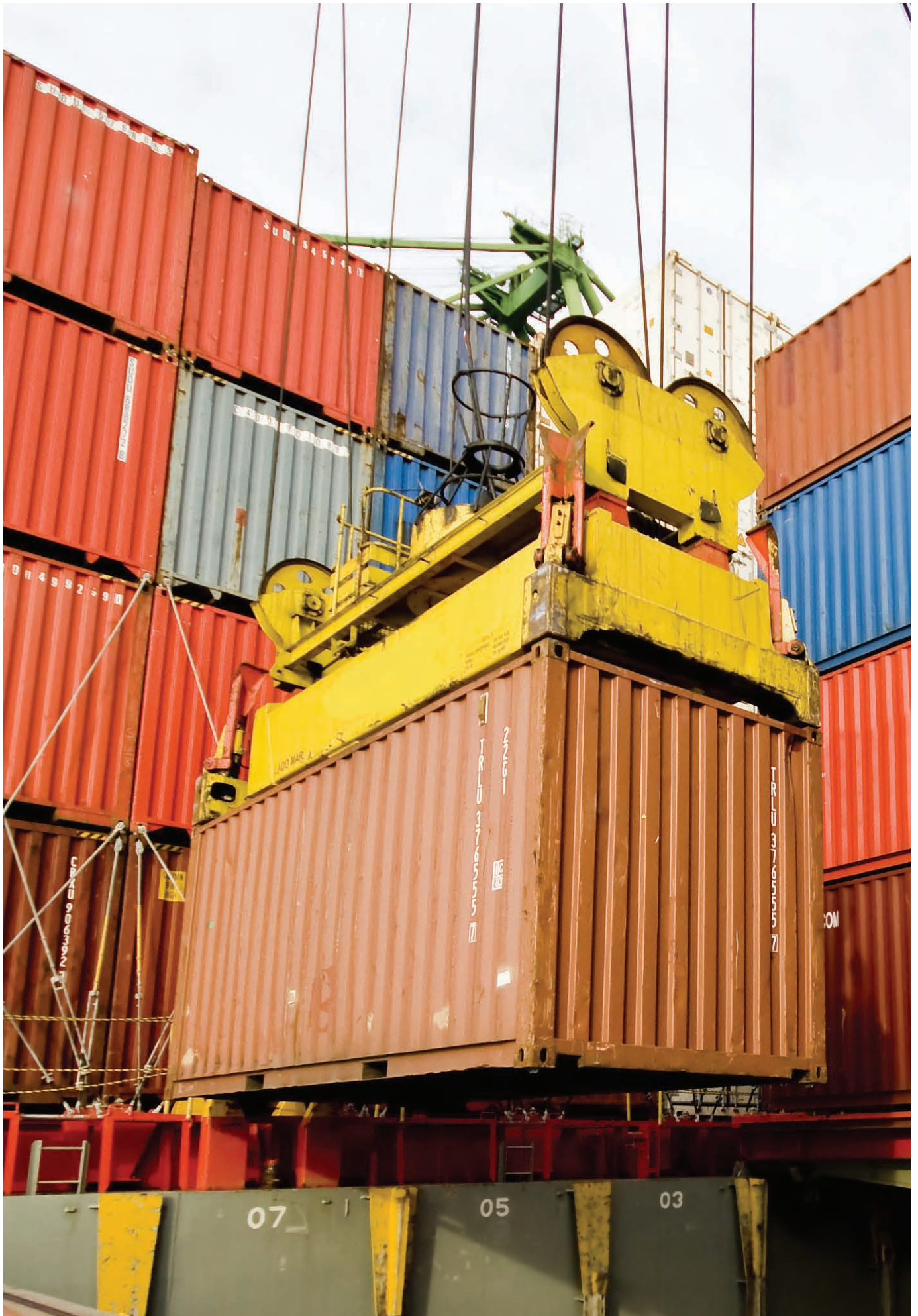
The T.O online portal has been registering over 60% new visitor every month.

Figure 1: T.O as a Policy Making Tool

Table 2 : T.O Online Portal Usage

2013												2014	
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
406	356	464	759	679	1,211	947	781	678	920	794	440	672	677

(Google Analytics, 2014)



2. METHODOLOGY AND ANALYSIS

2.1 Data collection

Data for the observatory is obtained from various sources i.e. Data from customs systems in member states, surveys (road transport survey and GPS survey) and country consultation missions. The annual Stakeholders surveys of the Northern Corridor which are carried out by the Secretariat together with the regulators and users of the Northern Corridor in the Member States also provide qualitative data for the observatory.

2.2 The Road Survey

The road transport survey and the GPS survey are done concurrently. A Field supervisor was recruited with the support of Trademark East Africa (TMEA) to administer questionnaire and issue GPS kits to willing transporters. For trucks destined for longer distances along the Corridor, two GPS kits were issued to be used consecutively such that when the battery of one is discharged, the other is switched on in order to complete a round trip. The field work is a continuous process which started in February, 2013 and the data gathered is analysed every quarter. Data values of more than 30 days and 21 days for Transit times and Port Dwell Time were identified as outliers and excluded from analysis. SPSS stem and leaf plot were used to identify outliers in other data sets.

GPS data consists of coordinates (longitudes and latitudes) and the time stamps. Initial preparations include recoding and geo zoning to map possible stop areas. In the geo zoning process the Border posts zones are set 1KM on both sides of the border and about 100 meters of both sides of the road while weigh bridges zones considered to be 1KM before and 0.5 KM the Weigh Bridge basing on outbound direction (for imports moving from the port to the hinterland) and about 100 meters of both sides of the road.

2.3 Country Consultation Missions

The Secretariat organizes country consultation missions every year to assess the implementation of policy organs directives. This year the consultative missions took place between 13th February 2014 and 1st March 2014 and provided both qualitative and quantitative data.

Objectives of the Country missions

Collection of data for the Transport Observatory including data on intraregional trade among the NCTTCA member States;

Assessment of the status of implementation of the decisions and recommendations by the Policy Organs of the NCTTCA



3. FINDINGS

3.1 Road Survey

3.1.1 Overview

The Road Transport Survey and the GPS Survey are run concurrently and involve issuing the truck drivers with a GPS kit and a questionnaire. This survey has been providing scientific results especially in monitoring the transit times and the delays at each node or stop along the corridor. This is the 2nd report that is featuring GPS survey. The study period for the survey featured in this report is from September, 2013 to February 2014. The GPS survey is run concurrently with the road transport Survey whereby the truck driver is issued with a GPS kit and a questionnaire.

Purpose of the Survey

To establish the causes of the delays along the Northern corridor disaggregated by nature of the cause, location, date and time of the day.

To establish the nature of any fees paid and the type of service for which the fees are paid.

3.1.2 Sampling

A total of 214 questionnaires were filled out of the 299 issued to truck drivers on transit as shown in table 3 below. This was an improvement from the previous survey that was carried out between Februarys 2013 and July 2013 which only 90 participated.

Table 3 : Achieved Sample

Country	Contact Sample	Effective sample	Response rate
Burundi	1	-	-
DRC	14	6	43%
Kenya	22	17	78%
Rwanda	21	10	48%
South Sudan	9	5	56%
Uganda	232	176	75%
Total	299	214	72%

(Road Survey, Sep 2013 - Jan 2014)

During the survey exercise, the response rate was recorded to be significantly high in some destination compared to others as a result of multiple reasons. Some of the notable reasons for this include the limited volume of cargo, security concerns, language barrier among some respondents and battery life for the GPS kits used. Various measures are being implemented to improve on the sample size and response rate.

3.1.3 Road Survey Findings

3.1.3.1 Number of Stops and Reasons

The table below shows the number of stops per country.

Table 4 : Number of Stops by Country

Direction	Burundi	DRC	Kenya	Rwanda	S. Sudan	Uganda
Inbound	4	4	1264	6	2	352
Outbound	7	5	1938	45	11	866

(Road Survey, Sep 2013 - Jan 2014)

Results from the sample shows more stops in Kenya and Uganda. Most of the transit traffic originates from Kenya and the fact that the Kenyan section being the longest. Furthermore, all trucks pass through Kenya and the number of trucks decreases as we progress along the corridor.

Table 5 : Percentage distribution of Reasons for stopping by Direction

Direction	Inbound	Outbound	Total
Personal and Other Reasons	20.11	21.52	41.63
Police/other security checks	5.37	8.24	13.61
Border Post Procedures	3.67	5.92	9.59
Customs checks	1.66	5.28	6.94
Insecurity	1.48	2.1	3.58
Inland Terminal Procedures	1.39	3.42	4.81
Vehicle Breakdowns	1.17	2.45	3.62
Weighbridges	1.02	14.07	15.09
Port Procedures	0.26	0.51	0.77
Escorts	0.02	0.33	0.35

(Road Survey, Aug 2013 - Jan 2014)

For outbound, most of the stops occur at weighbridges (14.07%) followed by personal reasons (12.97%) while for inbound most stops are due to Personal reasons (12.55%) followed by other reasons (7.56%). The total percentage for stops at weighbridges for both inbound and outbound is 15.09% while for personal reasons is 25.52%. In the previous survey, most of the stops were due to personal reasons (23%) followed by weighbridges (16%) for both inbound and outbound.

This implies that there is no sufficient evidence to show reduction in weighbridge stops since the difference is only 1%.

Police check points stops however reduced from 15% in the previous survey to 13.61%.

Table 6 : Number of Stop Reasons by Country (Inbound)

Reason	Kenya	Uganda
Personal Reasons and others	773	126
Police/other security checks	201	40
Border Post Procedures	72	90
Insecurity	62	5
Vehicle Breakdowns	41	12
Weighbridges	40	6
Customs checks	35	38
Inland Terminal Procedures	28	34
Port Procedures	11	1
Escorts	1	0

(Road Survey, Aug 2013 - Jan 2014).

In Kenya, most of the stops (499) were due to personal reasons while in Uganda; Border post procedures make most of the stops.

Table 7 : Number of Stop Reasons by Country (Outbound)

Reason	Kenya	Uganda	Rwanda
Personal Reasons	502	82	0
Weighbridges	497	139	1
Police/other security checks	295	66	6
Other	245	126	9
Border Post Procedures	118	133	9
Vehicle Breakdowns	92	16	0
Customs checks	91	130	9
Insecurity	71	23	0
Inland Terminal Procedures	14	127	10
Port Procedures	10	12	1
Escorts	3	12	0

(Road Survey, Aug 2013 - Jan 2014)

In Kenya most of the stops are due to personal reasons (502) followed by weighbridges (497 stops). In Uganda, most of the stops are due to weighbridges (139) stops followed by border post procedures. For Rwanda, most of the stops are due to inland terminal procedures followed by Border post procedures and customs checks.

3.1.3.2 Fees Paid during the survey

This section shows an array of fees often set or incurred that may impact on costs assumed by the transporter.

Capturing Data for Fees/Charges along the Corridor

In the first road transport survey which ended in September, 2013, data captured on tariffs was very minimal. This year, there has been an improvement though there were difficulties by drivers in recording the correct currency type. Differentiating between official and non-official charges at the Border was not possible considering the way the data was captured.

The finding below give indication that fees is paid at various points. Out of about 4497 stops, only 398 incidences recorded fee being paid of which 60 dint specify the type of fees paid.

Table 8: Type of Fees paid for both inbound and Outbound (Averages)

Type of Fee	Inbound (USD)	Outbound (USD)	No of incidences
Other Charges	10.81	5.72	72
Personal Charges	4.87	2.95	81
Border Charges	4.67	34.72	72
Weighbridges charges	4.66	12.32	6
Repair Charges	4.02	7.84	13
Vehicle Breakdowns	3.91	3.23	9
Customs charges	2.3	24.1	21
Police fees/ fine	1.83	4.84	54

(Road Survey, Aug 2013 - Jan 2014)

Outbound vehicle pay more fees than inbound. Police fees/fines target outbound vehicles than inbound vehicles.

Table 9: Type of Fees paid by Countries (Averages in USD)

Type of Fee	Kenya	Uganda	Rwanda	S Sudan
Customs charges	30.99	6.84		
Border Charges	18.26	32.2	152	35.15
Weighbridge Charges	12.32			
Other Charges	9.03	4.5		
Repair Charges	6.11	0.704		26.36
Police fees/ fine	4	6.36		
Vehicle breakdown	2.23	3.91		
Personal Charges	3.61	3.73		

(Road Survey, Aug 2013 - Jan 2014)

Border charges are paid in all countries. Average police charges are higher in Uganda than Kenya. There is need for sensitization and development of brochures to inform truckers of the legal charges along the corridor.

Table 10: Stop Reasons and Fee paid

Stop Reason	Mean (USD)	Number of Stops
Weighbridges	8.06	14
Other Reasons	7.04	60
Vehicle Breakdowns	6.01	13
Personal Reasons	4.48	89
Police/other security checks	2.82	88
Insecurity	1.91	14

(Road Survey, Aug 2013 - Jan 2014)

Though many of the Stops that attract fees occur at police check points, the fee involved is lower than those at the weighbridges.

Table 11 below gives the top 10 places with average fee paid. Malaba tops the list followed by Mukono.

Table 11: Place and Fees Paid

Name of place	Country	Mean (USD)
Malaba	Kenya/Uganda	19.36
Mukono	Uganda	12.14
Mariakani	Kenya	11.03
Webuye	Kenya	9
Busowa	Uganda	8.88
Magamaga	Uganda	8.33
Naivasha	Kenya	7.52
Kampala	Uganda	7.43
Mbale	Uganda	6.44
Nairobi	Kenya	5.75

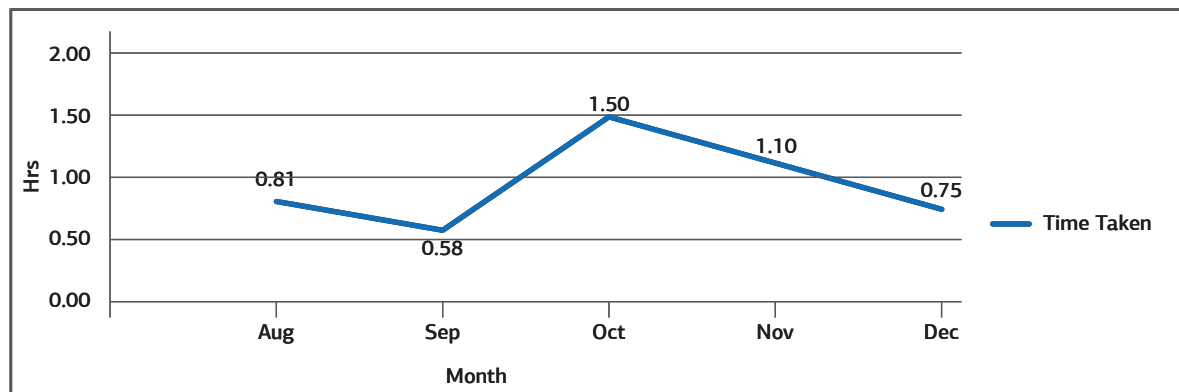
(Road Survey, Aug 2013 - Jan 2014)



3.1.3.3 Findings from the Road Survey GPS

The figure below shows the average crossing time at Mariakani weighbridge. The weighbridge is privately managed has the following features: Auxiliary Lane has been constructed, Multi Deck Scale in place, High Speed WIM – 2, Mobile – 1 Static– 1 Traffic Control CCTV cameras and computerized.

Figure 2: Average crossing time at Mariawkani Weighbridge (Hrs.)



Road Survey, Aug 2013 - Jan 2014)

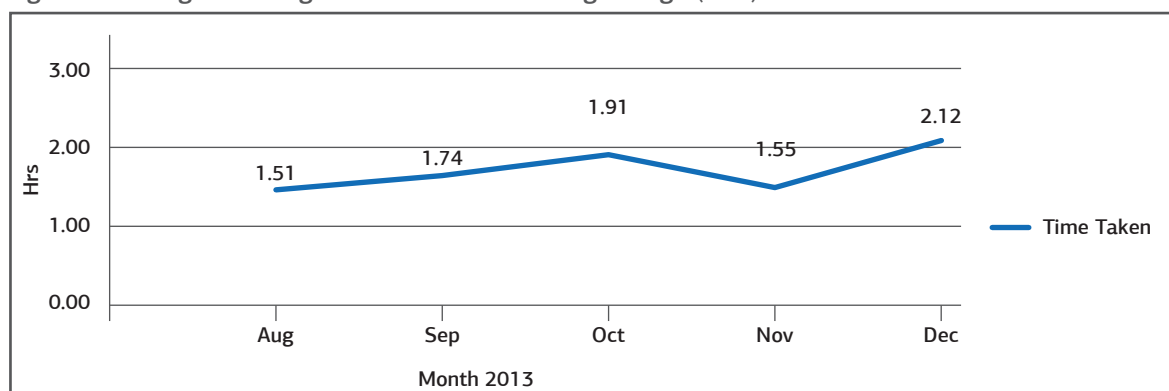
Figure 2 above shows a range of 0.58 hours and 1.5 hours which is a significant drop from the previous survey (April-September) which registered between 1.1 and 2.4 hours.

In the Month of October, the WIM was being set up and piloted. The sudden surge around that period could have resulted from the setups and piloting. Full implementation of WIM is expected to result to lower crossing time.

Athi River weighbridge is privately Managed and has the following features: Multi Deck Scale in place, HSWIM – 1 Static – 1 and Mobile – 1, Traffic Control CCTV -cameras and computerized.

Figure 3 gives the average crossing time at Athiriver.

Figure 3 Average crossing time at Athi River Weighbridge (Hrs.).

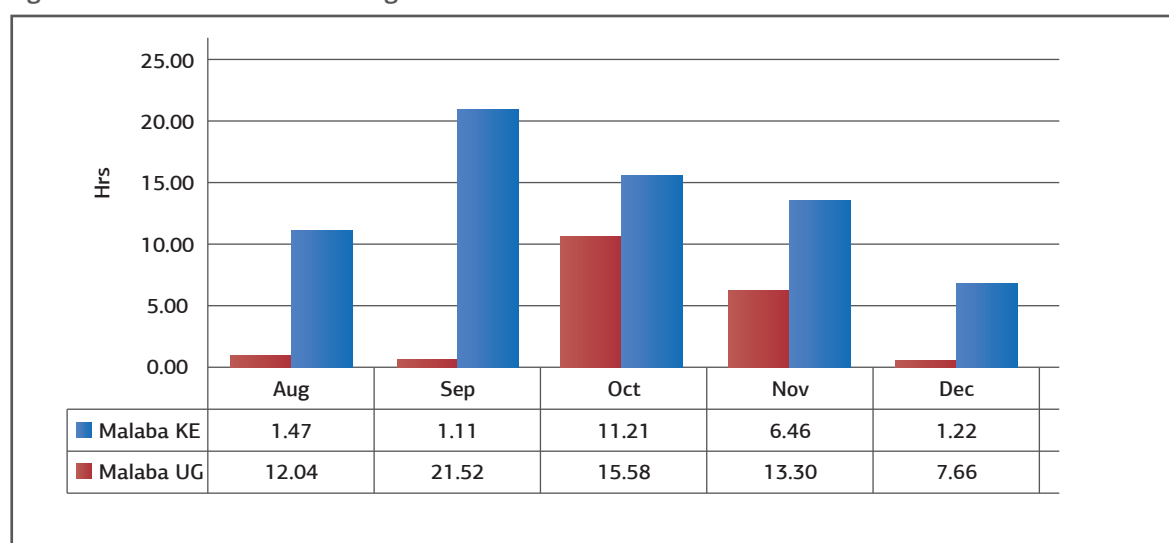


Road Survey, Aug 2013 - Jan 2014)

Weighbridge crossing time of between 1.51 hours and 2.12 hours. This shows some improvement from the last survey which showed results ranging from 2.5 hours to 8.4 hours.

The figure below shows the average border crossing time at Malaba border which is the busiest border along the corridor.

Figure 4: Malaba Border crossing time



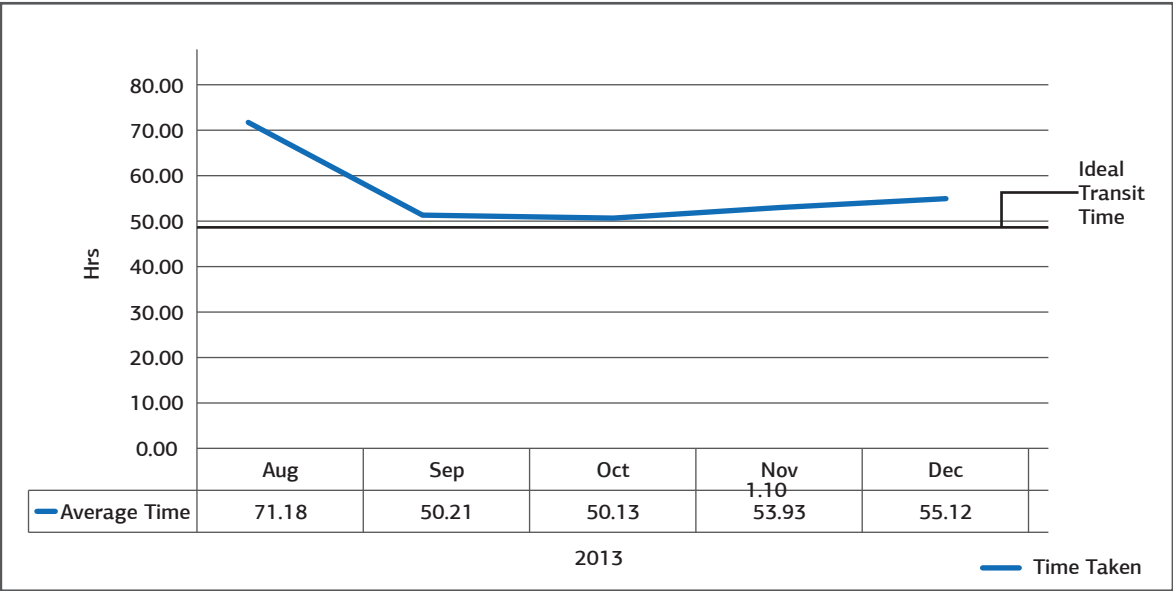
(Road Survey, Aug 2013 - Jan 2014)

Trucks spending more time on the Ugandan side of the border. However, border crossing time has been reducing for both Uganda and Kenyan side of Malaba border to 1.22 hours and 7.66 hours respectively during the month of December.

The average dwell time for trucks in Ugandan side reduced from 31.58 hours in the previous survey period (April to August) to 14.02 hours in the current survey.

Implementation of the single customs territory is expected to reduce further the crossing time.

Figure 5. Below gives the transit time from Mombasa to Malaba which is approximately 933Km.



(Road Survey, Aug 2013 - Jan 2014)

Transit time in Kenya was highest in August, 2013 at 74.48 hours however between September and December, average transit time range between 50 and 56 hours.



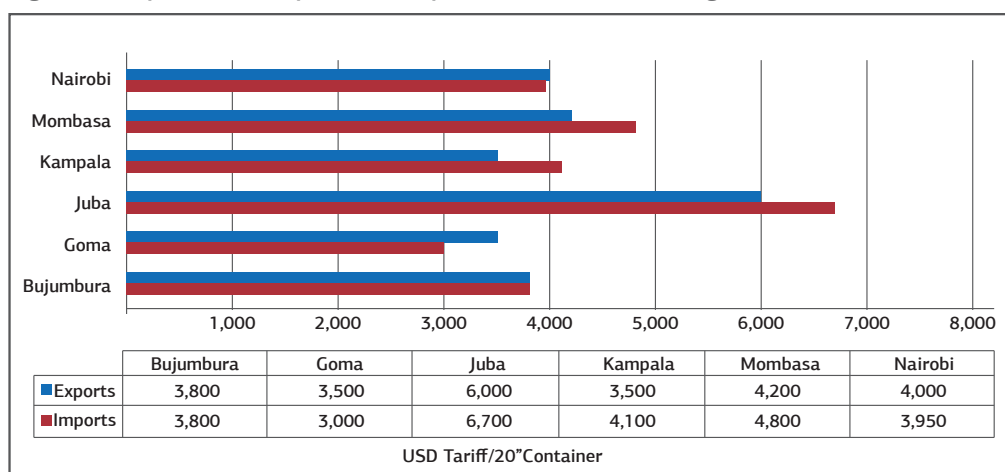
3.2 Transport Cost and rates

Transport cost is the amount that the transporter must incur to provide transportation services. The cost is determined by fixed (infrastructure) and variable (operating) costs depending on various conditions related to location, infrastructure, administrative barriers, energy and how the freight is carried. Rates on the other hand are the price of transportation services paid by the cargo owners/ users. The rates may not necessarily express the real transport cost since they are the negotiated cost for moving a unit of freight between various locations. Rates are subject to a competitive pressure and are usually adjusted based on demand and the supply as well as the value of the commodity. Determination of transport cost is beyond the scope of this report instead it features the rates charged by various transporters across the region.

This section gives various rates charged by transporters in the region and the number of round trips made per month. The figures will serve as a baseline for consecutive monitoring. It's expected that with the various initiatives along the corridor such as the ongoing efforts in addressing Corridor bottlenecks and improvement in infrastructure, trucks will make more round trips and hence the reduce transport rates.

3.2.1 Transport rates to/from Kigali

Figure 6: Imports and Exports Transport Rates (USD) for Kigali, RW



(RTDA, Rwanda, Feb 2014)

Table 12: Number of Round Trips made by Truckers in Rwanda

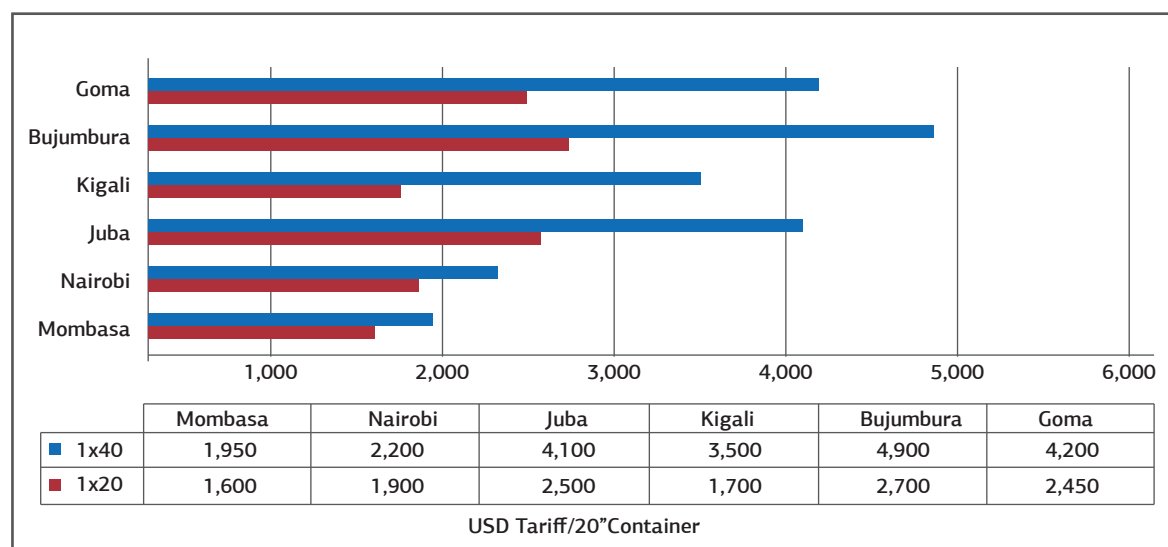
From	To	Round trips/Month
Kigali	Mombasa	1
	Nairobi	1
	Juba	1
	Kampala	2
	Bujumbura	2
	Goma	1

(ATAR, Rwanda, Feb 2014).

During the consultation mission a transporter attributed the possible number of round trips to Goma from Kigali to the nature of cargo collected from the West part of DRC which is mostly minerals that require special handling as well as procedures.

3.2.2 Transport rate to/from Kampala

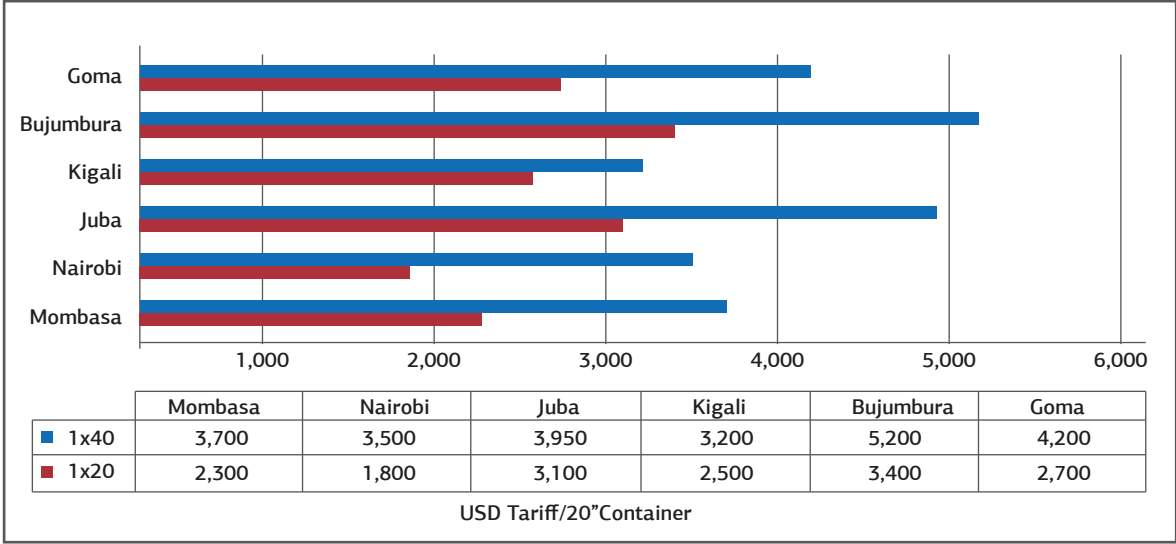
Figure 7: Exports Transport Tariff (USD) from Kampala, UG



(Uganda Freight Forwarders Association, Feb 2014)

Figure 6 shows transport rates from Mombasa, Nairobi, Juba, Kigali, Nairobi, Bujumbura and Goma to Kampala.

Figure 8: Imports Transport rate (USD) to Kampala, UG



(UFFA, Feb 2014)

Table 13: Number of Round Trips made by Truckers in Uganda

From	To	Round trips/Month
Kampala	Mombasa	3
	Nairobi	3
	Juba	3
	Kigali	4
	Bujumbura	2
	Goma	3

(UFFA, Feb 2014)

3.2.3 Transport rate to/from Bujumbura

Table 14: Transport rate (USD) Per Ton from Bujumbura to various Destinations

From	To	Apr, 2013	Feb, 2014
Bujumbura	Nairobi	160	130
	Mombasa	180	160
	Kampala	140	100
	Goma	70	80
	Kigali	50	60

(Association of Burundi Transporters, Feb 2014)

Table 15: Imports Transport Tariff (USD) to Bujumbura per Tonne

From	To	Nov, 2012	Apr, 2013	Feb, 2014
Nairobi	Bujumbura	200	180	200
Mombasa		235	220	220
Kampala		160	140	160
Goma			70	100
Kigali		50	50	80
(ABT, Feb 2014)				

Table 16: Number of Round Trips made by Truckers in Burundi

From	To	Number of round trips/Month
Bujumbura	Nairobi	1
	Juba	0
	Kampala	2
	Mombasa	1
	Goma	2
	Kigali	3

(Association of Burundi Transporters, Feb 2014)

Generally, there is a slight decrease in the rates charged for transportation to Burundi from the previous year. Distance affects transport costs and thus transport rates. The distance from Mombasa Port to Bujumbura, Burundi is 1961 KM along the Northern Corridor. Using the route from Mombasa via Taita Taveta through Tanzania to Burundi which is 400 Km shorter would reduce the cost significantly.

3.2.4 Transport rates to /from DRC

Table 17 below shows rates charged by DRC transporters.

Table 17: Transport rate to and from some cities in East DR Congo.

From	To	Rate(USD)
Mombasa	Bunia	7000
Mombasa	Lubero	7000
Mombasa	Butembo	7000
Lubero	Mombasa	3500
Bunia	Mombasa	3500

(FEC, 2014)

3.2.5 Indicative Transport Tariff Cost per KM

Table 18 below shows rates (per km per 20' or 40' container) charged by Rwanda transporters.

Table 18: Transport rate to and from Kigali in Rwanda

From	To	Distance (Kms)	USD Per KM per 20'/40'
Kigali	Bujumbura	279	13.62
Kigali	Goma	158	22.15
Kigali	Juba	1162	5.16
Kigali	Kampala	513	6.82
Kigali	Mombasa	1682	2.50
Kigali	Nairobi	1201	3.33
Bujumbura	Kigali	279	13.62
Goma	Kigali	158	18.99
Juba	Kigali	1162	5.77
Kampala	Kigali	513	7.99
Mombasa	Kigali	1682	2.85
Nairobi	Kigali	1201	3.29

The costs per km and per 20'/40' vary between 2.50 and 22.15 per 20'/40' Container respectively from Kigali to Mombasa and from Kigali to Goma/DRC.

Table 19 below shows rates (per km per 20' and per 40' container) charged by Uganda transporters.

Table 19 : Transport rate to and from Kampala in Uganda

From	To	Distance	USD Per KM per 20'	USD Per KM per 40'
Kampala	Mombasa	1169	1.37	1.67
Kampala	Nairobi	688	2.76	3.20
Kampala	Juba	649	3.85	6.32
Kampala	Kigali	513	3.31	6.82
Kampala	Bujumbura	792	3.41	6.19
Kampala	Goma	669	3.66	6.28
Mombasa	Kampala	1169	1.97	3.17
Nairobi	Kampala	688	2.62	5.09
Juba	Kampala	649	4.78	6.09
Kigali	Kampala	513	4.87	6.24
Bujumbura	Kampala	792	4.29	6.57
Goma	Kampala	669	4.04	6.28

From/To Kampala, the costs per km and per 20' varies between 1.37 US\$ (Kampala-Mombasa) and 4.87 US\$ (Kigali-Kampala) and between 1.67 US\$ (Kampala-Mombasa) and 6.82 US\$ (Kampala – Kigali) for a 40' container.

Table 20 below shows rates (per km per 20' or per 40' container) charged by DRC transporters.

Table 20 : Transport rate to and from Bunia and Butembo in East DRC

From	To	Distance	USD Per KM per 20'/40'
Mombasa	Bunia	1666	4.20
Mombasa	Butembo	1746	4.01
Bunia	Mombasa	1666	2.10
Goma	Kigali	158	18.99

To move a 20' or 40' container from Goma to Kigali it cost approximatively between 2.10 US\$ (Bunia -Mombasa) and 18.99 US\$ (Goma-Kigali) per km.

3.3 Results from Electronic Data Sources

This section gives some findings from electronic data sources i.e. Customs systems from Member states and Weighbridge Management systems from Roads authorities and the Ports Authorities.

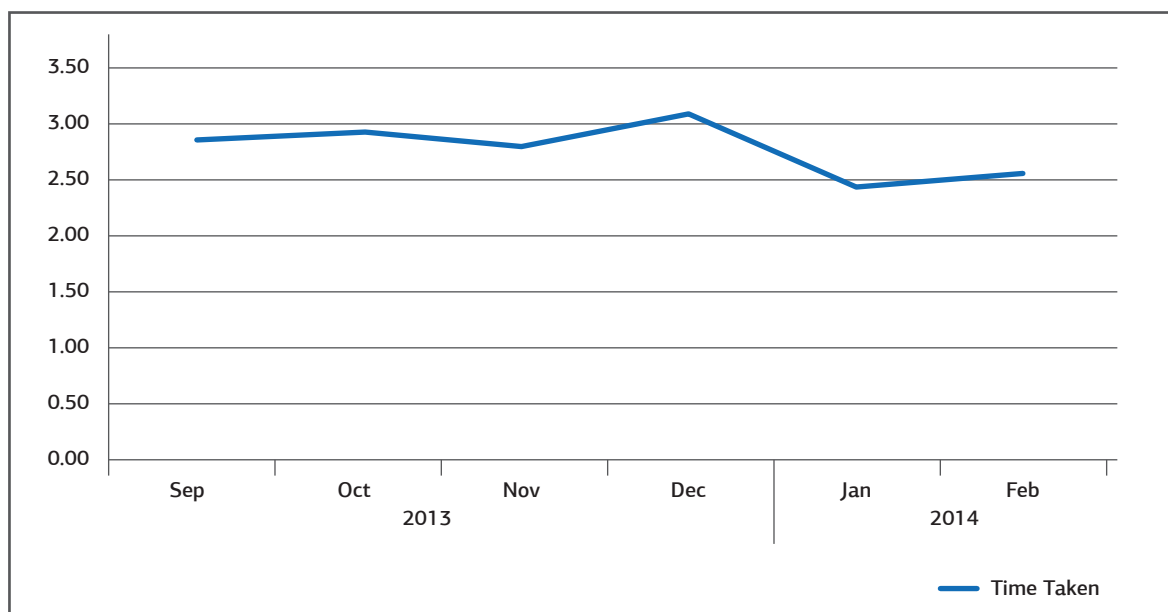
3.3.1 Transit time and Delays

The price of a transport service includes time costs and costs related to possible inefficiencies such as unexpected delays at various transit nodes. This is an important consideration as it is associated with the service factor of transportation. It is estimated that the Total indirect (hidden) costs per day of delays are estimated at \$384.4 for a loaded truck along the Northern Corridor.

3.3.1.1 Average Time taken at Document Processing Centre

The clearance at DPC is the process when entries are passed by KRA. This indicator provides time that forms part of the Port dwell time. Figure 17 below shows the Clearance Time at DPC (Nairobi).

Figure 9: Average Time (Hrs.) taken at the Document Processing Centre



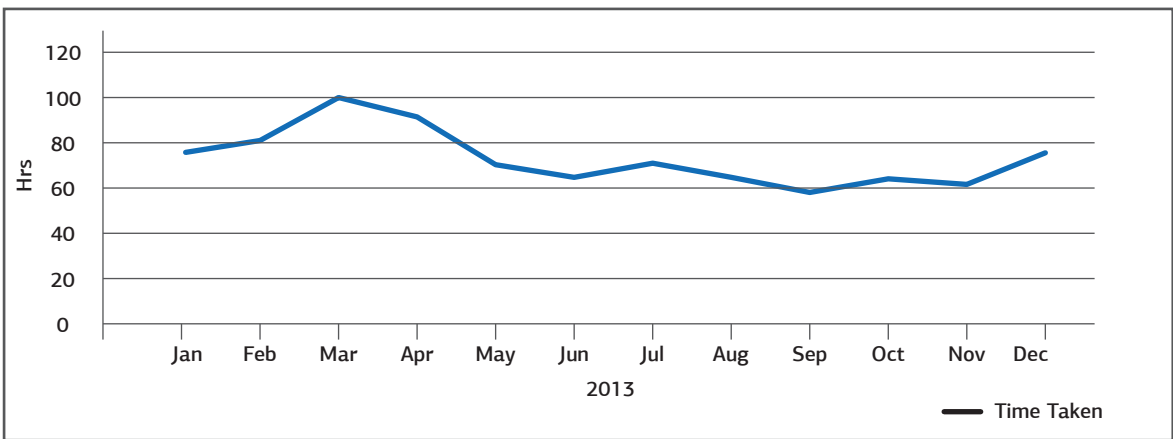
(KRA, Sep 2013 - Feb 2014)

Average time at document processing centre was less than three hours except December, 2014.

3.3.1.2 Time taken by Cargo in the Port after Customs release

Measures the time taken by Importers to have their cargo evacuated after authorization by the Customs

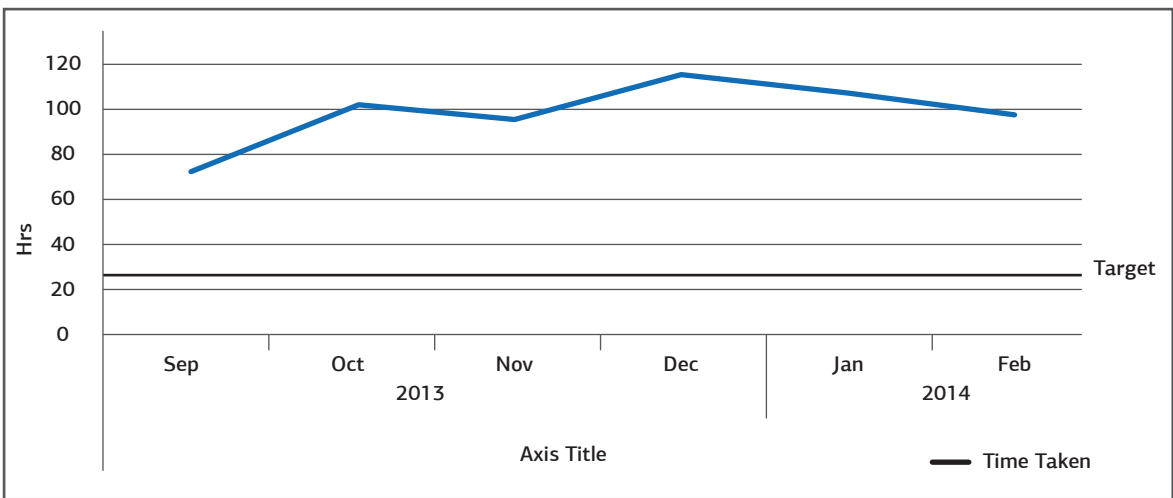
Figure 10 : Average Time (Hrs.) taken by Cargo in the Port after Customs release



(KRA, Jan – Dec 2014)

In March 2013, it took about 100 hours for transporters to pick their cargo from the port after release. The entire time taken ranges between 60 and 90 hours.

Table 11 : Average Time (Hrs.) taken at the One Stop Centre



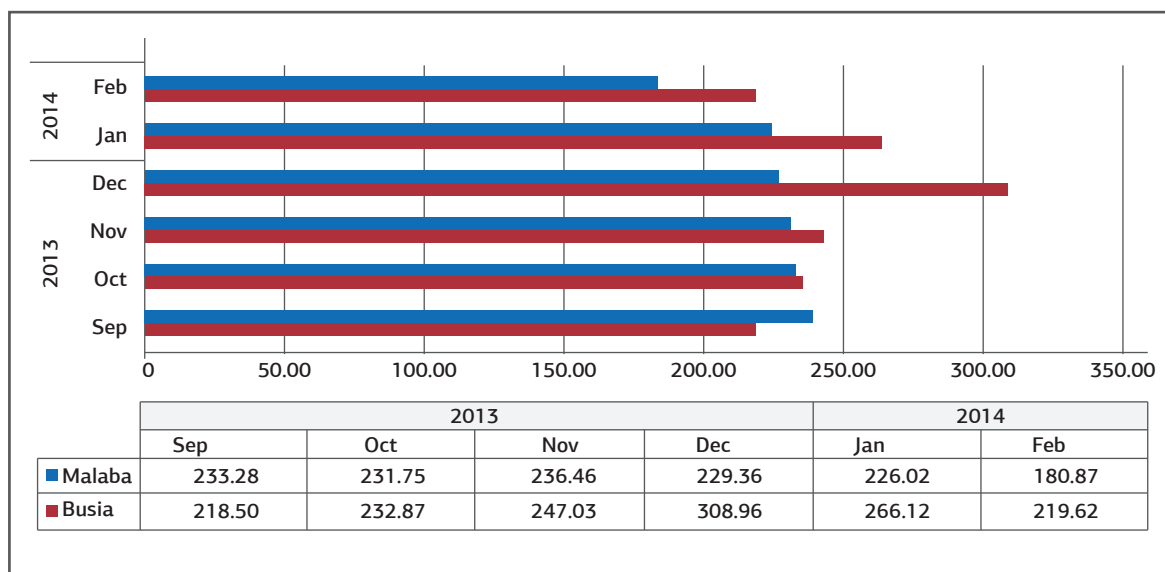
(KRA, Sep 2013 - Feb 2014)

Trend shows general increase in the time at the One Stop Centre, however, there has been a slight decrease for the last two months.

3.3.1.3 Transit Time in Kenya

This measures the period from the time cargo is removed from the Port of Mombasa to the time the export certificate after crossing the border (Malaba or Busia).

Figure 12 : Average Transit Time (Hrs.) in Kenya



(KRA, Sep 2013 - Feb 2014)

Longer transit times in the month of December and January.

3.3.1.4 Customs data vs GPS data for Transit time.

Table 20: Comparison of Customs and Road Survey GPS Data for Transit Time (Hrs.) (Via Malaba)

The table below shows the monthly averages transit time from the GPS survey and the customs data. The GPS kit is switched when the truck starts the journey and in most cases this happens several days after Customs release the Cargo.

Table 21 : Comparison of the GPS and Customs Electronic Data (Hrs.)

Month	GPS	Customs	Difference
Sep, 2013	50.21	233.28	183.07
Oct, 2013	50.13	231.75	181.62
Nov, 2013	53.93	236.46	182.54
Dec, 2013	55.12	229.36	174.24

(KRA and Road Survey, Sep 2013 - Dec 2013)

The GPS data collected during the road surveys is measured from the time the truck leaves Mombasa to the time the truck crosses the border while the Customs electronic data measure the time taken from the time customs releases the cargo to the time the consignment is marked as crossed in the system by customs officer at the border. It is worth noting that the time taken after customs release (See 3.3.1.2) averaged just above 60hours for most of the months and forms part of the transit time using the customs data and delays during this period can be attributed to the private sector, notably the transporters taking too long to clear and pick their cargo.

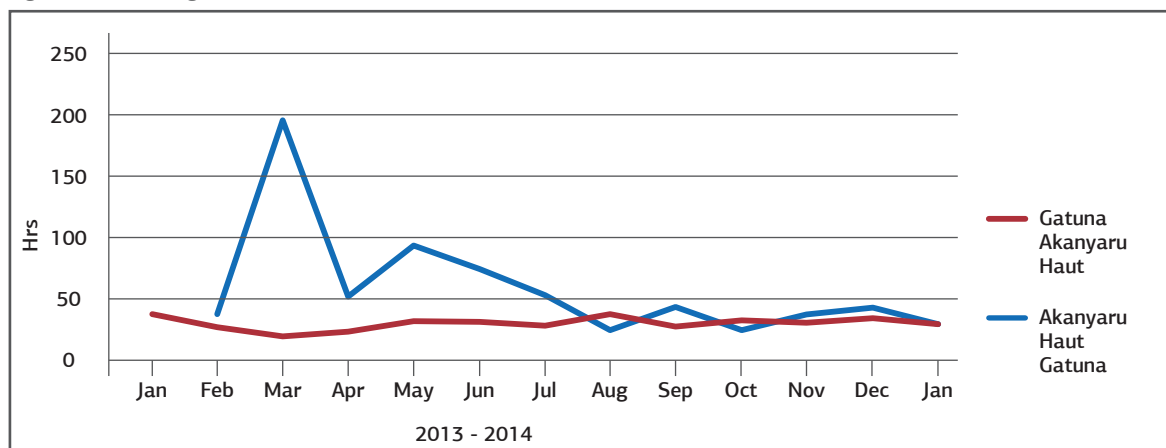
The difference in the transit time using the GPS data and the Customs electronic data was noted to be averaging at about 180hours which is about seven days. This difference is anticipated and various reasons have been established to be causing this including:

- Transporters are required to have cargo evacuated from the port (due to allowed time limit) then end up spending significant time in their yards repairing their trucks and also sourcing for funds to facilitate the journey or the importer not paying the clearing agent in time. Some transporters have reported that such delays could take days. Transporters should consider reducing this time to improve on the turnaround time.
- Another possible cause could be the delays occurred when the transporters takes the load to a private weighbridge at Mikindani to check the weight status to avert delays at Mariakani and other weighbridges.
- Finally, since bonds cancellation at border posts are not fully automated, customs officers are then required to execute exits on the system. Delays in exiting the consignment in the system at the border could be as a result of undertaking the process in batches or system downtime.

3.3.1.5 Transit time in Rwanda

The figure below shows transit time in Rwanda from Gatuna to Akanyaru Haut and vice versa

Figure 13 : Average Transit Time(Hrs) in Rwanda



(RRA, Jan 2013 - Jan 2014)

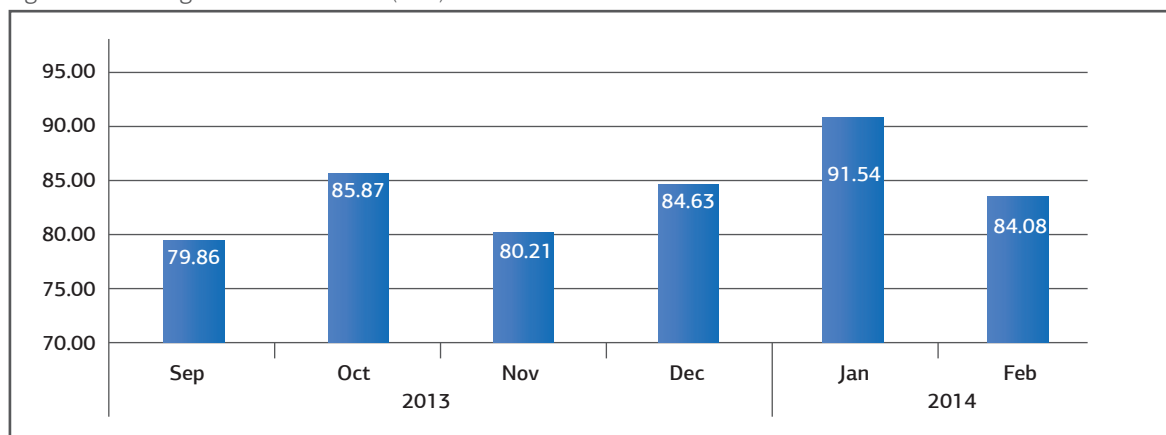
It takes between 28 and 32 hours from Gatuna to Akanyaru Haut.

3.3.1.6 Container Dwell Time at the Port of Mombasa

This measures on average how long containers stay at the port from the time they are offloaded to the time they exit the Mombasa Port.

Local cargo goes to the CFS in Mombasa and these CFS give different free storage periods.

Figure14 : Average Port Dwell Time (Hrs.)



(KPA, Sep 2013 - Feb 2014)

KPA has a target achieve container dwell time of 72 hours by the year 2017.

The dwell time for February, 2014 was 84.08 hours. Concerted effort needs to be channelled towards reducing the container dwell time to 72 hours.

3.3.2 Volume and Capacity

3.3.2.1 Cargo Throughput at the Port of Mombasa

Throughput projections inform investment in storage facilities and expansion of the port infrastructure. Table 11 shows imports by cargo type at the port of Mombasa by type of cargo. The rate of containerization has slightly increased to 35% from 27% in 2009. With containerization, the type of product plays little in the transport cost since rates are set per container. Containerized transportation translates to a significant reduction in freight transport rates around the world.

Table 22 : Imports at the Port of Mombasa (Tonnes) by Cargo Type

Year	Containerized	Dry Bulk	General Cargo	Petroleum & oil	Veg. Oil	Total	Rate of Containerization (%)
2009	4,821,080	4,640,676	1,351,327	5,723,478	707,990	17,244,552	28
2010	5,320,191	3,679,995	1,118,185	5,148,254	764,463	16,031,088	33.2
2011	6,115,982	3,806,891	1,206,659	5,851,739	755,003	17,736,274	34.5
2012	6,837,151	4,811,109	1,219,660	5,950,370	714,012	19,532,302	35
2013	6,979,688	4,912,935	1,666,954	5,699,533	816,552	20,075,662	34.8

(KPA, Jan - Dec 2013)

3.3.2.2 Imports and Exports throughput the Mombasa port

Imbalances between imports and exports have impacts on transport costs. For container transportation, trade imbalances imply the moving of empty containers that have to be taken into account in the total transport costs. The table below shows the total imports and exports through Mombasa Port.

Table 23: Comparison of Importation and Exports throughput at the port of Mombasa (Tonnes)

Year	Imports	Exports	Total throughput
2009	17,244,551.52	1,885,652.04	19,130,203.56
2010	15,594,435.44	1,899,201.23	17,493,636.67
2011	17,736,273.83	2,166,478.46	19,902,752.29
2012	19,532,302.36	2,140,760.41	21,673,062.77
2013	20,075,662.14	2,230,305.38	22,305,967.52

(KPA, Jan - Dec 2013)

Total imports through Mombasa port was about 20.08 million tonnes for the year, 2013 while the total exports were 2.23 million tons. This shows that the region is a net importer making it very uncompetitive compared to other world markets and economies. Between the year 2009 and 2013, imports and export increased by 16.42% and 18.28% respectively. The total throughput grew by about 17%. Though there was slightly higher

growth rate in exports than imports, trade balance is still strongly negative (more imports than exports) therefore transport costs for imports tend to be higher than for exports since there is no backhaul.

Table 24: Monthly Imports by Member States (Tonnes)

Month	Burundi	DRC	Kenya	Rwanda	S Sudan	Uganda
Jan	28	38,592	1,328,798	16,418	15,237	340,655
Feb	60	35,418	1,028,421	18,501	20,124	234,387
Mar	1,198	43,139	909,666	12,314	22,121	367,123
Apr	20,268	44,964	1,271,868	11,428	23,700	346,370
May	255	44,920	1,156,164	12,912	27,817	395,979
Jun	253	48,246	922,966	17,742	31,524	415,455
Jul	20,207	47,525	1,205,052	16,285	29,429	354,191
Aug	729	44,844	1,357,945	14,493	30,691	449,892
Sep	765	37,257	1,118,760	23,847	34,223	360,328
Oct	866	36,974	1,334,407	21,903	33,765	527,893
Nov	20,835	37,575	1,194,595	34,709	60,708	433,706
Dec	761	31,913	1,029,266	22,580	34,767	273,596
Total	66,226	491,368	13,857,907	223,131	364,107	4,499,577

(KPA, Jan - Dec 2013)

Low volume to Burundi together with the fact that fewer transporters operate from there use the Northern Corridor means high transport cost. Focus to boost utilization of the corridor by Burundi should be explored.

Table 25: Share of imports through the Port of Mombasa (Tonnes)

Country	Total	%
Kenya	13,857,907	69.03
Uganda	4,499,577	22.41
DRC	491,368	2.45
South Sudan	364,107	1.81
Others	362,801	1.81
Rwanda	223,131	1.11
Tanzania	180,141	0.9
Burundi	66,226	0.33
Somalia	30,405	0.15

(KPA, Jan - Dec 2013)

3.3.3 Productivity and Efficiency

Weighbridge Indicators

This section features weighbridge traffic and Vehicle load compliance based on the EAC vehicle load limits.

3.3.3.1 Weighed Traffic at Weighbridges in Uganda

Table 26: Weighed traffic for Uganda Weighbridges

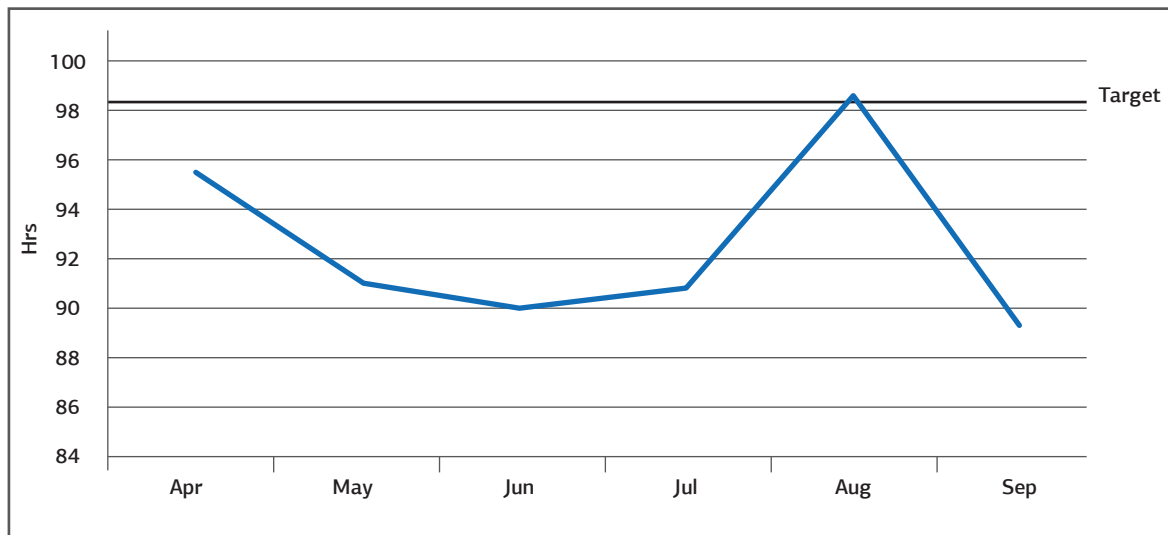
Weighbridge	2013									2014
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Busia	4210	3377	3545	3759	4161	1167				
Busitema	901	5544	753		910		6292	5327	6474	3578
Kasese	198	211	161	113	273	350	386	425	281	
Luwero	1461	1922	1537	1635	1581	804	721	1362	1097	
Magamaga	8585	11038	11292	3352			3653	9977	8346	945
Mbale	916	1133	1582	1466	1061	109	728	1568	1578	1291
Mbarara	868	2154	2257	1937	1898	2166	2508	1814	866	

(UNRA, Apr 2013 - Jan 2014)

Busitema and Magamaga recorded the highest traffic compared to the other weighbridges during the period of April 2013 to January 2014. Weighbridges that record high traffic should consider implementing High Speed Weigh in Motion (HSWM) to effectively manage the ever growing traffic to ensure enforcement of compliance with minimal congestion.

Compliance Levels for Weighed Traffic at Weighbridges in Uganda

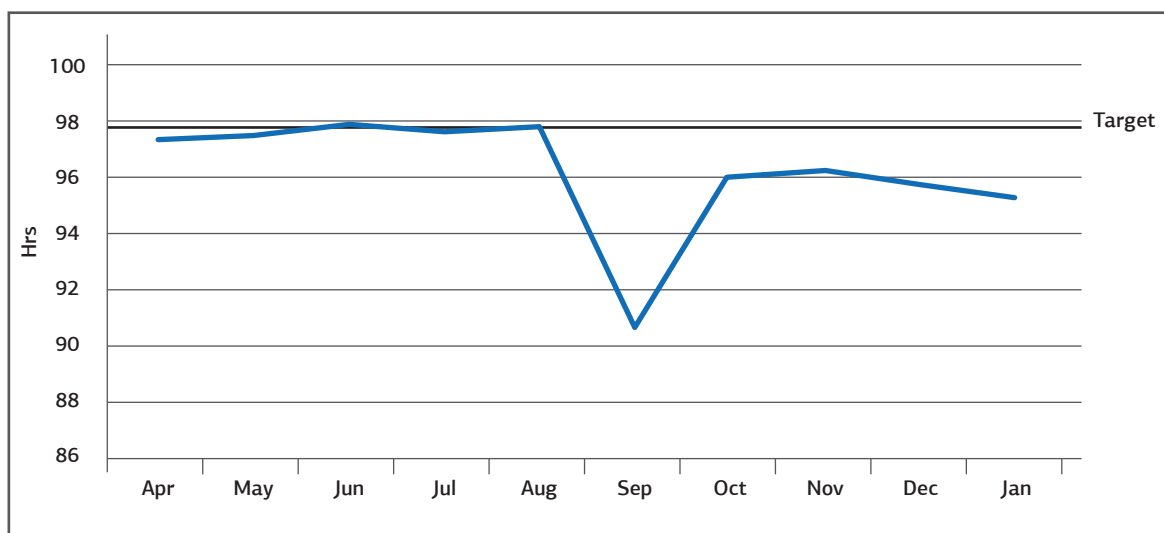
Figure 15: Percentage Compliance level of Weighed Traffic



UNRA, Apr 2013 - Jan 2014)

Compliance levels are not consistent, except for the month of August, compliance at Busia was below the 97% target.

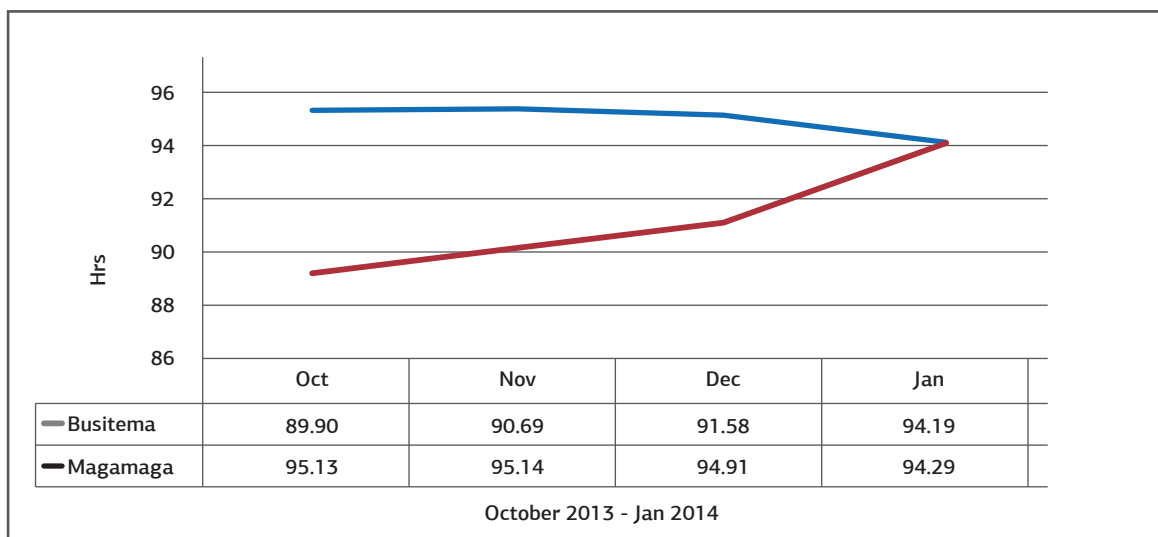
Figure 16 : Compliance at level at Mbale Weighbridge for Weighed Traffic



(UNRA, Apr 2013 - Jan 2014)

Compliance dropped drastically in September, 2013. Busia has lower compliance rate compared to Mbale which ranges between 95 and 98%.

Figure 17 : Compliance at level at Busitema and Magamaga Weighbridge for Weighed Traffic



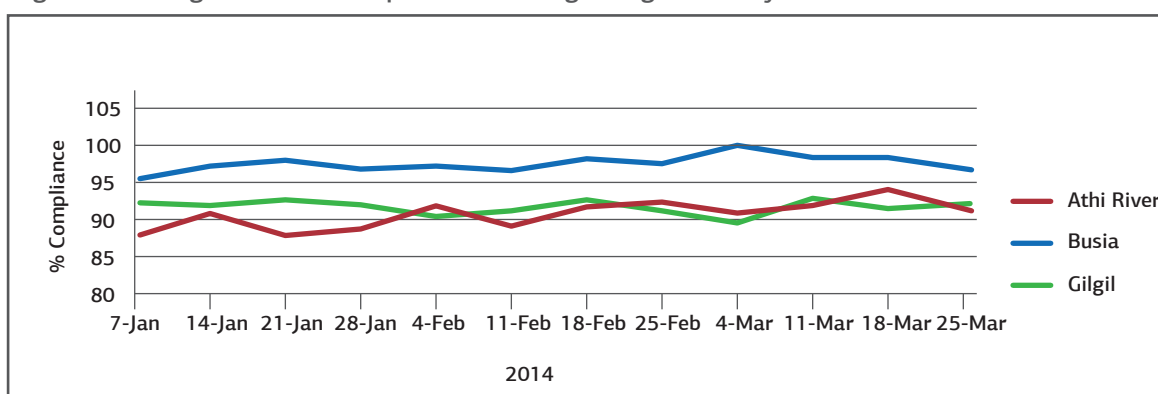
(UNRA, Apr 2013 - Jan 2014)

Trend shows an increase in compliance at Busitema weighbridge while Magamaga weighbridge compliance is declining. For both weighbridge compliance still below 97% Benchmark.

3.3.3.2 Compliance Levels for Weighed Traffic at Weighbridges in Kenya

The figures 15 and 16 below shows weighbridge compliance levels at Athiriver, Busia, Gilgil and Mariakani weighbridges

Figure 18 : Weighed traffic Compliance for Weighbridges in Kenya

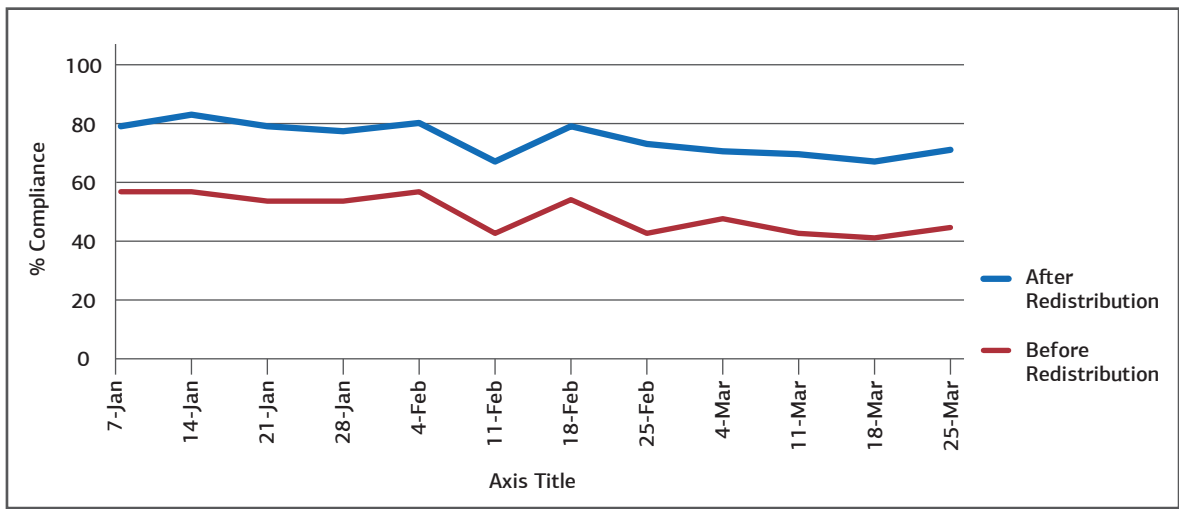


(KeNHA, 2014)

Busia has higher compliance level than Athi River and Gilgil which have compliance levels below the 97% target. Focus should be geared towards a campaign towards voluntary compliance

Mariakani weighbridge compliance is based on weighed traffic only. Since full implementation of High Speed Weigh in Motion, trucks that are weighed on the fixed scale are those that fail the weigh in motion scale or those that appear suspicious.

Figure 19: Weight Compliance at Weighbridges in Kenya.



(KeNHA, 2014)

The difference between compliance before and after redistribution seems to be constant while both compliance are slightly reducing with time. A proper targeting of those to weigh on the fixed scale will mean that the difference reduces.



4 QUALITY OF ROAD INFRASTRUCTURE

The efficiency and capacity of transport modes has a direct impact on transport costs. Poor infrastructure translates to higher transport costs, delays and negative economic consequences.

A more reliable transport system can handle more movements' hence lower transport costs.

The Northern Corridor is a multimodal transport system that includes pipeline, railway, road transport and inland waterways. About 95% of goods from the Port of Mombasa use the road network to transport and this has overstretched the capacity of the existing road network. The development of the standard gauge railway is expected to shift a large percentage of the cargo from our roads. Rail, when managed properly is considered more economical, efficient and environmentally friendly compared to the road alternative thereby reducing the cost of doing business in the region.

One of the priority projects specified in the Infrastructure Master Plan is the establishment of OSBPs at the border crossing points along the Northern Corridor. The completion of all earmarked border posts is expected to drastically reduce border crossing time.

The designated Northern Corridor road network is approximately 9,840 Km. The Corridor is important for social- economic development of the NC member states of Burundi, DRC, Kenya, South Sudan and Uganda.

Tables 27 - 31 show the quality of Northern Corridor roads sections in Kenya, Uganda, DRC and Burundi respectively.

Table 27: Road Condition in Kenya (Km)

The entire Northern Corridor road network in Kenya is paved. Therefore this condition status relates to paved roads.

SECTION	Length (Km)	Condition and Intervention undertaken
Mombasa - Miritini	14	Road condition good. Periodic maintenance ongoing.
Miritini – Maji ya Chumvi	35	Rehabilitation.
Bachuma Gate - Voi	50	Condition fair. Periodic maintenance ongoing.
Voi – Mtito Andei	93	Road condition is good. Periodic maintenance ongoing.
Mtito Andei – Sultan Hamud	123	Road condition good. Routine maintenance ongoing.
Sultan Hamud – Nairobi	90	Rehabilitation with a 12KM dual section.
Athi River – Rironi	54	36 km Section between Athiriver and Uthiru is in a fair condition, while an 18km section between Kinoo and Rironi is in a bad condition.
Rironi - Kimende	20	Periodic maintenance.
Lanet – Njoro Turnoff	16Km Dual	The section is in good condition
Njoro Turnoff - Timboroa	84	The section is in good condition
Timboroa – Eldoret	73	Rehabilitation of this section ongoing
Eldoret – Webuye	59	Rehabilitation of this section is ongoing
Webuye – Malaba	61	Rehabilitation of this section is ongoing
Mau Summit – Kericho	57	Rehabilitation of this section is ongoing
Kericho – Nyamasaria	76	Rehabilitation of this section is ongoing
Nyamasaria – Kisumu - Kisian	25 Km (Dual)	Construction works ongoing. Construction of Kisumu Southern Bypass expected to relieve the traffic through town.
Kisian – Sidindi – Busia	100	The road is in fair condition. Periodic maintenance ongoing.
TOTAL	1,030 Km	

(KeNHA, 2014)

Table 28: Road Condition in Uganda (Km)

The majority of the Northern Corridor road network in Uganda is paved. The sections that are not paved are currently being upgraded to paved. Therefore this condition status relates to paved roads.

Project link	Length (km)	Planned intervention and Current Status
Malaba-Bugiri/Busia-Namutere	82	V. Good Condition, Recent reconstruction
Bugiri - Jinja	72	V. Good to Good Condition, Recent reconstruction
New Nile Bridge, Jinja	1	New Cable Stayed Bridge under construction. Old bridge in poor condition
Jinja-Mukono	52	Good Condition, Reconstruction ongoing
Mukono-Kampala	17	Fair. Procurement for reconstruction ongoing. Under maintenance
Tororo-Mbale	49	V. Good Condition, Recent reconstruction
Mbale-Soroti	103	V. Good Condition, Reconstruction near completion
Soroti-Lira	122	V. Good Condition, Recent reconstruction
Lira - Kamdini	68	Good Condition, Reconstruction at advanced stage
Kamdini-Gulu	62	Poor, Reconstruction works just commenced
Gulu - Atiak	74	Poor, Upgrading to paved just commenced
Atiak - Elegu / Nimule	35	Poor, Upgrading to paved just commenced
Kamdini - Pakwach	118	V. Good Condition, Recent reconstruction
Packwach-Nebbi	54	Fair. Procurement for rehabilitation ongoing. Under maintenance
Nebbi - Goli	15	Fair. Pre-Design Stage for Upgrading. Under maintenance
Goli - Vurra	104	Fair. Pre-Design Stage for Upgrading. Under maintenance
Vurra - Arua - Oraba	92	Rehabilitation almost complete (90 %)
Kamdini-Karuma-Kiryandongo	59	Good Condition, Reconstruction at advanced stage
Kiryandongo-Kafu	45	V. Good Condition, Design Stage for Reconstruction. Recently overlayed.
Kafu Kawempe	166	Good Condition, Reconstruction (Overlay) at advanced stage
Kampala Northern Bypass Phase 2	21	V. Good Condition. Recently reconstructed. Procurement for dualling ongoing
Busega-Nsangi-Kamengo-Lukaya	63	V. Good Condition, Recent reconstruction
Nsangi-Kamengo-Lukaya-Masaka-Katonga Bridge	51	Good Condition, Reconstruction at advanced stage
Masaka-Mbarara	148	V. Good Condition, Recent reconstruction
Mbarara Bypass	14	New roadway under construction
Mbarara-Katuna	150	Good Condition, Reconstruction ongoing
Mbarara - Bushenyi - Ishaka	60	Good Condition, Light rehabilitation undertaken
Ishaka - Kikorongo - Kasese	108	Good Condition. Routine maintenance
Kikorongo - Mpondwe	39	V. Good Condition. Routine maintenance
Rukungiri - Ntungamo	57	Good Condition. Routine maintenance
Ntungamo-Mirama Hills	78	Good Condition. Routine maintenance. Detailed Designs for upgrade Complete
TOTAL LENGTH	2,179	

(UNRA, 2014)



Table 29: Northern Corridor Route Sections in DR Congo (Km)

The majority of the Northern Corridor road network in DR Congo is unpaved. Therefore this condition status relates to unpaved roads. In DRC, 28% of the road sections reported was in poor state while 1153 Km out of 3541 Km are under rehabilitation.

Project link	Length (km)	Planned intervention and Current Status
Bukavu -Burhale	55	Good condition. Under maintenance
Burhale -Shabuda- Kalima	413	Under maintenance (HIMO). 118km (29%) in good condition, 155km (37%) in fair condition and 140km (34%) in poor condition.
Kalima - Mali	30	Good condition. Under maintenance (HIMO)
Mali - Kindu	36	Good condition. Currently being rehabilitated
Mali - Lubutu	318	Currently being rehabilitated. 260km (82%) in good condition, 15km (5%) in fair condition and 43km (13%) in poor condition.
Lubutu - Kisangani	297	Currently being rehabilitated. 275km (93%) in good condition, 9km (3%) in fair condition and 13km (4%) in poor condition.
Bukavu - Kamanyola	52	Currently under maintenance. 4km (8%) in good condition, 30km (58%) in fair condition and 18km (34%) in poor condition.
Kamanyola - Uvira	86	Good condition. Under maintenance
Uvira – Kavimvira (DRC-Burundi border)	7	Rehabilitation almost complete.
Kisangani – Niania - Komanda	650	Currently under maintenance. 210km (32%) in good condition, 190km (29%) in fair condition and 250km (39%) in poor condition.
Komanda - Luna	65	Currently under maintenance. 7km (11%) in good condition, 20km (31%) in fair condition and 38km (58%) in poor condition.
Luna - Beni	60	Good condition. Under maintenance
Beni - Kasindi	80	Currently being rehabilitated. 69km (86%) in good condition and 11km (14%) in fair condition.
Komanda - Bunia	71	No works ongoing. 45km (63%) in good condition, 6km (9%) in fair condition and 20km (28%) in poor condition.
Bunia - mahagi	175	Good condition. Being rehabilitated

Project link	Length (km)	Planned intervention and Current Status
Mahagi – Goli (Uganda Border)	15	Currently being rehabilitated. 6km (40%) in good condition and 9km (60%) in fair condition.
Kisangani - Niania		
Niania - Isiro	232	Currently being rehabilitated. 121km (52%) in good condition, 45km (19%) in fair condition and 66km (29%) in poor condition.
Isiro - Faradge – Aba (South Sudan Border)	478	No works ongoing. 8km (29%) in good condition, 54km (11%) in fair condition and 386km (81%) in poor condition.
Beni - Ndoluma	199	No works ongoing. 171km (86%) in good condition and 28km (14%) in fair condition.
Ndoluma – Rutshuru - Goma	132	No works ongoing. 130km (98%) in good condition and 2km (2%) in fair condition.
Rutshuru - Bunangana	27	Fair condition. No works undergoing
Rutshuru - Ishasha	63	Currently under maintenance. 44km (70%) in good condition, 5km (22%) in fair condition and 14km (8%) in poor condition.
TOTAL LENGTH	3541	1940km (55%) in good condition, 606km (17%) in fair condition and 995km (28%) in poor condition.

(OdR, 2014)

Table 30: Sections under rehabilitation in Burundi (Km)

The majority of the Northern Corridor road network in Burundi is paved. Therefore this condition status relates to paved roads.

Project link	Length (km)	Planned intervention and Current Status
Bujumbura-Bugarama-Kayanza-Kanyaru Haut	115	Fair Condition
Bujumbura-Gatumba- Frontière RDC	19	4km (20%) in good condition and 15km (80%) in average condition.
Bujumbura-Nyamitanga-Ruhwa	80	50km (60%) in good condition and 30km (40%) in poor condition.
Kayanza-Ngozi-Gashoho	72	Fair Condition
Gashoho-Kirundo-Gasenyi	67	34km (51%) in good condition and 33km (49%) in fair condition.
TOTAL LENGTH	353	88km (25%) in good condition, 235km (67%) in fair condition and 30km (8%) in poor condition.

(OdR, DR Congo 2013)

Table 31: Sections under rehabilitation in Rwanda (Km)

The majority of the Northern Corridor road network in Rwanda is paved. Therefore this condition status relates to paved roads.

Project link	Length (km)	Planned intervention and Current Status
Kigali-Huye-Akanyaru	158	Good Condition. However starting to present defects on surface layer.
Kigali-Musanze-Rubavu	150	Good Condition. Road recently rehabilitated. However, minor defects at a few locations.
Kigali - Gatuna	70	V. Good condition. Recently refurbished
Kigali-Kayonza-Rusumo	166	Good condition following recent maintenance interventions.
Kigali-Nyamata-Nemba	62	Good condition. Generally, IRI is less than 4m/km.
Huye-Kitabi-Buhinga	115	Very Good – Average condition Recently rehabilitated section from Crete Congo-Nili to Buhinga. Remaining section is awaiting rehabilitation
Nyakinama-Musanze-Cyanika	34	Good Condition. The section of Nyakinama-Musanze is under rehabilitation and the section from Musanze to Cyanika is an old pavement structure.
Musanze-Kinigi-Rubavu	23	Surface layer is in Poor condition
Kayonza-Kagitumba	117	Poor condition due to pothole repair and old pavement structure. Planned works have not yet commenced
TOTAL LENGTH	895	185km (21%) in Very Good condition, 404km (45%) in fair condition and 306km (34%) in poor condition.

(RTDA, Rwanda 2013)

Northern Corridor Route in South Sudan

Since joining the NCTTCA, South Sudan and in line with protocol No. 2 of the NCTTCA Agreement, South Sudan has designated a number of routes and their associated borders as part of the Northern Corridor Route. These are Nimule – Nesitu – Juba (192km); Nesitu – Torit – Nadapal (400km); Juba – Lainya – Yei (150km); Yei – Aba (45km); Yei – Morombo – Kaya (285km); Yei – Maridi – Yambio (315km); Yambio – Ezo (200km).

Currently, the major entry point by road into South Sudan is the Elegu/Nimule border located 109km by road north of Gulu, Uganda.

The Nimule – Juba (192 Km) pavement structure has started to show signs of severe fatigue on some sections. The construction of this road was completed in February 2012 with a grant from the USAID. This being the major route into South Sudan from the Port of Mombasa, the traffic now ploughing this section is much greater than was initially envisaged. This coupled with the excess weight exerted on the roadway was culpable for the rapid deterioration of the pavement structure.

Similarly, a 30 year old narrow 2-lane steel truss bridge crosses the River Nile at the entry of Juba. This bridge was repaired in January 2012 after buckling and partial collapse. This bridge is still being severely affected by the heavy loads that were not anticipated to utilize it and is in a precarious position. The Japanese International Corporation Agency (JICA) has completed feasibility studies and preliminary designs for a new, permanent bridge over the River Nile. The new bridge, which is expected to be completed in 2016 about 1.5 km upstream from the current bridge.

There is also a proposal to upgrade the Eldoret – Lokichoggio – Juba route to enhance the interconnectivity of South Sudan to the EAC region and the Mombasa Port in Kenya. This route is an important one for the region and is expected to improve interconnectivity between the Northern & LAPSET corridors, increase socio-economic development in the Turkana Region, Kenya & the Toposa Region, South Sudan and improve access to the Lamu port in Kenya. This Eldoret – Lokichoggio – Juba route has been considered for inclusion to the Northern Corridor network linking South Sudan and Kenya. For the development of this road, some commitment from donors under the leadership of World Bank has been secured.



5. STRATEGIC CONSIDERATIONS

The Transport Observatory tool is supposed to assess, measure the performance of the corridor thus leading to the design of interventions to address the findings. It is supposed to inform us how well the Corridor is performing and the changes over time. The availability of good information is not in itself sufficient for policy generation. Concerted effort needs to be applied by all stakeholders to advocate for policies and actions towards reduction of the cost of doing business in the region.

Summary of the findings and proposed actions.

1. Number stops at weighbridges have not decreased however the time taken to cross the weigh bridges has reduced drastically.
 - Follow-up to ensure that transit trucks are only weighed twice at the point of Entry.
 - Upgrade all weighbridges reduce further the time at weighbridge.
 - Axle load self compliance by Transporters.
2. Transit time in Kenya has reduced significantly (ranges between 55 though short of the target of 48 hours).
 - Full implementation of the presidential directive on removal of all roadblocks and police checks.
3. Time spend by customs clearance slightly below the target.
 - Strengthening the single customs initiatives.
 - Upgrade Customs Systems.
 - Adopt Single Window.
4. Slightly longer waiting time at Malaba Border post on Ugandan side
 - The OSBP in plan should look at including LAN & WAN infrastructure in the build with power backup systems as mitigation for outages due to heavy rains and power.
 - Sensitization on regulations and procedures for clearance through customs and immigration
 - Digital scanner is necessary to minimize delays or easy verification of goods at the border stations.
5. Levies and fees being charged along the corridor.
 - Sensitization of truckers through issuance of information brochures and on official charges.
 - Implementation of the Single Customs Territory, Regional Customs Transit Guarantee and Single Customs Declaration form for the region and others Trade facilitation instruments.

6. Weight Compliance at weighbridges below 97%.
 - Advocate for voluntary weight compliance across the region- Axle load compliance campaign.
7. Northern Corridor Member states are investing in infrastructure and more road sections are being rehabilitated.
 - Put in place vehicle and axle load controls; set up a Weighbridge along the Nimule – Juba road is getting damaged due to overloaded trucks.
 - Different modes are characterized by different transport costs, since each has its own capacity limitations and operational conditions. When two or more modes are directly competing for the same market, the outcome often results in lower transport costs. Investing in rail will ultimately reduce the cost of doing business.
8. Impact Assessment of Corridor performance : gains, savings towards reduction of costs



6. ANNEXES

Annex 1: Indicator Glossary

A. Volume and Capacity

1. Total cargo throughput of the port of Mombasa (TCPMsa) vs transit traffic (TTPMsa) in tonnes.

TCPMsa = Summation of all cargo's weight handled within the Port (Tonne); TTPMsa = Summation of all cargo handled within the port and which cargo have another destination than local market (or the port's country).

Tracked: Quarterly

2. Volume per country of destination (TC).

TC per Country of destination = Summation of all cargo's weight handled within the Port per Country of destination (Tonne).

Tracked: Quarterly

3. Rate of containerization of transit traffic in percentage (RcTT), annual basis at the Port of Mombasa.

$RcTT = (\text{Summation of the Transit containerized Cargos Weight} / \text{TTPMsa}) \times 100$

Tracked: Quarterly

4. Evolution of licensed fleet of trucks per country (TF).

TF = Summation of registered (Licensed) vehicles used for international/transit cargo transportation per year and per country.

Tracked: Quarterly

5. Average annual distance per truck in km per year (AvanDist).

AvanDist = Average distance achieved per truck per year (or Average number of trip achieved by truck during the year).

Tracked: Quarterly

6. Transport capacity by rail (locomotives and wagons).

Railway Capacity = Total number of operational locomotives and wagons (or the proportion of total cargo carried by railway).

Tracked: Annually

B. Rate and Costs

7. **Transport costs per route and per mode (including transit charges) (TraCstRd).**
TraCstRd = Summation of tariff charge by transporter, transit and other charges per Route and/or section.
Tracked: Quarterly
8. **Rail Freight Charge.**
Freight = Tariff charged by railway operator per section and/or per route.
Tracked: Quarterly
9. **Road Freight Charge.**
Freight = Tariff charged by transporter per section and/or per route.
Tracked: Quarterly
10. **Port Transit Charges.**
Published tariffs by Stakeholder
Tracked: Annually
11. **Return of empty containers (grace period, penalties, and deposit).**
Published tariffs by Stakeholder
Tracked: Quarterly

C. Productivity and Efficiency

12. **Number of check points, NCP (Weighbridge, Police, Customs, Road Toll) per country per route.**
NCP = Summation of checkpoints by country, by route
Tracked: Semi-Annually
13. **Rate of Fraud or Declared Damage for goods in transit, RFDD (percentage of total transit).**
RFDD=Number of Fraud or Declared Damage cases divide by total of Fraud or Declared Damage cases at a node.
Tracked: Annually
14. **Quality of the transport infrastructure.**
Defined qualitative descriptions of state of infrastructure, Defined routes, Defined routes sections, Qualitative state of each section.
Tracked: Annually
15. **Gross Moves per ship per hour at the port of Mombasa**
Tracked: Weekly

16. Volume of containerized and general cargo handled per day/month/quarterly at the Port of Mombasa.

Summation of volume of Containerized Cargo Handled per day/month/year; Summation of volume of General Cargo Handled per day/month/year.

Tracked: Quarterly

17. Number of accidents per route.

Summation of the number of Accidents, Injuries and Fatalities by Category and Sub Category

Tracked: Quarterly

18. Weighbridge Traffic against time

Average number of trucks passing a weighbridge in a day.

Tracked: Weekly

19. Weight compliance

The percentage of trucks that comply with the axle load limits before and after re-distribution.

Tracked: Weekly

D. Time and Delays

20. Transit Time per route per mode of transport (by country).

TT per route = Arrival DateTime at the node minus departure DateTime from the destination node.

i. Transit Time in Uganda, Rwanda, Burundi, DRC (Road).

TT = Cargo Exit border DateTime minus Entry border DateTime (Based on IM8, T1)

Tracked: Quarterly

ii. Transit time in Kenya (Road through Malaba or Busia).

TT = Certificate of Export DateTime minus Release DateTime at port. (Based on KRA's T812)

Tracked: Weekly and Quarterly

21. Transit time origin to destination by country.

TT = Arrival DateTime at the destination minus departure DateTime from the origin (entry port). (Based on Road/GPS based Surveys data)

Tracked: Weekly and Quarterly

22. Ship turnaround time

The average of the time difference in hours from the Entry in Port Area to Exit in Port Area. (Based on KPAs Raw Operations data)

Tracked: Weekly

23. Vessel waiting time before berth

The average of the time difference in hours from the Entry in Port Area to the Berthing time. (Based on KPAs Raw Operations data)

Tracked: Weekly

24. Average cargo dwell time in Mombasa port.

DT = Exit DateTime from the port minus Arrival DateTime at the port. (Based on KPAs Raw Operations data)

Tracked: Quarterly

25. Time for Customs Clearance at the Document Processing Centre.

TCC = Passing DateTime of process minus Registration DateTime (Based on KRA's T810, T812)

Tracked: Weekly and Quarterly

26. Transit time at Mombasa One Stop Centre

TT = Release Order time minus Passed DateTime (Based on KRA's T812)

Tracked: Weekly and Quarterly

27. Transit time after Customs Release at the Port of Mombasa

TT = Cargo removal time at the gate from port minus Release Order time (Based on KRA's T810)

Tracked: Weekly and Quarterly

28. Border Post Crossing Time.

TT = Departure DateTime from the border minus Arrival DateTime at the border. (Based on Road/GPS based Surveys data)

Tracked: Quarterly

29. Time for Customs procedures at destination.

TT = End DateTime of the last process minus Start DateTime of the first process.

Tracked: Quarterly

30. Transit time within the ICD/Inland Port.

TT = Departure DateTime from the ICD minus Arrival DateTime at the ICD.

Tracked: Quarterly

31. Weighbridge crossing time.

TT = Departure DateTime from the weighbridge minus Arrival DateTime at the weighbridge. (Based on Road/GPS based Surveys data)

Tracked: Quarterly



Annex 2: Northern Corridor Transit Sections (Distances in Km)

	FROM	TO	KM
1	Mombasa	Mariakani	36
2	Mariakani	Mtito Andei	217
3	Mariakani	Taveta	123
4	Mtito Andei	Athi River	199
5	Athi River	Nairobi	29
6	Nairobi	Namanga	163
7	Nairobi	Isebania	405
8	Nairobi	Mai Mahiu	71
9	Nairobi	Gilgil	121
10	Gilgil	Mai Mahiu	67
11	Gilgil	Kisumu	235
12	Mai Mahiu	Kisumu	276
13	Kisumu	Busia	113
14	Gilgil	Eldoret	210
15	Eldoret	Nadapal	620
16	Eldoret	Webuye	60
17	Webuye	Malaba	61
18	Malaba	Busitema	51
19	Malaba	Mbale	52
20	Malaba	Busia	33
21	Busia	Busitema	13
22	Busitema	Magamaga	87
23	Magamaga	Kampala	98
24	Kampala	Lukaya	102
25	Lukaya	Mutukula	
26	Lukaya	Mbarara	
27	Mbarara	Ntungamo	84
28	Ntungamo	Kabale	69
29	Ntungamo	Ishasha	130
30	Kabale	Katuna	22
31	Kabale	Kisoro	68

	FROM	TO	KM
32	Mbarara	Mpondwe/ Kasindi	175
33	Mbarara	Ishasha	202
34	Kisoro	Cyanika	
35	Kisoro	Bunagana	
36	Ntungamo	Merama Hills/ Kagitumba	
37	Mbale	Lira	222
38	Lira	Gulu	108
39	Lira	Kamdini	82
40	Gulu	Elegu/Nimule	115
41	Kamdini	Gulu	64
42	Kamdini	Pakwachi	118
43	Pakwachi	Goli	69
44	Pakwachi	Arua	110
45	Arua	Oraba/Kaya	75
46	Arua	Afogi/Kajo Keji	
47	Arua	Vura	
48	Arua	Goli	179
49	Gulu	Kitgum	
50	Kitgum	Madi Opei	
51	Kampala	Luwero	68
52	Luwero	Kamdini	210
53	Katuna	Kigali	81
54	Kagitumba	Kigali	212
55	Cyanika	Kigali	
56	Kigali	Nemba/Gasenyei	69
57	Kigali	Butare	
58	Butare	Rusizi	
59	Butare	Akanyaru Haut	
60	Rusizi	Bukavu	

	FROM	TO	KM
61	Kigali	Shyorongi	23
62	Shyorongi	Ruhengeri	70
63	Ruhengeri	Cyanika	
64	Ruhengeri	Rubavu/Goma	45
65	Rubavu	Rusizi	186
66	Nadapal	Narus	
67	Narus	Kapoeta	
68	Kapoeta	Torit	127
69	Torit	Nesitu	111
70	Nesitu	Juba	18
71	Juba	Yei	156
72	Yei	Lasu	45
73	Yei	Rasul	
74	Rasul	Maridi	
75	Maridi	Yambio	
76	Yambio	Nabiapai	
77	Yambio	Ezo	138
78	Nimule	Nesitu	178
79	Kaya	Yei	78
80	Lasu	Abba	
81	Aba	Faradje	
82	Faradje	Watsa	
83	Watsa	Isiro	
84	Watsa	Bunia	251
85	Gasenyi	Kayanza	148
86	Kanyaru Haut	Kayanza	24
87	Kayanza	Bujumbura	104
88	Bujumbura	Gatumba/ Kavimvira	20
89	Kasindi	Beni	80
90	Beni	Butembo	55
91	Butembo	Rutshuru	213
92	Bunagana	Rutshuru	30
93	Ishasha	Rutshuru	63
94	Goma	Rutshuru	71
95	Goma	Bukavu	184
96	Beni	Komamda	125
97	Goli	Mahagi	15

	FROM	TO	KM
98	Mahagi	Bunia	175
99	Bunia	Komanda	71
100	Komanda	Mambassa	
101	Mambassa	Nia Nia	
102	Nia Nia	Bafwasende	
103	Bafwasende	Kisangani	
104	Bukavu	Walikale	
105	Walikale	Lubutu	
106	Lubutu	Kisangani	297
107	Nia Nia	Isiro	
108	Isiro	Niangara	
109	Niangara	Dungu	
110	Dungu	Nabiapai	
111	Dundu	Faradje	
112	Aba	Ariwala	
113	Arua	Lia	
114	Lia	Aru	
115	Aru	Ariwala	
116	Ariwala	Aba	



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