

NORTHERN CORRIDOR TRANSPORT OBSERVATORY REPORT

Issue No. 6 | April, 2015



PERFORMANCE OUTLOOK



**TRANSPORT
OBSERVATORY**
RELIABLE NORTHERN CORRIDOR PERFORMANCE DATA





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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
FEAFFA	Federation of East African Freight Forwarders Association
FEC	Fédération des Entreprises Du Congo
FERI	Fiche Electronique de Renseignement à l'importation
GPS	Global Positioning System
IABT	International Association of Burundi Transporters
ICD	Inland Container Deport
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
NTSA	National Transport Safety 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
RVR	Rift Valley Railways
RW	Rwanda
SPSS	Statistical Package for Social Science
SSFebA	South Sudan Federation of Employees and Business Association
SSATP	Sub-Saharan African Transport Policy Programme
TMEA	TradeMark East Africa
TO	Transport Observatory
TOP	Transport Observatory Portal
UFFA	Uganda Freight Forwarders Association
UG	Uganda
UNRA	Uganda National Roads Authority
URA	Uganda Revenue Authority
URC	Uganda Railways Corporation
ACPLRWA	Rwanda Long Distance Truck Association



FOREWORD

It is a real pleasure to note that the Northern Corridor Transport Observatory (NCTO) had continued steadily to monitor the Corridor performance and to provide useful information required by policy makers.

The Observatory features more than thirty indicators that measure Corridor performance with a view to provide reliable information that guide in policy decisions. The Observatory has an online platform for users to access collected data and information.

In order to enhance online user experience, the Secretariat has an enhanced Web portal for dissemination of information and currently the Geographic Information System (GIS) component is being developed to provide geographical presentation of the Corridor network and Performance indicators. With these improvements, more and more people are getting interested in the transport observatory.

The number of suggestions, increased visit to the Observatory Portal and inputs being received regularly from Stakeholders and the Member States constitute a clear indication of interest in this monitoring tool.

In this report, it was observed that for outbound journey from Mombasa, rests, meals and drivers personal reasons accounted for about 42.2% of the number of stops made. There is need to fully embrace, regulate the driving time and invest in Roadside Stations with all the amenities to regularly unnecessary numerous stops.

Unnecessary stops translate into low productivity and poor efficiency due to delays that affects the cost of doing business within the Northern Corridor.

Generally, there has been a reduction in transport rates from Mombasa to the key destinations of goods; major towns and Capital Cities. In most cases, both the direct cost of trucking and the hidden cost of delays have been reduced along all the northern corridor transit routes.

From 2010 to 2014, a minimum reduction of transport logistics cost of 23% on Mombasa- Kigali transit section and a maximum reduction of 56% on Mombasa - Nairobi route was observed. The number of round trips has increased as a result of reduction on non-tariff barriers, reduced transit times and increase in business opportunities.

The average cargo dwell time at the Port of Mombasa ranged between 4.5 days during the period October 2014 to March 2015. The port dwell time which is an aggregated indicator influenced negatively by other factors tracked through some disaggregated indicators such as the time taken at one stop center, time taken at Document processing center and time taken within the port after customs release. Interventions by all stakeholders on all these areas will automatically reduce the port dwell time to the set target of 3 days.

The report shows that though there has been improvement in vehicle load compliance at some weighbridges, the target of 100% compliance has not been achieved and Member States should fully domesticate and enforce the provisions of the EAC vehicle load control act.

This is to call upon all stakeholders to implement various actions plan and various re-forms as well as to provide data on a timely basis aimed at improving the performance of the Corridor and its monitoring mechanism.



Donat M. BAGULA,
Executive Secretary.

ACKNOWLEDGMENT

The NCTTCA Secretariat wish to express its gratitude to the Council of Ministers and the Executive Committee of the Northern Corridor Member States, the various Specialized Technical Committees, the Stakeholders Forums and the Experts that have provided immense support and contribution towards the Transport Observatory.

Special thanks go to TradeMark East Africa (TMEA) for their continued support in funding the Transport Observatory activities.

The Secretariat is grateful to all the Stakeholders for their continued provision of the data used to generate the Transport Observatory report. The Transport Observatory has continued to rely heavily on the raw data from the stakeholders to ensure its continuity.

The data providers include Revenue Authorities, Ports Authorities, Authorities in charge of Roads, Rail and Pipeline infrastructure development and Management, Private Players Associations and Business Representatives.

We also wish to express our warm gratitude to Kenya Transporters Association (KTA) and its members who have participated in the road surveys and enable us have road survey data. The data has complimented the sources from other stakeholders' business electronic systems and improved on the reporting on the Northern Corridor performance.



01.

INTRODUCTION

The Northern Corridor Transport Observatory (NCTO) is a Corridor performance monitoring tool that has an online platform. The Observatory is accessed via <http://top.ttcanc.org> or through www.ttcanc.org. The Observatory has continued to provide information on Key performance indicators used to monitor and measure the performance of the Corridor. The information is intended to identify causes of choke points in the Northern Corridor logistics chain and support decision making by Governments, Regulatory Agencies and Policy makers in undertaking effective measures to address transit and transport issues in the region.

Monitoring transport and trade facilitation measures have been main focus of the Observatory with various indicators being tracked on a regular basis. These indicators (see Annex 1 for the full list in the indicator glossary) cover issues relating to:

- Transit Time and Delays
- Rates and Costs
- Productivity and efficiency and
- Volume and Capacity

Among the 31 performance indicators, nine are tracked and reported every week at the Friday Port Community meeting held at the Port of Mombasa. These indicators are monitored through The Northern Corridor dashboard which is accessible via <http://top.ttcanc.org> and has the following indicators:

1.1 NORTHERN CORRIDOR DASHBOARD INDICATORS

- Ship turnaround time
- Vessel waiting time before berth
- Average Cargo Dwell time at the Port
- Time for clearance at the Custom Processing Centre
- Time for clearance at one stop Center
- Delay after customs release at the Port of Mombasa

- Average weighbridge traffic
- Weighbridge Compliance
- Transit time in Kenya.

The dashboard is used in monitoring the implementation of the port community charter that commits various stakeholders, both public and private to increase efficiency at the Port and in the transport logistics chain in Kenya. The port charter can be is accessible from the Northern Corridor Transit and Transport website on www.ttcanc.org

1.2 CURRENT INITIATIVES

The process of upgrading the Transport Observatory System (TO) to incorporate the Geographical Information system (GIS) component which is underway from August 2014 and expected to be completed by end of 2015.

Improvement of the Website has been finalized and what is remaining is the completion of the GIS component.

In order to improve reporting, the Secretariat has continued to engage stakeholders in reviewing data requirements, frequency of submission and is currently receiving computerized data from automated Stakeholders systems.

Through the steering committee comprising of NCTTCA, TMEA and KTA, new improvements to the TOP are discussed on quarterly basis and implemented jointly.

1.3 VISITS TO THE TRANSPORT OBSERVATORY

The graph below shows the number of visits and page views to the transport observatory portal.

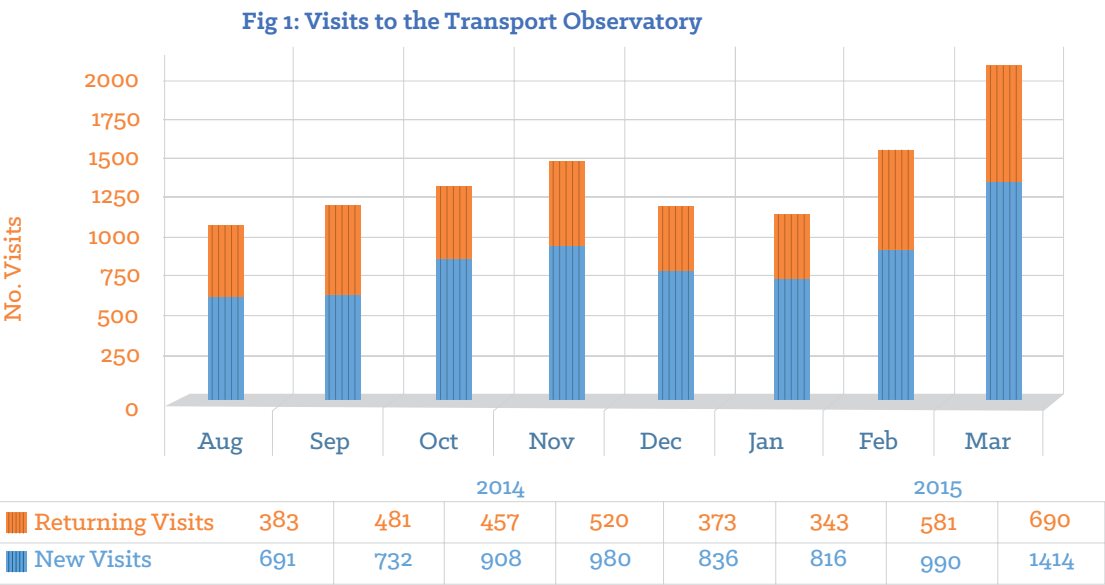
Total Visits	1,074	1,213	1,365	1,500	1,209	1,159	1,571	2,104
Page Views	3,097	3,648	3,520	4,261	3,284	3,087	6,362	6,005

The Figure 1. shows that the number of visits to the Observatory has been on the rise since August 2014. During the period of March 2015, the observatory registered in total 2,104 visitors who viewed about 6,005 pages. During the period August 2014 – March 2015, the observatory registered a total number of 11,195

visits most of which were through search engines (59%), referral sites (19%) while 22% where through direct access.

Results from the Transport Observatory have informed the study on Impact assessment of the Northern Corridor initiatives, the campaign against overloading along the Northern Corridor

and the development of the self-regulatory vehicle load control Charter in Kenya and Uganda. Data from the transport observatory has been used in numerous publications such as the 2014 East Africa Logistics Performance Survey, etc.



02.

METHODOLOGY AND ANALYSIS

The performance of the Corridor is measured through an array of indicators which require multiple sources and methods of data collection. The Transport Observatory report contains both qualitative and quantitative data from various sources. With regular review of these indicators, new data requirements have emerged and the Secretariat has equally devised innovative ways of filling in the data gaps.

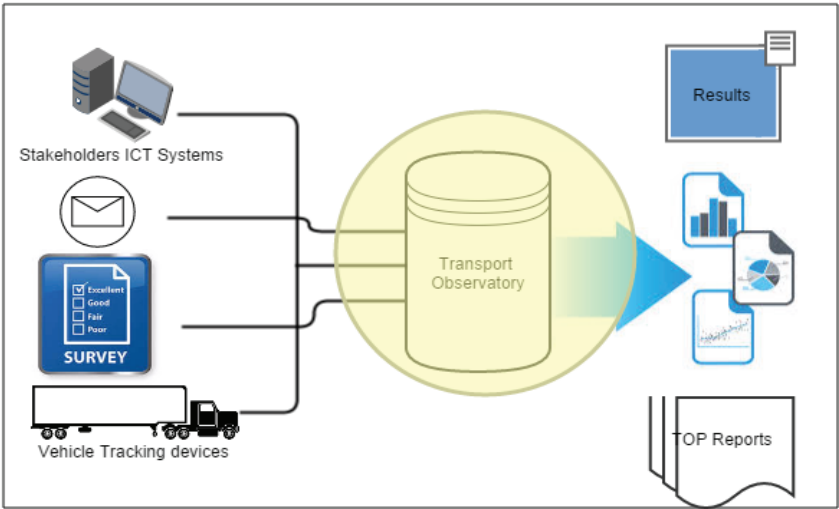
The methodology for data collection involves a combination of various methods and sources. The main source of data is from computerized systems from automated Stakeholders such as Ports Authorities (KPA), Revenues Authorities (KRA, URA, RRA, OBR, and DGDA), Road Authorities (KeNHA, UNRA, RTDA, OdR Burundi and DRC), Railways Authorities (KRC and URC), RVR and Transporters Associations (KTA, UNTA, FEC, ATAR, ACPLR, ABT, etc.)

The Secretariat also uses GPS and road surveys concurrently whereby the field supervisor issues GPS kits and survey forms to willing truck transporters. The Kits capture geo codes and time

stamps for all the stops from which stop locations, transit time and delays at various nodes are extracted. Initial preparations involve recoding and geo zoning to map possible stop locations. The border post zones are set 1Km on both sides of the border while the weighbridge region is measured 1 Km and 0.5Km respectively before and after the weighing scale infrastructure basing on outbound direction for imports from the port of Mombasa. The questionnaire is administered alongside the kits for drivers to capture stop reasons, fees, among other information.

The Secretariat also carries out targeted data collection for the observatory from various stakeholders. This report uses data collected during the month of April 2015 from Member States, the GPS data, as well as computerized data from stakeholders.

The analysis involves both descriptive and quantitative techniques using various statistical tools to generate graphs and tables for interpretation. Assumptions were made based on the types of data, for each indicator and data source, under description and results were generated for the reporting period.



03.

OBSERVATORY FINDINGS

3.1 ROAD SURVEY RESULTS

The Road Transport survey and the GPS road survey are conducted concurrently. The process involves issuing truck drivers from various transporters with a hard copy questionnaire and the GPS kit. The aim is to monitor transit time and delays as well as the fees paid by truck drivers for the various reasons along the Northern Corridor.

The road survey data reported covers the period September 2014 to February 2015. Out of the 323 questionnaires that were issued, 171 were returned and further validated for analysis. The effective sample size as a proportion of the total issued questionnaires was 53% which is an improvement compared to 48% response rate in the last report.

Table 1. summarizes the rate of return of questionnaires issued per Country of destination.

Table 1: Questionnaires Returned by Country of Destination

Cargo Destination	Contact Sample (No.)	Effective Sample (No.)	Response Rate (%)
Burundi	9	7	77.8%
DRC	36	14	38.9%
Rwanda	20	8	40.0%
S. Sudan	30	16	53.3%
Uganda	228	126	55.3%
TOTAL	323	171	52.9%

Source: Road Transport Survey, Oct 2014 – Feb 2015

During the survey exercise, the response rate was recorded to be significantly high in Burundi (78%) and lower in DRC (39%).

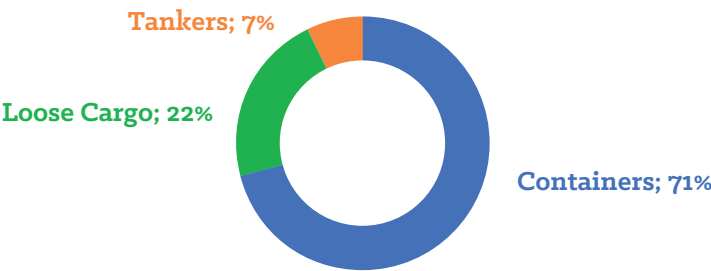
Fig 2. below provides a summary of the cargo composition transported by truckers along the Northern Corridor.

The figure indicates that most of the cargos transiting the Northern Corridor are containerized (71%). In addition, loose cargo (22%) also forms a larger composition of the transit cargo within the region as compared to tankers (7%).

The findings therefore support the international community’s recommendation on the increased use of containers for cargo transport as they are easy to handle and secure the cargo on transit.

Cargo on transit within the Northern Corridor takes averagely less than five days to reach Malaba / Busia borders. However, there are delays due to a number of reasons.

Fig 2: Transit Cargo Composition - Inbound/Outbound



Source: Road Transport Survey, Oct 2014 – Feb 2015

Figure 3 and table 2 below provides a summary of the number of stops for outbound (the journey from Mombasa to other destinations) and inbound (return journeys back to Mombasa) during the period October 2014 – February 2015.

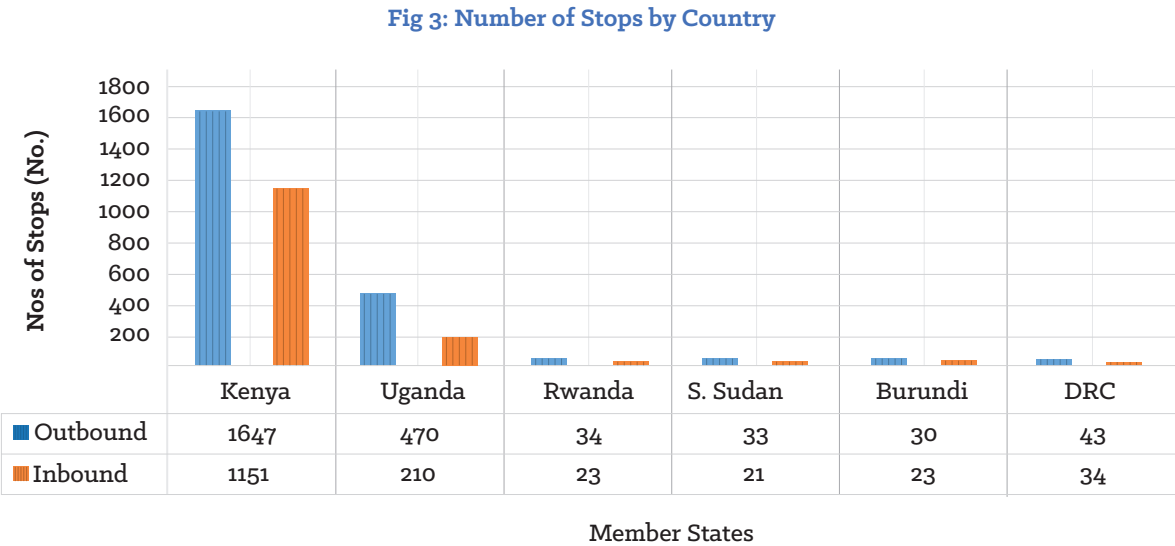
Results from the sample show more stops in Kenya and Uganda. This is because the Kenyan section is the longest and most of the transit traffic originates from Kenya and the number decreases as we progress along the corridor.

All the 171 trucks conducted during the survey period passed through Kenya making 1,647 stops in total for the outbound journey, which translates to about 10 stops per truck per trip. It is expected that drivers should rest after four hours of continuous driving and also stop at least once at the weighbridge and at the border.

In order to improve safety, rest stops need to be regulated and aligned with the implementation of the Road Site Stations(RSS)¹

About 29% of the stops made by truckers happen when they are breaking for rest and meals. This is followed by personal reasons (18.7%) and weighbridge stops (15.5%) among other stop reasons.

¹The road site stations are NCTTCA initiatives that have identified rest stops along the corridor. <http://www.roadsidestations.org/>



Source: Road Transport Survey, Oct 2014 – Feb 2015

Table 2: Number of Stop Reasons by Country (October 2014 – February 2015)

Stop Reason	Kenya	Uganda	Rwanda	S. Sudan	Burundi	DRC	Total	%
Rest/meals	856	189	7	4	18	8	1082	29.1%
Personal reasons	568	89	16	7	7	7	694	18.7%
Weighbridges	436	139	0	0	0	0	575	15.5%
Police/other security checks	241	54	3	17	5	8	328	8.8%
Border post procedures	197	18	25	1	7	12	260	6.6%
Customs checks	89	44	0	7	11	16	167	4.9%
Company check points	126	7	0	0	0	2	135	3.6%
Vehicle breakdowns	109	14	1	0	1	1	126	3.4%
Road condition	80	23	1	0	0	13	117	3.1%
Cargo dropping	42	32	2	7	4	2	89	2.4%
Inland terminal procedures	14	52	2	4	0	6	78	2.1%
Cargo picking	14	14	0	1	1	1	31	0.8%

Source: Road Transport Survey, Oct 2014 – Feb 2015

3.1.1 Outbound/ Inbound Stop Reason

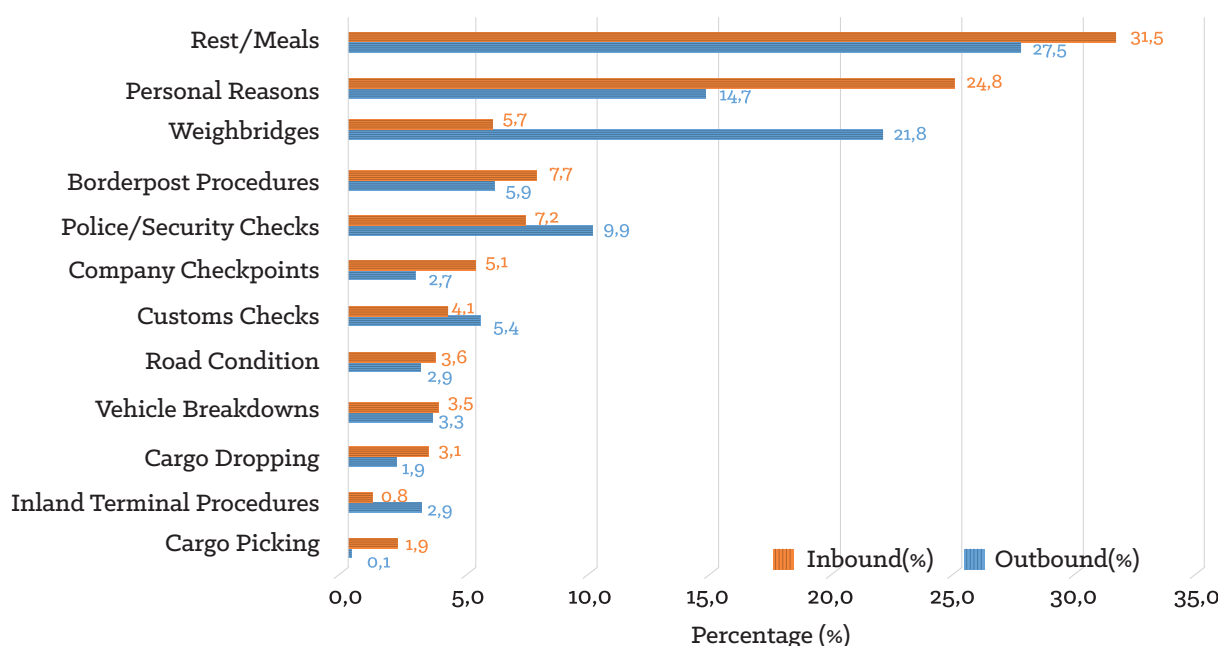
The Figure 4 provides a summary of some of the reasons why drivers on transit make either inbound or outbound stops along their journey to destination. Outbound institute the journey from Mombasa to inland destinations while inbound are the return journeys from inland back to Mombasa.

Figure 4 shows that most of the outbound stops made by drivers are for Rest and Meals followed by stops at the weighbridge, personal reasons and police/security checks (27.5%, 21.8%, 14.7% and 9.9%) respectively.

Inbound stops were mainly for rest and meals (31.5%), personal reasons 24.8%) and stops due to weighbridges (5.7%).

Unnecessary stops translate into low productivity and poor efficiency due to delays that enters into the cost side of doing business within the Northern Corridor. There is need to fully embrace, regulate the driving time and invest in Road side stations with all the amenities to minimize unnecessary numerous stops.

Fig 4: Stop Reason Percentage Distribution(Outbound/Inbound)



Source: Road Transport Survey, Oct 2014 – Feb 2015

3.1.2 Charges during the Survey

Table 3 provides a summary of the service fee paid by truck drivers while on transit along the Northern Corridor.

The results in table 3 indicate that there are some legal and illegal charges being paid along the corridor. Police fees/fine, port charges and border charges are some of the main fees paid in all Member States.

Police charges are ranked higher by truck drivers (26.1%) followed by port charges (20.2%), personal charges (18.1%) and then weighbridge charges at 13.3%.

Results not conclusive to differentiate between legal and illegal fees. It was noticed that most of the drivers don't know the difference between legal and illegal fees and therefore the need for sensitization and development of brochures to inform truckers of the legal charges along the Corridor.

Table 3: Fee Paid by Truckers per country

Service Fee Paid	Kenya	Uganda	Rwanda	Burundi	S. Sudan	DRC	Total	%
Police fees/fine	97	53	23	10	7	9	199	26.1%
Port charges	91	32	8	3	13	7	154	20.2%
Personal charges	94	12	8	8	6	10	138	18.1%
Weighbridge charges	58	23	9	3	4	4	101	13.3%
Vehicle breakdowns	38	9	6	5	11	7	76	10.0%
Repair charges	43	1	0	0	0	0	44	5.8%
Border charges	12	1	2	2	2	2	21	2.8%
Other charges	11	1	2	0	2	3	19	2.5%
Customs charges	1	3	3	1	0	1	9	1.2%

Source: Road Transport Survey, Oct 2014 – Feb 2015

Figure 5 below provides a summary of the charges paid with respect to the inbound and outbound cargo.

The results indicate that outbound vehicles pay more charges than inbound. In addition police fees/fines, border, customs and weighbridges more targeted outbound vehicles which in most cases are loaded than inbound vehicles which are likely to be empty.

3.2 FINDINGS FROM GPS ROAD SURVEY

The graphs highlighted in this section shows findings from the GPS road survey. The results were based on the assumption that the maximum dwell time at the weighbridges is within 24 hours. Anything that was higher than this time limit was considered as an outlier and was therefore not used in the analysis.

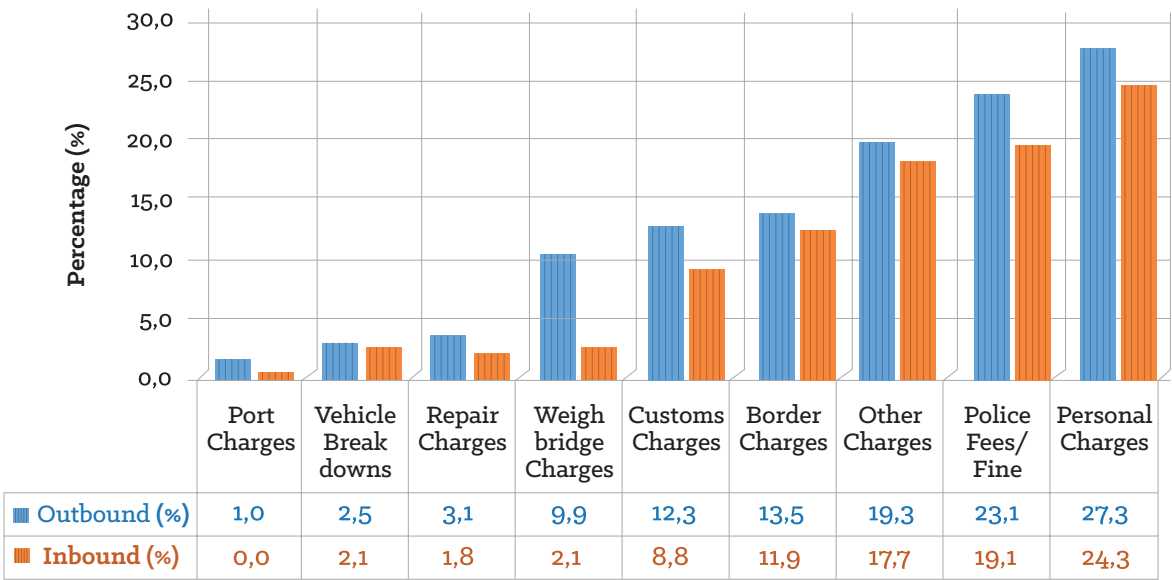
3.2.1 Weighbridges Crossing Time

Weighbridge crossing time is measured by subtracting arrival time at the weighbridge from departure time from the weighbridge based on Road/GPS based Surveys data.

Figure 6 gives an average crossing time at the various weighbridges in Kenya and Uganda from November 2014 to February 2015.

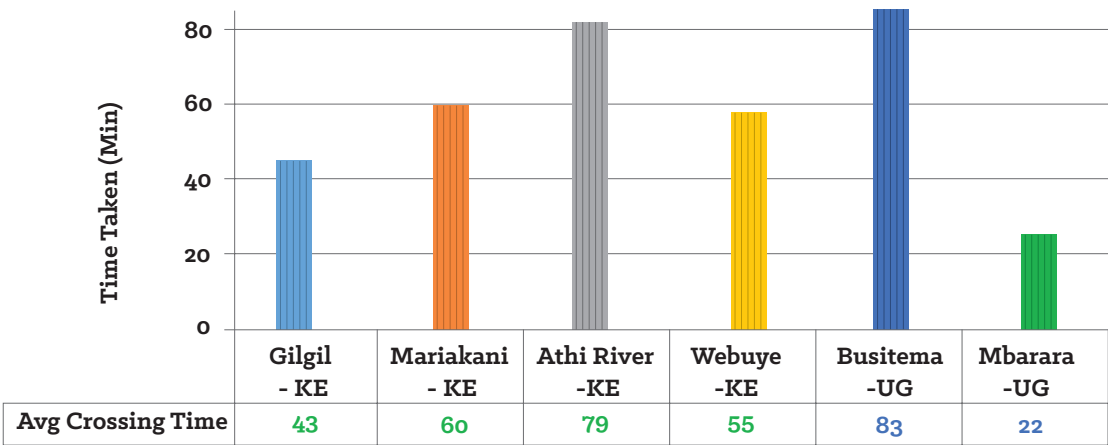
The results in figure 6 are indicative of the average weighbridge crossing time. It shows that it takes longer to cross Athi River (79 min) and Busitema (83 minutes) weighbridges in Kenya and Uganda respectively. This is an improvement from the previous performance in the previous survey between January and October where Busitema registered between 34 and 52 minutes crossing time while Webuye had a crossing time of between 35 and 64 minutes. Proximity of these weighbridges to urban areas with high population and traffic has an impact on the traffic flow.

Fig 5: Percentage Distribution of charges Paid (Inbound/Outbound)



Source: Road Transport Survey, Oct 2014 – Feb 2015

Fig 6. Average Weighbridge Crossing Time (Min)



Source: Road Survey, Nov 2014 – Feb 2015

However, Mbarara and Gilgil showed the shortest weighbridge crossing time of 22 minutes and 43 minutes respectively.

All the weighbridges in Kenya have high speed weigh in motion installed except Busia weighbridge and only trucks that fail the HSWIM are diverted to the fixed scale.

3.2.2 Border Post Crossing Time

The indicator is measured by taking departure time from the border minus arrival time at the border based on Road/GPS based Surveys data.

Figure7 shows the average time it takes a truck to cross Malaba and Busia border posts on the Kenyan and Ugandan sides.

- At Malaba border post, it takes on average 89 minutes to cross the Kenyan and Ugandan sides of the border. However, trucks take shorter time to cross the Ugandan side (41 minutes) of the border than on the Kenyan side (89 minutes). The average border crossing time for Malaba has improved drastically compared to the period between august, 2013 to October, 2014 where it too an average of 4.55 hours to 32.73 hours(1.4 days) to cross the border.

- Crossing Busia border on the Kenyan side took the shortest time of averagely 26 minutes while the Ugandan side recorded an average crossing time of 103 minutes.

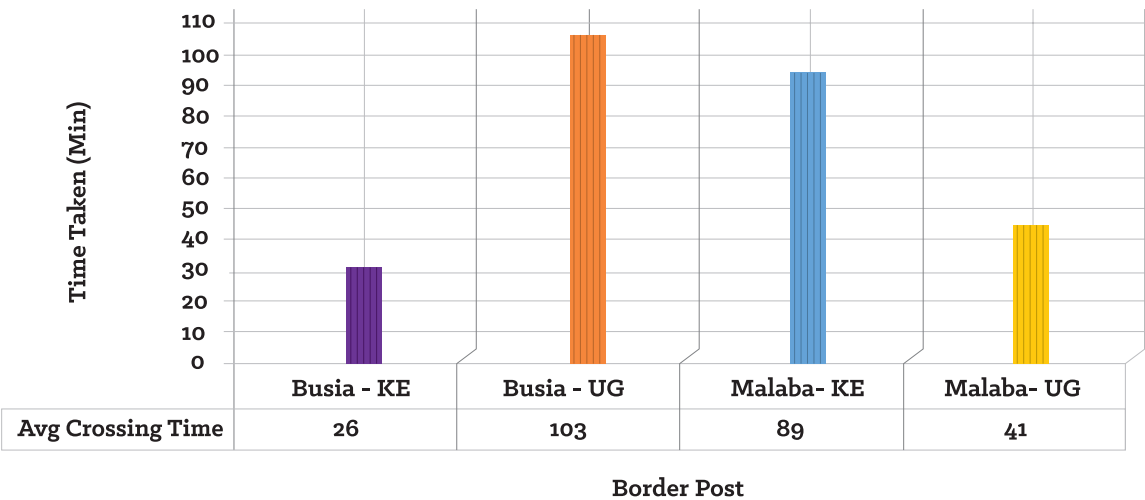
3.3 TRANSPORT COST AND RATES

Transport cost is the amount 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/ shippers. The rates may not necessarily be based on the real transport cost due to the industry market structure. Rates are subject to market influence and are usually adjusted based on several factors notably the demand and supply as well as the value and type of the commodity.

The Table below shows the change in both direct and indirect costs to the six capitals or main distribution centres. In most cases, both the direct cost of trucking and the hidden cost of delays have been reduced between 2009-10 and 2014.

Fig 7: Border Post Crossing Time



Source: Road Survey, Nov 2014 – Feb 2015

3.3.1 Road Freight Charges

Data on freight charges allow for comparison of road freight transport fiscal regimes in different Countries in quantitative terms. They serve as core information on investment decision making. Freight charges acts as a basis to study cost recovery of road infrastructure by relating all the various taxes and charges levied on transport activities to costs.

The indicator captures the different tariff charges by transporters per road and/or per section.

Table 4 gives a summary of the average transport cost for moving a container (20' or 40' not exceeding 27 tons) from Mombasa to main destinations along the Northern Corridor.

Table 4: Principal Elements of Direct and Indirect Cost (US\$/TEU), 2009/10 vs. 2014

Mombasa-Nairobi	2009-2010	2014	% change
Trucking Cost	1,300	1,023	-21%
Opportunity Cost for Truck	297	247	-17%
Extra Inventory for Cargo	2,219	411	-81%
Subtotal - Hidden Costs	2,516	658	-74%
Total: Trucking Cost + Hidden Cost	3,816	1,681	-56%
Mombasa-Kigali			
Trucking Cost	6,500	4,833	-26%
Opportunity Cost for Truck	2,107	2,542	21%
Extra Inventory for Cargo	4,405	1,973	-55%
Subtotal - Hidden Costs	6,512	4,515	-31%
Total: Trucking Cost + Hidden Cost	13,012	9,348	-28%
Mombasa-Kampala			
Trucking Cost	3,400	2,867	-16%
Opportunity Cost for Truck	1,738	2,276	31%
Extra Inventory for Cargo	4,142	1,726	-58%
Subtotal - Hidden Costs	5,880	4,002	-32%
Total: Trucking Cost + Hidden Cost	9,280	6,869	-26%
Mombasa-Bujumbura			
Trucking Cost	8,000	6,350	-21%
Opportunity Cost for Truck	1,898	2,750	45%
Extra Inventory for Cargo	5,079	2,466	-51%
Subtotal - Hidden Costs	6,977	5,216	-25%
Total: Trucking Cost + Hidden Cost	14,977	11,566	-23%
Mombasa-Juba			
Trucking Cost	9,500	6,750	-29%
Opportunity Cost for Truck	1,630	2,203	35%
Extra Inventory for Cargo	10,486	4,507	-57%
Subtotal - Hidden Costs	12,116	6,710	-45%
Total: Trucking Cost + Hidden Cost	21,616	13,460	-38%

Source: NCTTCA, *Impact Assessment of the Northern Corridor Performance Improvement Activities*, May 2015.

3.3.2 Transport Rates in Kenya

Table 5 below summarises transport rates in Kenya from the year 2010 to 2015.

Comparing 2014 and 2015, transport rates between the nodes have reduced considerably in most of the destinations except from Mombasa to Nairobi and Juba. This high rate is probably due to market competition and availability of trucks for Mombasa - Nairobi section and for Juba leg, due to late fully embracement of SCT process initiatives and high insurance cost owe to current unrest situation in some part of South Sudan.

Mombasa-Goma records the highest decrease in freight charges compared to other destinations.

The number of round trips made by transporters has considerably increased with Nairobi recording the highest of 11 rounds not only because of being the shortest section but more importantly the improvement of infrastructure, weighbridge procedures (HSWIM) as well as the removal of roadblocks along the Mombasa-Nairobi section have remarkably translated to more round trips.

Table 5: Transport charges per Route

Route	Distance (Km)	Average Transport rates per Route				No. of Round Trips/Month	
		2010 (USD)	2012 (USD)	Nov. 2014 (USD)	Mar. 2015 (USD)	Nov. 2014	Mar. 2015
Mombasa-Nairobi	430	1,300	1,118	1,023	1,057	9	11
Mombasa-Kampala	1,170	3,400	3,070	2,867	2,751	4	4
Mombasa-Kigali	1,700	6,500	4,650	4,833	4,350	2	3
Mombasa-Bujumbura	2,000	8,000	7,000	6,350	6,040	1	3
Mombasa-Goma	1,880	9,500	6,500	6,750	5,058	1	2
Mombasa-Juba	1,750	9,800	6,250	4,678	5,030	2	2

Source: Road Transport Association, March 2015

3.3.3 Transport Rates in Uganda

Freight charges in Uganda presented in the table below are based on container type.

The results in table 6 indicate that rates are based on the utilization of the truck irrespective of the container sizes. Export from Uganda, except those destined to Kenya, attracts high freight charges as compared to imports.

In addition, it is much expensive to transport cargo to and from Bujumbura compared to other destination.

It is indicative that transporters from Kampala make more trips to Kigali and Nairobi in a month compared to other destinations.

Table 6: Transit Tariff for Kampala – Uganda (USD)

Kampala Transit Tariff in USD (\$) per Container				Rate Per Container	
	From	To	Distance (KM)	Mar - 15 (20')	Mar - 15 (40')
Imports	Mombasa (KE)	Kampala (UG)	1,170	2,800	2,800
	Nairobi (KE)	Kampala (UG)	688	1,500	1,500
	Juba (SS)	Kampala (UG)	653	-	-
	Bujumbura (BI)	Kampala (UG)	788	1,800	1,800
	Kigali (RW)	Kampala (UG)	513	1,200	1,200
	Goma (DRC)	Kampala (UG)	669	1,500	1,500
Exports	Kampala (UG)	Goma (DRC)	669	3,200	3,200
	Kampala (UG)	Kigali (RW)	513	2,080	2,080
	Kampala (UG)	Bujumbura (BI)	788	4,480	4,480
	Kampala (UG)	Juba (SS)	653	3,200	3,200
	Kampala (UG)	Nairobi (KE)	688	500	500
	Kampala (UG)	Mombasa (KE)	1170	900	900

Source: UNTA, March 2015

Table 7: Number of Round Trips made by Truckers in Uganda

From	To	Number of Round Trips	
		Distance	Mar-15
Kampala (UG)	Goma (DRC)	669	4
	Kigali (RW)	513	6
	Bujumbura (BI)	788	4
	Nairobi (KE)	688	6
	Mombasa (KE)	1170	4
	Juba (SS)	653	4 - 5

Source: UNTA, March 2015

3.3.4 Transport Rates in Burundi

The table 8 summarizes transport charges per ton in Bujumbura in USD (\$). The table indicate that transport rates charged by transporters have been reducing over time for both imports and exports to and from Bujumbura.

Transport rates for imports have increased since November 2014 and currently importing cargo from Mombasa to Bujumbura costs on average USD 233 per ton while from Nairobi and Kampala costs USD 180 and 130 per ton respective. However, the transport rate of importing the same cargo from Kigali, Rwanda has dropped by USD 30 from 80 USD in November 2014 to USD 50 per ton by March 2015.

In addition, the transport rate of the same tonnage of cargo from Bujumbura during this same period to Mombasa, Nairobi and Kampala costs USD 160, 120 and 80 per ton respectively. This shows that cost of transporting an import cargo is slightly higher compared to the cost of exporting the same cargo.

The average number of Round trips done to the above destinations in the month of March 2015 is summarized in table 9.

It is evident that number of trips made by transporters from Bujumbura has significantly reduced. This might be due to the increased cargo transiting through the Central Corridor which is shorter than the Northern corridor.

Table 8: Transit Tariff for Bujumbura – Burundi (USD)

Bujumbura Transit Tariff USD (\$) per Ton							
	From	To	Distance	Apr-2013	Feb-2014	Nov-2014	Mar-2015
Imports	Mombasa (KE)	Bujumbura (BI)	2,000	235	220	200	233
	Nairobi (KE)	Bujumbura (BI)	1476	200	180	180	180
	Kampala (UG)	Bujumbura (BI)	788	160	140	130	130
	Kigali (RW)	Bujumbura (BI)	275	50	50	80	50
	Goma (DRC)	Bujumbura (BI)	431	--	70	100	70
Exports	Bujumbura (BI)	Goma (DRC)	431	70	80	80	70
	Bujumbura (BI)	Kigali (RW)	275	50	60	60	50
	Bujumbura (BI)	Kampala (UG)	788	140	100	90	80
	Bujumbura (BI)	Nairobi (KE)	1476	160	130	120	120
	Bujumbura (BI)	Mombasa (KE)	2000	180	160	155	160

Source: Association des Transporteurs Internationaux du Burundi, Feb 2014, Nov 2014 and Mar 2015

Table 9: Number of Round Trips made by Truckers in Burundi

From	To	Distance (KM)	No. of Round Trips		
			Feb-2014	Nov-2014	Mar-2015
Bujumbura (BI)	Goma (DRC)	431	2	3	2
	Kigali (RW)	275	3	4	3
	Kampala (UG)	788	2	3	2
	Nairobi (KE)	1476	1	2	2
	Juba (SS)	1441	-	-	-
	Mombasa (KE)	2000	1	1 or 2	1

Source: Association des Transporteurs Internationaux du Burundi, Feb 2014, Nov 2014 and Mar 2015

3.3.5 Transport Rates in Rwanda

Table 10 below provides a summary of transport rates charged by transporters in Kigali per trip made to the following destinations: Mombasa, Nairobi, Kampala, Bujumbura, Goma and Jinja, for both imports and exports.

Transport rates for imports in Rwanda from Nairobi, Kampala, and Goma increased with Kigali -Kampala section registering the highest increase of USD 200 rates. Equally, transport export rates to other destinations reduced except transport export rates to Nairobi and Mombasa which increase by USD 200. i.e From 2000 and 3000 to USD 2200 and 3200 respectively. The rates are based on single trip estimated to be between 25 - 30 tones.

A freight charge of USD 160 per ton is levied for trucks loading coffee or tea for exports.

Improvement in the logistics in Rwanda and promotion of market competition will ultimately reduce transport rates in Rwanda.

Table 11 shows that the number of round trips made by transporters in Rwanda has remained constant except for Kampala that has increased by one round trip. This implies an improvement in the business environment.

Table 10: Transit Tariff for Kigali – Rwanda (USD)

Kigali Transit Tariff USD (\$) per Container				Rate per Container		
	From	To	Distance	Feb-2014	Nov-2014	Mar-2015
Imports	Mombasa (KE)	Kigali (RW)	1,700	4,800	4,800	4,200
	Nairobi (KE)	Kigali (RW)	1201	3,950	3,800	3,900
	Kampala (UG)	Kigali (RW)	513	4,100	2,000	2,400
	Juba (SS)	Kigali (RW)	1166	6,700	-	6,200
	Bujumbura (BI)	Kigali (RW)	275	3,800	-	3,200
	Goma (DRC)	Kigali (RW)	156	3,000	-	3,200
Exports	Kigali (RW)	Goma (DRC)	156	3,500	-	3,200
	Kigali (RW)	Bujumbura (BI)	275	3,800	-	2,200
	Kigali (RW)	Juba (SS)	1166	-	7,000	6,400
	Kigali (RW)	Kampala (UG)	513	3,500	1,600	1,800
	Kigali (RW)	Nairobi (KE)	1201	2,000	2,000	2,200
	Kigali (RW)	Mombasa (KE)	1700	4,200	3,000	3,200

Source; ACPLRWA, Feb 2014, Nov 2014 and Mar 2015

Table 11: Number of Round Trips made by Truckers in Rwanda

From	To	Distance (KM)	No. of Round Trips		
			Feb-2014	Nov-2014	Mar-2015
Kigali (RW)	Goma (DRC)	156	1	7	7
	Bujumbura (BI)	275	2	5	5
	Kampala (UG)	513	2	5	6
	Juba (SS)	1166	1	1	1
	Nairobi (KE)	1201	1	3	3
	Mombasa (KE)	1700	1	2	2

Source; ACPLRWA, Mar 2014

3.3.6 Transport Rates in D.R.Congo

Goma in DR Congo marks one of the major nodes within the Northern Corridor. The town is one of the major origin and destination for most cargo in the Country through the northern Corridor. Table 12 below provides a monthly average for imports and exports transport tariff from and to Goma.

It is observed that currently transport rates for both imports and exports are charged differently based on the container type and cargo destination as opposed to tonnage rates before.

Imports attract high freight charges as opposed to exports from the region.

Nevertheless, imports from Juba attract higher freight charges than other destinations due to the dilapidated road conditions and security concerns.

Table 13 provides a summary of the average number of round trips made by transporters from Goma to other destinations.

The results indicate that amidst the overall increase in number of round trips most of the traffic is made to Kampala, Nairobi and Mombasa mainly because of the exports and imports between the two Countries.

Table 12: Transport Tariff for Goma – DR Congo (USD)

Goma Transit Tariff in USD (\$)				Per Ton	Per type of Container	
	From	To	Distance (KM)	Nov-14, USD	Mar-15 (20')	Mar-15 (40')
Imports	Mombasa (KE)	Goma (RDC)	1880	235	3,000	6,000
	Nairobi (KE)	Goma (RDC)	1357	230	2,500	4,500
	Juba (SS)	Goma (RDC)	1322	180	3,800	7,300
	Bujumbura (BI)	Goma (RDC)	431	-	2,000	3,800
	Bujumbura (BI)	Bukavu (RDC)	165	-	1,500	2,400
	Kampala (UG)	Goma (RDC)	669	77	2,000	3,000
	Kigali (RW)	Goma (RDC)	156	100	1,500	2,700
Exports	Goma (RDC)	Mombasa (KE)	1880	235	2,000	3,500
	Goma (RDC)	Nairobi (KE)	1357	230	1,900	3,000
	Goma (RDC)	Juba (SS)	1322	-	-	-
	Goma (RDC)	Bujumbura (BI)	431	175	1,500	2,000
	Goma (RDC)	Kigali (RW)	156	100	1,400	2,500
	Goma (RDC)	Kampala (UG)	669	77	1,500	2,200

Source; FEC, Mar 2015

Table 13: Number of Round Trips made by Truckers in DR Congo

From	To	Distance (KM)	Number of Round Trips	
			Nov - 2014	Mar - 2015
Goma (DRC)	Bujumbura (BI)	431	2	1
	Kigali (RW)	156	2	2
	Kampala (UG)	669	2	5 - 6
	Juba (SS)	1322	1.5	1
	Nairobi (KE)	1357	2	3 - 4
	Mombasa (KE)	1880	1.5	2 - 3

Source; FEC, Mar 2015

3.3.7 Transport Rates in South Sudan

Table 14 below provides a summary of rates charged by transporters in S. Sudan.

Table 14: Transit Tariff for Juba – South Sudan (USD)

Juba Transit Tariff in USD (\$) per Container				Container Type	
	From	To	Distance (KM)	Mar - 2015 (20')	Mar - 2015 (40')
Imports	Mombasa (KE)	Juba (SS)	1,750	6,000	6,000
	Nairobi (KE)	Juba (SS)	1145	5,500	5,500
	Bujumbura (BI)	Juba (SS)	1441	10,000	15,000
	Kigali (RW)	Juba (SS)	1166	6,000	12,000
	Goma (DRC)	Juba (SS)	1322	15,000	20,000
	Kampala	Juba (SS)	653	4,500	4,500
Exports	Juba (SS)	Goma (DRC)	1322	6,000	10,000
	Juba (SS)	Kigali (RW)	1166	4,000	8,000
	Juba (SS)	Bujumbura (BI)	1441	5,000	12,000
	Juba (SS)	Nairobi (KE)	1145	3,000	3,000
	Juba (SS)	Mombasa (KE)	1,750	4,000	4,000
	Juba (SS)	Kampala (UG)	653	2,000	2,000

Source: SSBU/SSFEB, Mar 2015

Table 15: Number of Round Trips made by Truckers in South Sudan

From	To	Distance (KM)	Number of Round Trips
			Mar - 2015
Juba (SS)	Goma (DRC)	1322	1
	Kigali (RW)	1166	2
	Bujumbura (BI)	1441	2
	Nairobi (KE)	1145	3
	Mombasa (KE)	1,750	3
	Kampala (UG)	653	4

Source: SSBU/SSFEB, Mar 2015

3.4 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.

3.4.1 Transit time and delays

Transit time within the Corridor is the time taken from the point of entry or origin to destination. The main transit delays usually occur at the point of loading, offloading and at various transit nodes.

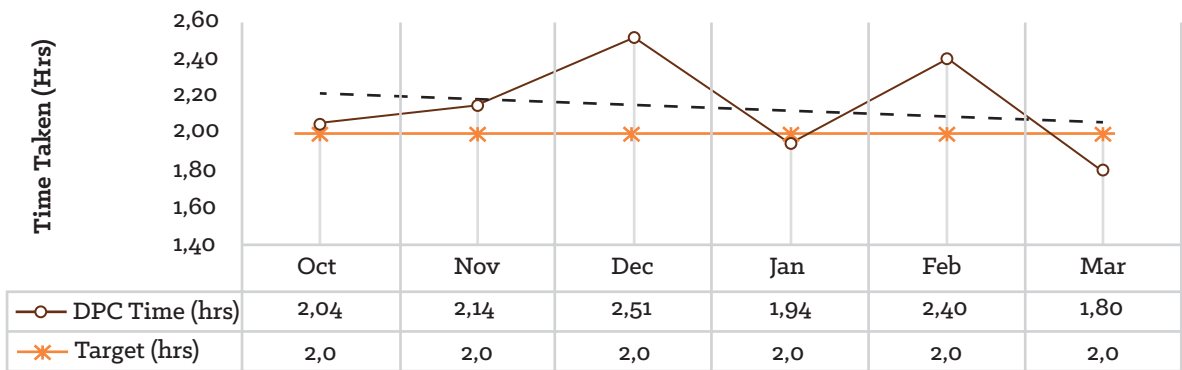
3.4.1.1 Time for Customs Clearance at the Document Processing Centre (DPC)

This is the time it takes to have an entry lodged by a clearing agent cleared by customs. DPC time is calculated by the difference between the time of passing an entry and the time of entry registration.

Figure 8 shows time taken by the customs officers to clear cargo at the document processing centre against the targeted clearance time.

The graph in Fig 8 shows a monthly time duration taken by customs department to clear cargo at the DPC centre.

Fig 8: Customs Clearance at DPC



Oct 2014 - Mar 2015

Source: KRA, Oct 2014 – Mar 2015

The DPC time shows a decreasing trend which is favourable to the business community as clearance time drops to 1.8 hours below the 2 hours expected DPC time in March 2015.

However, the variations are due to short fluctuations depending on the season and available conditions.

3.4.1.2 Average Container Dwell Time in Mombasa Port

Dwell time is the measure of time that elapse from the time cargo arrives at the port to the time goods leave the port premises after all permits and clearances have been obtained.

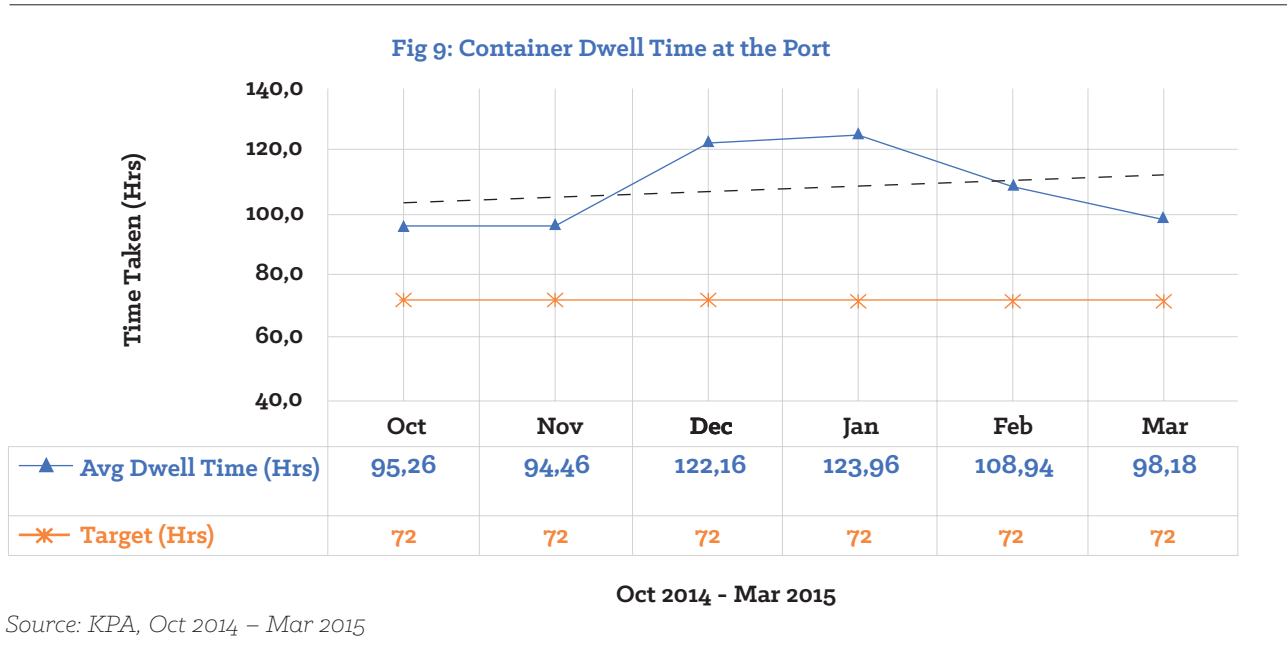
It is measured by subtracting arrival time from the exit time at the port. Data on arrival and exit from the port are provided by KPA from the KWATOS system.

Internationally, lower Port dwell time has become a major commercial indicator in attracting more cargo to the Ports. Figure 9 shows a monthly mean container dwell time at the port of Mombasa for the given time period.

The graph clearly indicates that average cargo dwell time at the Port of Mombasa since October 2014 to March 2015 ranges between 3.9 days to 5.2 days. This is way above the set target of 3 days (72 hrs).

The results are indicative of long dwell times at the ports which might hurt efficiency of port operations thereby affecting the cost of doing business. This is based on the assumption that all the logistics chain operators' mainly private sector (terminal operator, customs broker, owner of container depots, shippers) have an interest in reducing dwell time.

The port dwell time is depended on other indicators such as the time taken at one stop centre, time taken at Document processing centre and time taken within the port after customs release. Intervening in the under this under these indicators will automatically reduce the port dwell time.



3.4.1.3 Time Taken At Mombasa One Stop Centre

The indicator is measured by subtracting the time when an entry is passed from the time release order is generated.

The indicator involves a number of processes undertaken by different agencies involved in the clearance process.

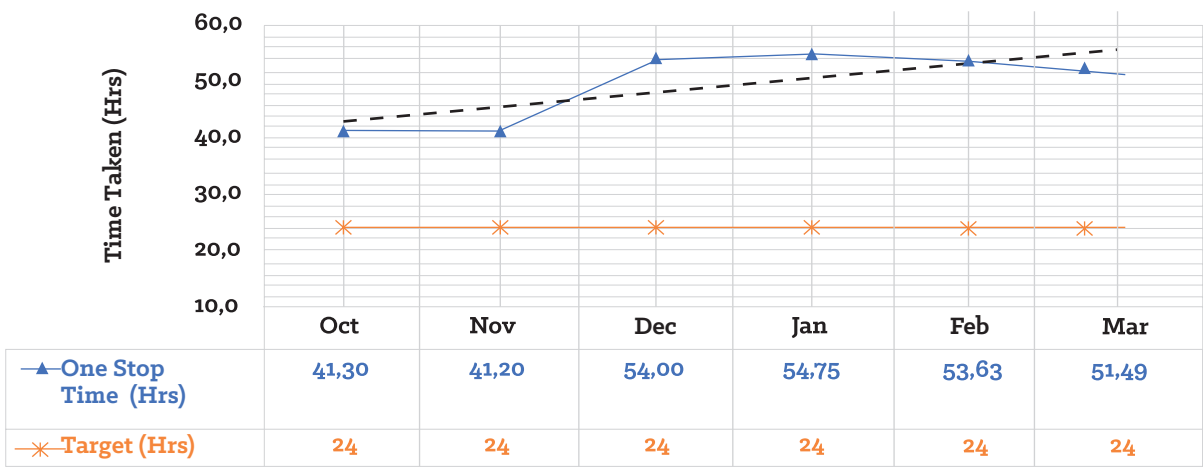
From figure 10, time at one stop centre has been increasing registering its highest and lowest of 54.8 and 41.2 hours in January 2015 and November 2014 respectively. However, the average one stop centre time is still higher than the 24 hour target and there is the need to reverse the trend.

The trend indicatively show that time taken at One Stop Centre continues to rise in the long run.

This results in delays in the release of goods that is very often attributed to the procedural and documentary requirements of all the agents and customs since they are one of the more visible agencies at the border.

It is therefore in the interest of customs administrations to initiate measures to improve the clearance process and for monitoring the release times for goods through regular reviews.

Fig 10: Time Taken at One Stop Centre



Source: KPA, Oct 2014 – Mar 2015

3.4.1.4 Time within the Port after Customs Release

Refers to the period it takes to evacuate the cargo from the port after it is officially released. This time is calculated by taking cargo removal time at the port gate minus the time release order was generated.

Figure 11 shows the trend on transit time after customs release at the Port of Mombasa.

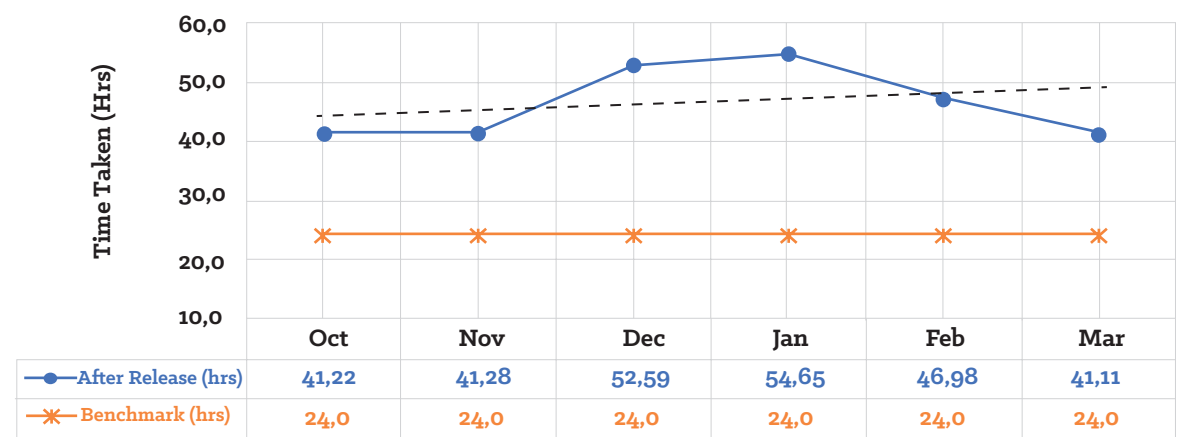
Figure 11 shows that averagely, it takes between 1.7 - 2.3 days for transporters to pick cargo after customs release. This is significantly high compared to the 24 hours benchmark.

The delays after customs release are majorly attributed to transporters and traders not taking the initiative to load their cargo from the port on time.

More importantly, the trend line indicates a fluctuating after release time signifying unpredictability of the future release time.

One of the mechanisms to reduce this time wastage is to clear truck drivers while inside the truck to ease congestion in the waiting area. Another measure is to revise the maximum free period after release time.

Fig 11: Time Taken After Customs Release



Source: KRA, Oct 2014 – Mar 2015

Oct 2014 - Mar 2015

3.4.1.5 Transit Time within the Corridor

Transit time within the Corridor is the time taken from the point of entry or origin to destination. The time indicator is measured using two methods by the Transport Observatory.

- i. Transit time using the customs electronic data (time taken from the time the time release order is issued at the port to the time export certificate is issued at the border)
- ii. Transit time using the GPS survey (time when the journey starts, in most cases at the yards, to the time the truck crosses the border)

3.4.1.5.1 Transit Time in Kenya

Transit time in Kenya using the customs electronic data is an indicator that estimates the period from the time when release order is issued at the port of Mombasa (Mbs) to the time the export certificate is issued after crossing the border at Malaba (Mlb) or Busia (Bsa).

Figure 12 below shows transit time in Kenya covering the distance from Mombasa to Busia and Malaba.

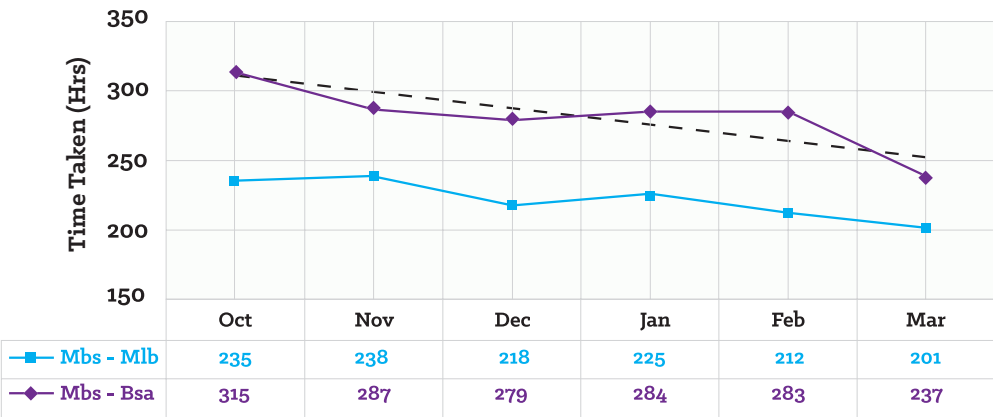
The Figure 12 indicates that it takes longer for a truck to travel from Mombasa to Busia compared to Malaba. The average transit time to Malaba and Busia shows a decreasing trend.

Both Malaba and Busia registered the lowest transit time of 8.4 days (201.3 hrs) and 9.9 days (234 hrs) in March 2015 respectively.

It should be noted that this time includes delays after customs release at the port whereby in most cases transporters keep their cargo in their yards before starting their journey.

At the border, sometimes manual entries are done and updated far much later when a truck has already crossed.

Fig 12: Transit Time in Kenya - Mombasa to Malaba and Busia



Oct 2014 - Mar 2015

Source: KRA, Jan 2013-Jul 2014

3.4.1.5.2 Transit Time in Uganda

The indicator is measured by the difference between date and time when cargo exits and enters Uganda.

Table 16 below shows transit time in Uganda from Busia and Malaba border to Katuna, Elegu, Kampala, Mpondwe Mbale and Bunagana.

On average it takes longer to transport cargo from Malaba to other borders in Uganda than from Busia. Time taken by truck

drivers from Malaba to Kampala, Katuna, Elegu and Bunagana averaged 2.7 days, 3.1 days and 8.8 days respectively.

However, time taken from Busia to the same destinations seems shorter implying more preference by truck drivers if distance and other factors are to be held constant.

The difference between times taken is due to the differences in the actual distance covered between the two time nodes.

Table 16: Average Transit Time in Uganda (Hrs)

Entry Point	Destination	Oct-14 (hrs)	Nov-14 (hrs)	Dec-14 (hrs)	Jan-15 (hrs)	Feb-15 (hrs)	Mar-15 (hrs)	Average (hrs)
Malaba	Kampala	53	57	65	83	72	55	64
	Katuna	70	72	62	121	92	73	82
	Elegu	67	70	97	73	67	70	74
	Mbale	34	33	33	46	31	35	35
	Oraba	90	72	83	90	81	64	80
	Mpondwe	104	87	155	129	161	76	119
	Bunagana	163	130	172	247	422	137	212
Busia	Kampala	88	53	56	54	47	69	61
	Katuna	76	73	77	83	78	55	74
	Elegu	82	75	79	84	102	76	83
	Mpondwe	169	77	90	96	82	74	98
	Bunagana	177	142	152	209	152	109	157

Source: URA, Oct 2014 - Mar 2015

3.4.1.5.3 Transit Time in Rwanda

The Northern Corridor passes through the following borders in Rwanda: Gatuna (GA) to Akanyaru Haut (AH) and Nemba (RE) on the Burundian side and Gatuna (GA) to Bugarama (BU), Gisenyi (GC) and Rusizi (MU) on the DRC side.

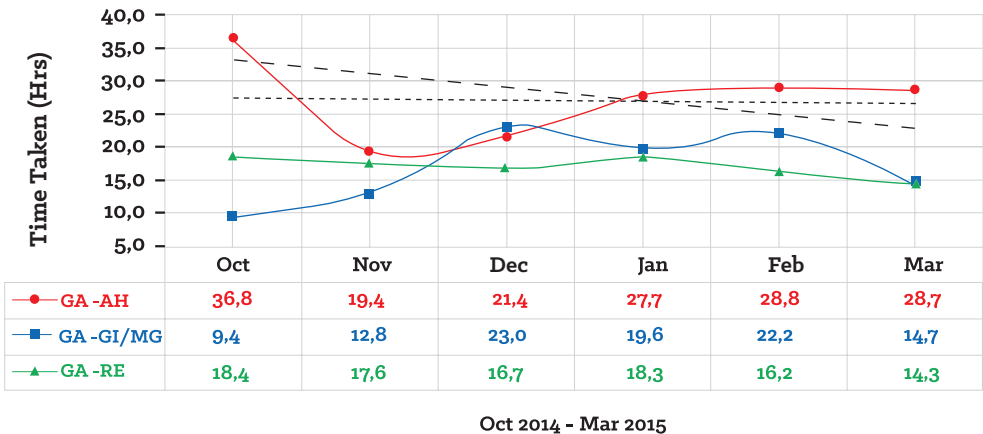
Transit time between these borders is measured by the difference between the time when cargo exits and enters Country.

Figure 13 and 14 demonstrate Rwanda transit time between the respective Northern Corridor borders.

The Figure 13 indicates that on average it takes 1.1 and 0.7 days to transport cargo from Gatuna (GA) to Akanyaru Haut (AH), Magerwa (MG) and Nemba (RE) respectively. However, the trend indicates a consistency in the transit time between the nodes.

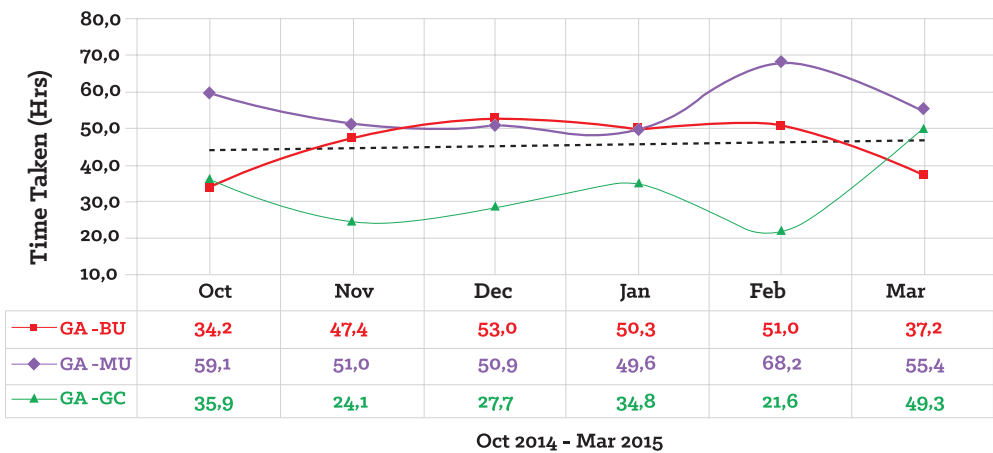
The results in figure 14 indicates that on average it takes 1.9 days, 2.3 days and 1.3 days to transport cargo from Gatuna to Bugarama (BU), Rusizi (MU) and Rubavu/Gisenyi (GC) respectively.

Fig 13: Rwanda Transit Time from Gatuna to Burundi Borders and Magerwa



Source: RRA, Oct 2014 – Mar 2015

Fig 14: Rwanda Transit Time from Gatuna to DRC Borders



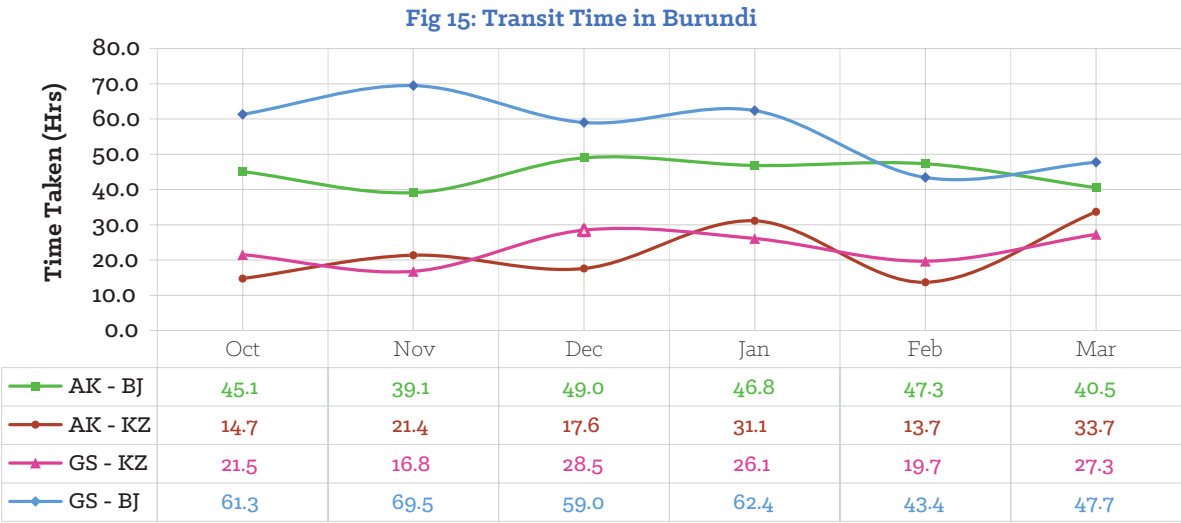
Source: RRA, Oct 2014 – Mar 2015

3.4.1.5.4 Transit Time in Burundi

Transit time between the borders in Burundi is measured by the difference between the time when cargo enters and exits the Country.

Figure 15 below shows transit time in Burundi across the main Northern Corridor nodes and border points. The nodes indicated include Bujumbura (BJ), Akanyaru Haut (AH), Gasenyi (GS) and Kayanza (KZ).

- It takes averagely shorter time to transit from Gasenyi to Bujumbura than from Akanyaru Haut.
- In addition, average time taken to Kayanza from Gasenyi and Akanyaru Haut are stable between 14 hours and 38 hours over the time periods.



Oct 2014- Mar 2015

Source: RRA, Oct 2014 – Mar 2015

3.4.1.5.5 Transit Time and Delays in DRC

The Northern Corridor roads extend its sections into the Eastern part of DRC. The country share a number of border posts with other member states. Some of the main border posts that are computerized include Aru, Mahagi, Bunia, Kasindi, Bunagana and Kamanyola which extends their destinations to Goma and Doko.

Table 17 below provides a summary of 2014 annual average of transit time and delays in DRC.

Processes at the border points on the DRC side are mainly through manual processes. This makes it cumbersome to transmit data to the observatory for processing and designing of policy interventions.

The few data cases captured electronically are mainly from Mahagi border post but are not sufficient to generate comparative indicators for the T.O. However, since January 2014 to March 2015, it is indicative that transit time after release and delays after customs release at Mahagi averages 0.5 days and 11 days respectively.

Border post crossing time indicatively shows longer crossing time. The average crossing time at Aru is 3.4 days while Mahagi, Kasindi and Bunagana averages to 1.1 days, 0.9 days and 0.7 days respectively.

There is need to pursue computerization where border post are not yet computerised to hasten clearance processes

Table 17: Transit Time and Delays in DRC

Customs Processes and Delays	Average Time Taken (Hours)
Customs delays	12 (0.5 days)
Delays after customs release	264 (11.0 days)
Border Post Crossing time	
Aru	82 (3.4 days)
Mahagi	26 (1.1 days)
Kasindi	22 (0.9 days)
Bunagana	17 (0.7 days)

3.4.1.6 Inland Container Depots (ICDs)/Inland Ports

Inland Container Depots (ICDs) are facilities located hinterland or remote from port(s) which offer services for temporary storage of cargo as well as empty containers and customs clearance of containers and general cargo that enters or leaves the ICDs.

The Kenya Ports Authority operates Inland Container Depots (ICDs)/dry ports at Nairobi, Kisumu, and Eldoret for handling and storage of containerized cargo and empty containers. This service gives inland customers faster and more reliable service. The ICDs are directly linked to the container terminal in Mombasa by rail.

Table 18 below summarizes the Inland Container Depots (ICDs) traffic from 2009 to 2014.

The Nairobi ICD is located within an area of 18.7 ha at Embakasi and has a capacity of 180,000 TEU per annum. Due

to its geographic position, the Nairobi's Embakasi ICD is best positioned to serve local traffic. This is due to its accessibility by trades from different parts of the Country.

It does, further, serves as a transit point for traffic to Kisumu ICD. Container traffic at Nairobi's ICD has been growing overtime with over 15,000 TEUs traffic of imports registered in 2012. However 2014 registered a slight decrease in import containers. The ICD also records high turnover for empty containers in their yards.

Kisumu depot has not showed a consistent growth in its TEUs traffic since 2009. The ICD is designed for a capacity of 15,000 TEU per annum. Plans are underway to transform the Kisumu ICD into a dry port, thereby becoming a trans-shipment point between the Port of Mombasa and other countries of the Northern Corridor.

Table 18: Inland Container Depot/Dry Port Traffic (TEUs)

ICD	Container Status	ICD Traffic (TEUs)					
		2009	2010	2011	2012	2013	2014
Nairobi	Imports	12,523	14,185	14,494	15,319	14,811	10,263
	Exports	4,930	5,157	4,607	4,848	5,261	5,319
	Empty	14,794	18,659	21,830	19,737	26,816	22,138
Kisumu	Imports	1,520	131	66	102	111	32
	Exports	308	2	-	-	-	1
	Empty	181	95	74	55	93	41

Source; KPA 2009-2014

3.4.1.7 Truck Dwell Time within MAGERWA in Rwanda

Truck dwell time is measured from the time the driver of the vehicle receives authorization to enter the gate, until its departure once authorized from the terminal exit gate. The driver receives such authorization to enter, either from the road office or at the self-service centre. It measures the terminal's service quality to road transport operators.

From figure 16, truck dwell time at MAGERWA is still high at the inland ports compared to the target of one hour except in October and November 2014. This might be due to delays arising from scanning operations, gates layout as well as availability of equipment during delivery operations.

3.4.2 Volume and Capacity Indicators

3.4.2.1 Imports, Exports and Transit Weight through Mombasa Port

The Northern Corridor Member States are major exporters of raw materials without value addition which attracts low

value per ton, while imports include manufactured goods and processed foods with high value addition. As dutiable goods, imports undergo the most control and suffer greater cost and time penalties in transit than exports.

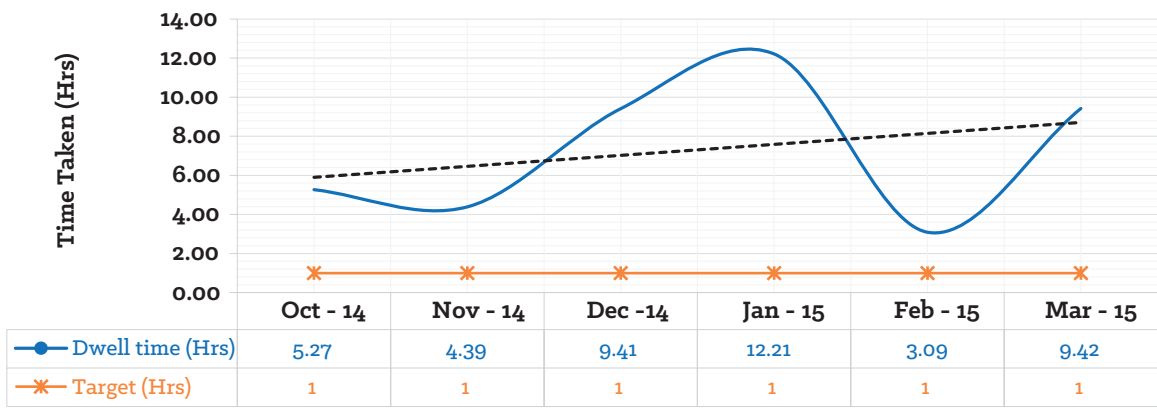
Figure 17 shows the total cargo (imports and exports) and transit weight in tones handled at the port of Mombasa. Imports and exports through the port of Mombasa, are measured by cargo volumes that pass through the port.

From Fig 17, it is clearly evident that Mombasa Port majorly handles import cargo. Comparing 2012 and 2014 figures, imports through the port rose from 19 million tons to slightly above 20 million tons respectively. This is approximately seven times greater than total cargo exported in 2014.

Exports rose from 2,141 million tonnes in 2012 to 3,366 million tonnes in 2014 which represents a 57% increase.

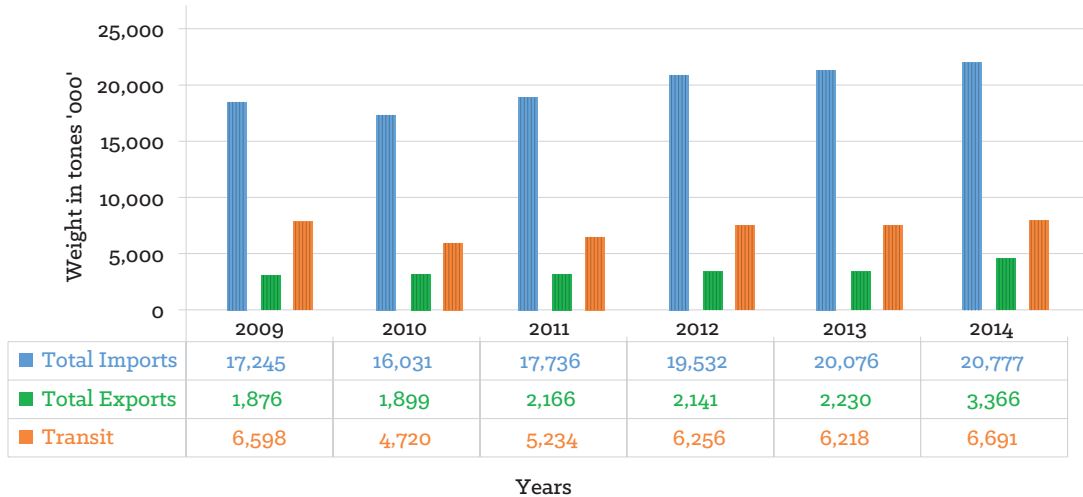
This shows that the region records a trade deficit in each and every subsequent year. However, transit cargo has been growing over time.

Fig 16: Magerwa ICD Dwell Time - Rwanda



Source: MAGERWA, October 2014 – March 2015

Fig 17: Cargo Throughput the Port of Mombasa



Source: KPA, 2009-2014

Table 19 and gives a comparison of transit traffic for imports and exports per Country within the Northern Corridor during the period 2009-2014.

The table below shows that imports and exports has been growing overtime at a fluctuating rate with 2014 registering about 8.7% increase in imports compared to the previous year. Exports increased by 12.8%. The reasons for fluctuating growth in transit volumes can be attributed to various factors including delays of cargo to and from the port as well as unrest in some countries which impacted negatively the general economic condition in the region.

Uganda still remains the largest transit cargo destination followed by South Sudan and DR Congo.

3.4.2.2 Rail Transport Capacity

Railway Capacity indicator within the Northern Corridor looks at the total number of locomotives and wagons and the proportion of the total cargo carried by rail.

Table 20 gives a summary of the rail infrastructure in Kenya and Uganda.

Kenya has a rail network of 2,778 km length. The railway line connects the Port of Mombasa to Nairobi to Nakuru and to the Kenya-Uganda border at Malaba. A branch route leaves the main railway line at Nakuru and extends to Kisumu on Lake Victoria. The rail track from Mombasa to Kampala via Malaba (1,330 km) is currently the principal route for rail transit.

Table 19: Imports and Exports from Mombasa Port to Member States

Country	Cargo Type	DWT					
		2009	2010	2011	2012	2013	2014
Kenya	Imports	11,895,000	11,197,000	11,772,000	12,531,000	12,954,000	14,086,000
	Exports	2,082,000	2,198,000	2,358,000	2,620,000	2,470,000	2,858,000
Uganda	Imports	3,686,862	3,942,242	4,028,361	4,499,302	4,508,118	5,132,276
	Exports	293,532	290,492	347,314	346,193	404,198	389,844
S. Sudan	Imports	155,691	190,468	375,897	736,266	716,470	696,816
	Exports	11,662	32,999	41,135	30,390	58,679	64,520
DR Congo	Imports	263,110	401,703	339,287	464,989	491,367	383,461
	Exports	25,586	28,714	16,004	17,369	20,346	24,267
Rwanda	Imports	236,087	275,559	216,306	247,730	223,127	221,323
	Exports	14,472	12,564	9,787	12,508	16,972	14,589
Burundi	Imports	19,093	5,785	1,201	38,917	66,227	79,961
	Exports	1,022	1,204	688	243	682	139
Total	Imports	16,255,843	16,012,757	16,733,052	18,518,204	18,959,309	20,599,837
	Exports	2,428,274	2,563,973	2,772,928	3,026,703	2,970,877	3,351,359

Source: KPA, 2009-2014

Table 20: Status of Rail Facilities in the Northern Corridor

Rail Status	Kenya	Uganda	Total
Number of Freight and Passenger Locomotives	35	43	78
Number of Freight Wagons	803	1,447	2,250
Number of Passenger Coaches	86	6	92

Figure 18 shows RVR rail transit time from Changamwe to the respective nodes. The nodes described include destination to other railway stations within the region.

The graph indicates that rail transit time from Mombasa to Kampala is not stable and has showed increasing trend between the month of February and March 2015.

However, rail transit time to Malaba and Nairobi has been improving and stable over the period. Transit time to Kampala averaged to 3.3 days while Malaba and Nairobi averaged to 3.1 days and 1.3 days respectively. The shorter time taken to Nairobi is due to its proximity to Mombasa.

Some of the operational reasons for delays are the poor condition of trucks and ageing rolling stock and locomotives. With the slow performance and falling service levels of the railway transport system, the road transport has taken a large proportion of the freight and passenger services in the region.

With regard to transport distance railway lines have a direct link to the final destination of their freight (such as to a mine or an industrial site). The clients therefore have to bear the costs of transfer of their freight to another transport mode to reach their final destination.

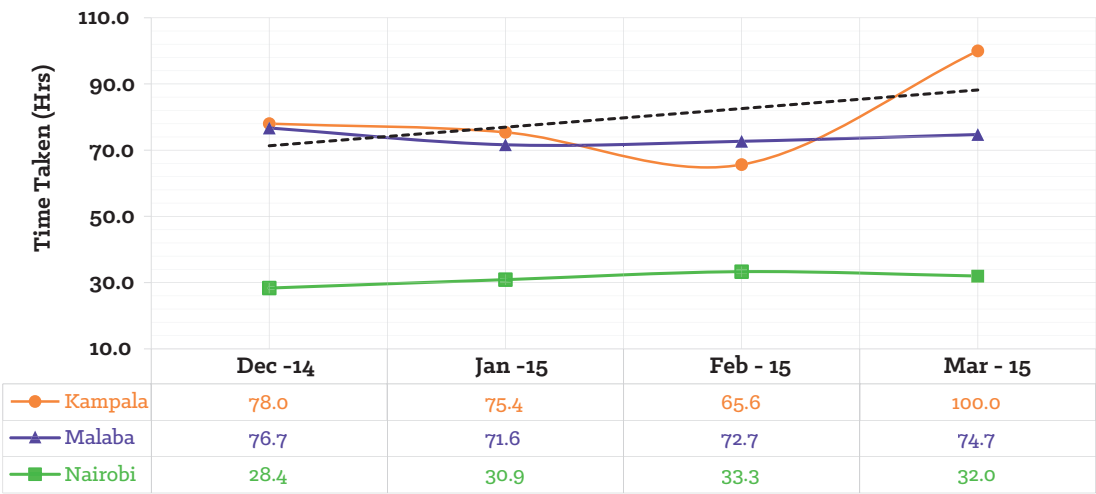
3.4.2.3 Kenya Pipeline Capacity

The Kenya Pipeline Company is a government parastatal mandated to provide efficient, reliable, safe and cost effective means of transporting petroleum products from Mombasa to the hinterland. Petroleum products are volatile in nature and therefore require a tight regulated system that can enhance health and safety to the environment.

The figure below provides a summary of the monthly average volume discharged at each station.

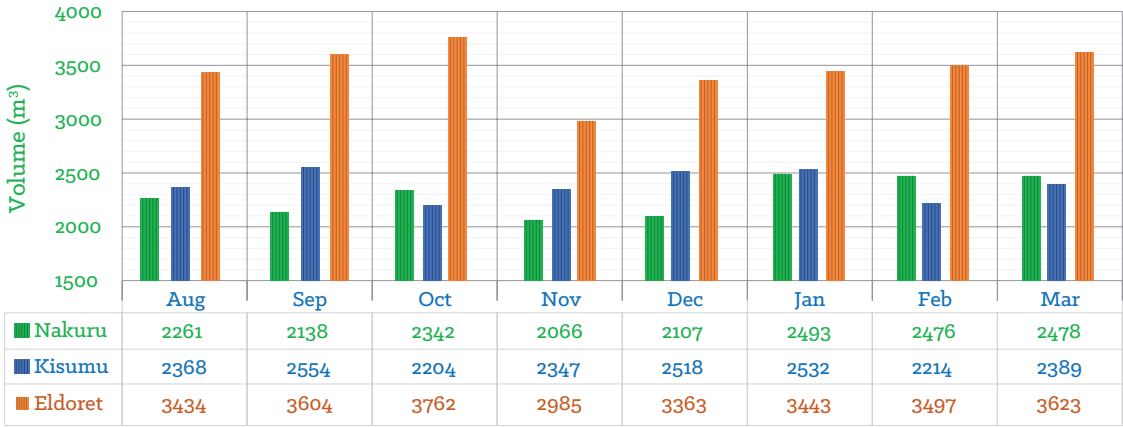
The Figure 19 shows that Eldoret transmitted the highest volume of oil products compared to Kisumu and Nakuru stations. This is because Eldoret is one of the largest depot in Kenya and therefore handles the largest oil products destined to western Kenya and the neighbouring countries. Flow rate to Kisumu is currently limited by the capacity of the 6-inch diameter pipeline. However, plans are underway for the construction of a Parallel Pipeline from Sinendet to Kisumu.

Fig 18: Rail Transit Time from Changamwe in Mombasa to Destination



Source: RVR, Dec 2014 – Mar 2015

Fig 19: Monthly Average Volume (M³)



3.4.2.4 Licensed Fleet of Transit Trucks

The indicator looks at the sum of registered vehicles used for transit cargo transportation per year and per Country.

Kenya has experienced an increase in the number of trucks registered over the past periods. However, 2014 has showed a

decline compared to 2013.The registration procedure within the Country runs from January to December of every year.

Burundi through OBR however, have very few trucks registered in 2014.

Table 21: Licensed Trucks per Year per Country

Country of Reg.	Stakeholder	Number of Trucks Licensed per Year				
		2010	2011	2012	2013	2014
Kenya	KRA	115	3,023	1,460	6,708	5,939
Rwanda	RRA				1,527	
Burundi	OBR					253

3.4.3 Productivity and Efficiency

3.4.3.1 Port Efficiency and Productivity

The success of Mombasa port performance depends on its efficiency and productivity as well as its facilities, strategic location, ample capacity and good features in order to attract more shipping lines.

In addition, ports performance and viability is also measured by the quality of services it offers. Hence, the port merely providing infrastructure is not the only factor that pulls in ships to dock, but its strategy around which it plans the development and business focus of the ports functions.

The Port productivity can therefore be improved when efforts are further articulately centred towards improving ships turnaround time and waiting time before berthing.

3.4.3.2 Ship Turnaround Time at the Port

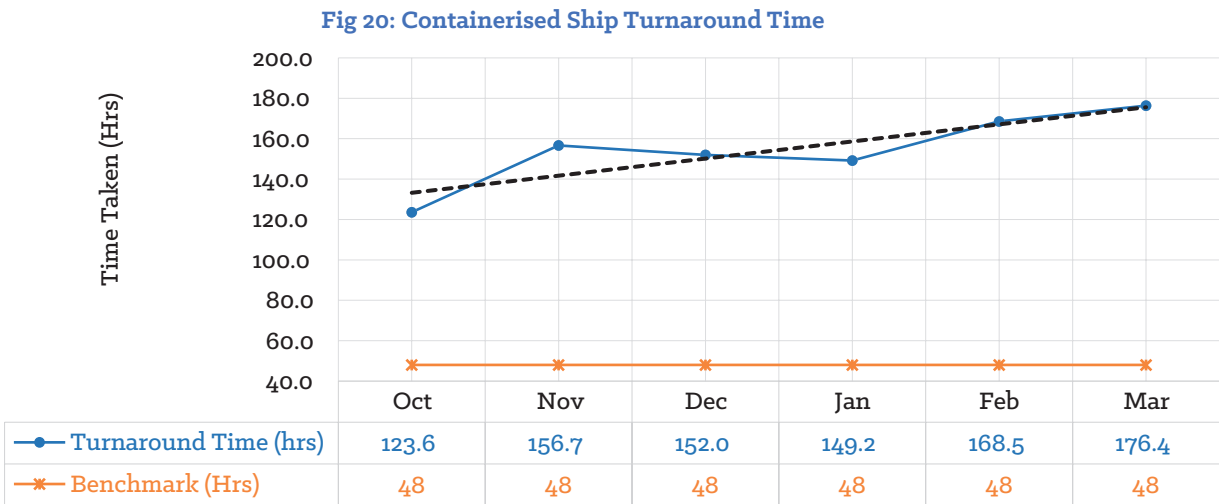
Ship turnaround time refers to the total time spent by a ship in port. It is the average of the time difference in hours from the entry in port area to exit of the port area. It's composed of the ships waiting time, berthing and un-berthing time and service

time. Waiting time is normally a small proportion of turnaround time. However, berth time is the component which when reduced can substantially reduce ship turnaround time. The berth time depends on the quantity of cargo a vessel has to load or discharge, the type and characteristics of a vessel, the type of equipment and other resources used at berth. Figure 20 shows average turnaround time for the vessels at the port of Mombasa.

Figure 20 shows that the monthly average turnaround time for containerised vessels at the port is increasing over time and is above the benchmark of 48 hours.

The ship turnaround time increased from 6.2 days to 7 days, in the month of January and February, and later on to 7.4 days in March 2015 respectively. Likewise, October 2014 registered the lowest turnaround time of 5.2 days.

The registered turnaround time is still above the 2 days benchmark and therefore measures need to be undertaken to enhance port's efficiency and productivity.



Oct. 2014 - Mar. 2015

Source: KPA, Oct 2014 – Mar 2015

3.4.3.3 The Vessels Waiting Time before Berth

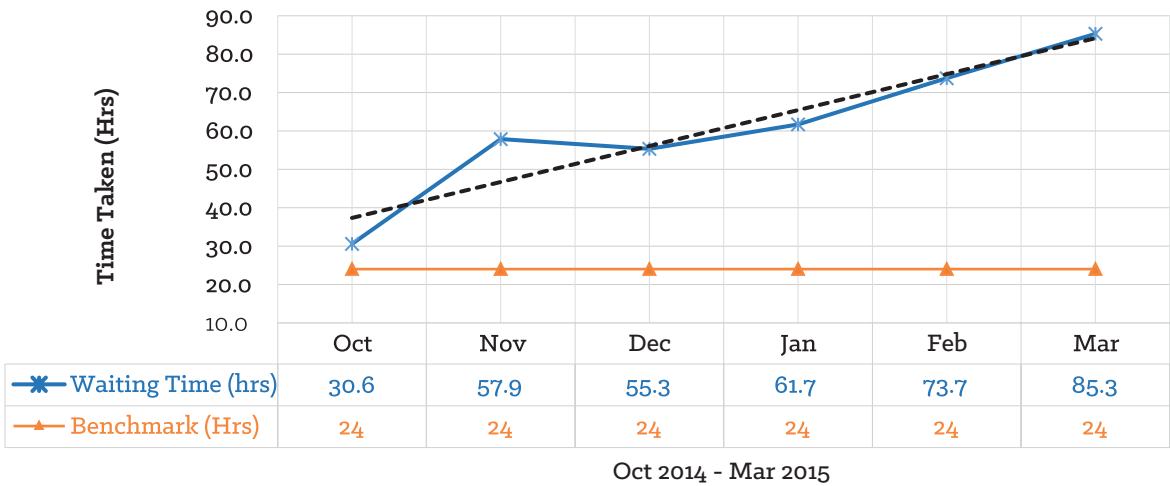
Waiting time before berth is the average of the time difference in hours from the entry in port area to the berthing time. It is a small proportion of turnaround time.

The trend indicates that ships waiting time for containerised vessels has been increasing and only registered its lowest time of 30.6 hours though still above the benchmark of 24hours in March 2014.

This increase can be attributed to various operational reasons. Availability of berthing space is one such obvious reason.

However, shipping lines in some cases choose to have their vessels wait for convenience before berthing.

Fig 21: Containerised Vessel Waiting Time before Berth



Source: KPA, Oct 2014 – Mar 2015

3.4.3.4 Weighbridge Indicators

Weighbridges are mainly installed within the Corridor routes to help protect roads from damages due to overloading by truckers. They also serve to measure traffic counts that inform road expansion developments.

Officials administering the weighbridges are therefore supposed to strictly adhere to vehicle load control measures while serving the station in order to enhance compliance.

The Secretariat of the Northern Corridor is mandated by the State Partners to monitor the efficient performance of the weighbridges in trying to protect the Corridor roads from damages. It is therefore expected that all trucks fully comply with Vehicle Load limits.

Weighbridge Indicator Adjustment

Previously, weighbridge indicators were reported based on the static weighbridge data. However, information on static weighbridge is viewed insufficient as it does not include data on the High speed weigh-in-Motion (HSWIM) for the trucks that are compliant and are not called in.

Therefore, including information from the HSWIM enable us to factor in all the vehicles for both HSWIM and static weighbridges for the weighbridge indicators. This is with effect from February 2015.

Register on the HSWIM provides the following information:

- ✓ Total number of vehicles weighed using both HSWIM and static weighbridges

- ✓ Number of trucks called in, which forms the total number of trucks that passes through the static weighbridges.
- ✓ Total number of vehicles that are compliant to the HSWIM weighbridge and was not diverted to the static weighbridge.

3.4.3.4.1 Weighbridge Compliance in Kenya

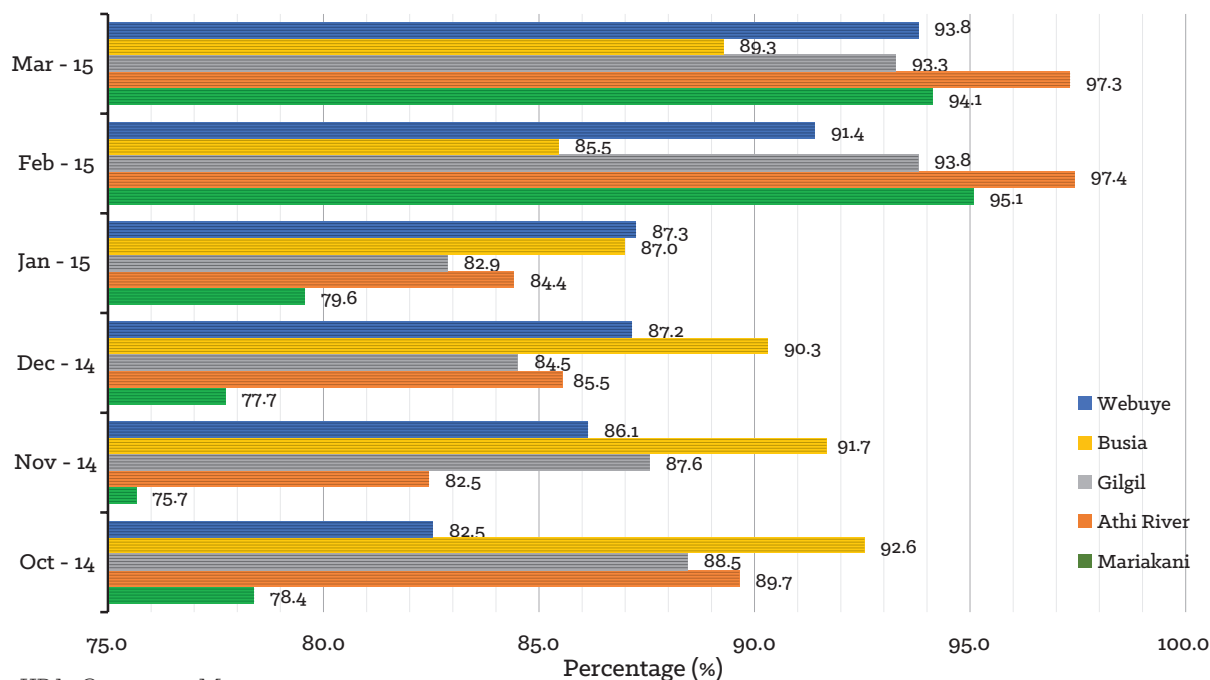
This measure the percentage of trucks that comply with the axle load limits before and after re-distribution of the weights.

Through the Northern Corridor Dashboard, the NCTTCA monitors compliance at weighbridges. Results from this initiative informed the initiation of the Vehicle Load Control Charter program to enhance compliance at weighbridges.

The Figure 22 shows that only Busia weighbridge registered a compliance level below the 90% level both in February and March 2015. However, all the weighbridges have showed a drop in compliance level from February to March except Webuye (91.4% to 93.8%) and Busia (85.5% to 89.3%).

In general, all the trucks weighed should achieve 100% compliance with very few exceptional cases.

Fig 22: Weighbridge Compliance Level (%)



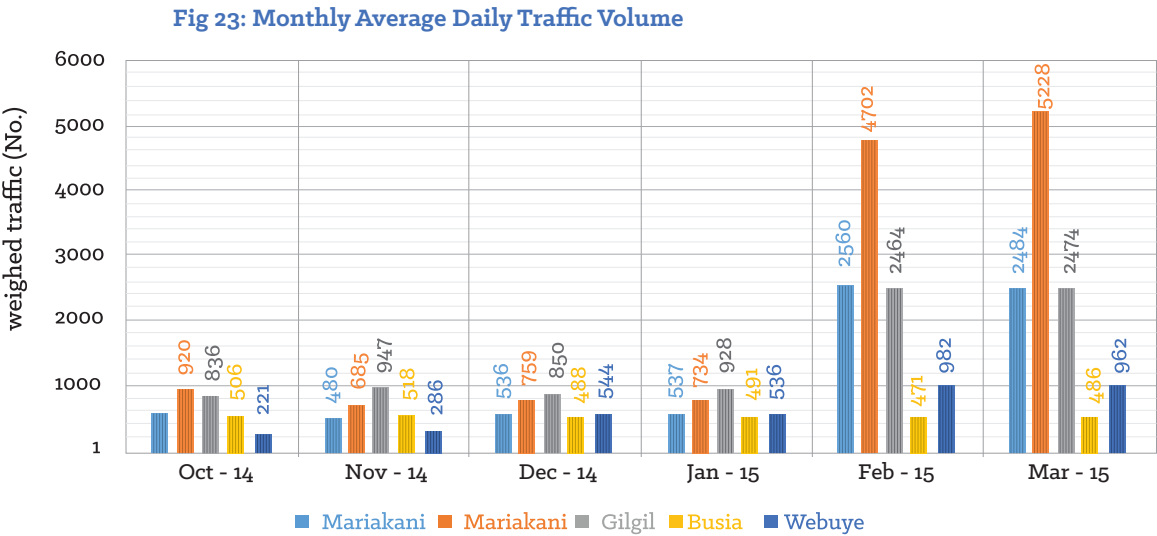
Source: KPA, Oct 2014 – Mar 2015

3.4.3.4.2 Weighbridge Traffic in Kenya

This indicator measures the average number of trucks weighed per day at the various weighbridges in Kenya.

Figure 23 below provides a summary of the monthly average daily traffic weighed at respective weighbridges.

Note: February and March 2015 includes all trucks that were diverted to the fixed scale and those that only went through the High Speed Weigh in Motion.



Source: KeNHA, Oct 2014 – Mar 2015

The Figure 23 above shows that on average Athi River registers the highest number of traffic weighed followed by Gilgil. Both Gilgil, Athi River and Busia showed a rise in traffic weighed while Mariakani and Webuye showed a drop in traffic volumes entering the weighbridge in March compared to February 2015.

The high traffic weighed at Athi River and Gilgil might be due to cargo that are originating from Nairobi and its environs being the capital City and the main business hub in the Country.

All the weighbridges (except Busia) along the Northern Corridor are implementing high speed Weigh-In-Motion(HSWIM) and only trucks that fail HSWIM are diverted to the static scale.

In Kenya, KeNHA has privatized the operations of weighbridges and is left with an oversight role to ensure quality service provision. It's recommended that KeNHA ensures a fully functioning remote monitoring of the operations which can be accessed through the headquarters.

Interconnection of these weighbridges should be prioritized to minimize corruption and reduce multiple weighing of trucks.

3.4.3.4.3 Weighbridge indicators in Uganda

Uganda has more than seven weighbridges. All are weighing in motion and measure axle load as well as gross weight. UNRA has allowed a tolerance of 5% when weighing the trucks axles. **Table 22 gives a summary of the Ugandan weighbridge compliance versus the monthly average daily traffic weighed.**

Monthly Average Daily Traffic: - The results show that Busitema and Magamaga weighbridges registered the highest Monthly Average Daily Traffic followed by Mbale and Luwero.

Weighbridge compliance: - Most of the weighbridges showed a gross compliance level above 90% except for Magamaga across the entire period. However, the axle load compliance is still very low showing there is need to enforce axle load limits.

In general, UNRA should therefore develop a weighbridge management strategy to improve the quality of service and further ensure weighbridge system integration, in order to harmonize weighbridge data and improve on service provision.

Furthermore, weighbridge operations still remain semi-automated within the Country. The truck and driver details are still being keyed in manually but the weights are captured automatically and each weighbridge operates with a different database.

Table 22: Weighed traffic verses Percentage Compliance Level (%) for Uganda Weighbridges

Weighbridge	Indicator	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15
Magamaga	Trucks (No.)	389	277	307	262	
	Axle compliance (%)	21%	22%	22%	22%	
	Gross compliance (%)	85%	83%	76%	75%	
Busitema	Trucks (No.)	187	176	158	291	190
	Axle compliance (%)	28%	34%	32%	27%	21%
	Gross compliance (%)	94%	97%	95%	98%	99%
Mbale	Trucks (No.)	88	102	125	99	
	Axle compliance (%)	52%	56%	58%	64%	
	Gross compliance (%)	99%	100%	100%	99%	
Luwero	Trucks (No.)	78	79	82	83	
	Axle compliance (%)	63%	60%	64%	65%	
	Gross compliance (%)	93%	95%	95%	96%	
Kasese	Trucks (No.)	26	32	39		
	Axle compliance (%)	81%	69%	71%		
	Gross compliance (%)	96%	94%	95%		

(UNRA, Oct 2014 - Feb 2015)

04.

QUALITY OF TRANSPORT INFRASTRUCTURE WITHIN THE NORTHERN CORRIDOR

This indicator describes the qualitative state of infrastructure, routes and state of route sections.

The Northern Corridor Secretariat enables the Member States to implement an economic Corridor-based approach to reduce costs of cross-border trade within the region. The authority's goal is to enable producers and traders become more competitive, thereby creating higher levels of economic growth, employment creation and poverty reduction. Road network and quality is one of the major target seriously emphasized on towards the achievement of these goals.

The designated Northern Corridor road network is approximately 9,840Km in length. The Corridor mainly transports 95% of goods from the port of Mombasa through road transport which has lately been overstretched. The remaining portion of goods is either transported through inland water ways, railway lines and pipelines.

Tables 23, 24, 25 and 26 below give a summary of the Corridor routes and their status using the International Roughness Index (IRI).

Table 23: Road Condition in Kenya

Sections From	Section To	Roughness Index (IRI)	Current Condition of the link
Mombasa	Mariakani	3.50	Good
Mariakani	Voi	3.13	Good
Voi	Mtito Andei	2.60	Excellent (Very Good)
Mtito Andei	Athi River	2.08	Excellent (Very Good)
Nairobi	Naivasha	2.95	Excellent (Very Good)
Naivasha	Gilgil	2.41	Excellent (Very Good)
Gilgil	Nakuru	3.15	Good
Nakuru	Salgaa	1.96	Excellent (Very Good)
Salgaa	Mau Summit	3.51	Good
Mau Summit	Eldoret	2.99	Excellent (Very Good)
Eldoret	Webuye	3.81	Good
Webuye	Malaba	3.64	Good

Source: KeNHA, Mar 2015

From Kenya to Uganda, the Mombasa - Malaba - Kampala road (1,170 km) is preferred due to the relative good quality of the network and availability of social amenities en-route. However,

there is an alternative route through Mombasa - Kisumu - Busia - Kampala.

Table 24: Road Condition in Uganda

Road Sections	Average IRI	Excellent (Km)	Good (Km)	Fair (Km)	Poor (Km)	Very Poor (Km)	Length (Km)
Malaba-Kampala	2.73	141.01	59.69	12.33	2.61	0.00	215.64
Kampala-Mbarara	2.58	208.38	40.65	6.88	2.23	0.16	258.30
Mbarara-Katuna	3.86	85.24	42.53	15.97	13.19	1.61	158.53
Gatuna-Mbarara	2.98	96.94	33.76	15.93	12.40	0.53	159.55
Mbarara-Jinja	2.62	256.28	76.09	12.40	3.82	0.09	348.69
Jinja-Busia	2.23	100.01	10.34	3.17	0.45	0.00	113.96

Source: KeNHA, March 2015

The study conducted by KeNHA on road condition using IRI clearly indicates that most of the Northern corridor road sections in Uganda are in excellent/good condition. The few sections that

are below average therefore need proper assessment for further improvement.

Table 25: Northern Corridor Road Condition in Rwanda

Section From	Section To	Length (km)	Roughness IRI	Current condition of this link	Current Status of project
Kagitumba	Kayonza	116	3.50 - 4.00	Good	Under liability period
Kayonza	Kigali	74.5	1.80 - 2.12	Good	Maintenance Ongoing
Kigali	Nemba	61	1.69 - 1.79	Good	Procurement process ongoing
Cyanika	Musanze	25	4.1	Bad	Maintenance Ongoing
Musanze	Kigali	93	2.08	Good	Rehabilitation Completed
Musanze	Rubavu	59	1.72 - 1.73	Good	Maintenance Ongoing
Kigali	Muhanga	47.5	2.18 - 2.37	Good	Procurement process ongoing
Muhanga	Huye	76.5	1.90 - 1.92	Good	Procurement process ongoing
Huye	Akanyaru Haut	33.5	3.39	Good	Procurement process ongoing
Butare	Rusizi 1 &2	145	2.03 - 3.53	Good	Road rehabilitation done in 4 lots. 2 Lots of 60Km are completed, 1 lot of 33Km ongoing and 1Lot of 54Km will start by October 2015.
Rusizi 1 &2	Ruhwa	45.8	1.80 - 2.45	Good	Maintenance Ongoing

Source: RTDA, Mar 2015

The principal routes from Uganda to Rwanda are Kampala - Kagitumba - Kigali and Kampala - Gatuna - Kigali. Further, Bujumbura in Burundi is reached from Kampala through

Rwanda. Uganda and Rwanda also provides a link to Bukavu, Goma, Beni, Butembo and Kisangani as well.

Table 26: Northern Corridor Road Condition in Burundi

The table below provides a summary of the current Northern Corridor road condition in Burundi.

Route	Segment / Section	Length (Km)	Constructed / Renovated	Status	Plan for Improvement
Bujumbura – Bugarama – Kayanza – Kanyaru(115 Km)	Bujumbura – Bugarama	35	Renovation studies available	Fairly good	Study available for rehabilitating and upgrading the road (widening to 7m)
	Bugarama – Kanayru	65		Fairly good	
	Kayanza Kanyaru	15		Fairly good	
Bujumbura – Gatumba (19 Km)	Bujumbura – Gatumba	15	Renovation work ongoing	Fairly good	Financing/EU
	Gatumba Frontiere	4		Good	
Bujumbura – Nyamitanga – Ruhwa (80 Km)	Bujumbura – Nyamitanga	30	Renovation works planned for r 2015-2017.	Bad	Financing/ Arab countries
	Nyamitanga – Ruhwa	50	Renovation works completed in 2013.	Very good	Financing/AfDB
Kayanza – Ngozi – Gashoho (72 Km)	Kayanza – Ngozi	32	Maintenance works only	Fairly good	Not yet secured
	Ngozi – Gashoho	40		Fairly good	Not yet secured
Gashoho – Kirungo – Gasenyi (67 Km)	Gashoho – Kirungo	32	Maintenance works only	Fairly good	Not yet secured
	Kirundo – Gasenyi	35	Renovated in 2009	Good	Financing/AfDB
	Gitega – Nyangungu	50	Renovation ongoing	Bad	Financing/AfDB
Gitega – Ngozi – Kanyaru Bas (103 Km)	Nyangungu – Ngozi	30	Renovated in 2014	Very good	Financing/AfDB
	Ngozi – Kanyaru Bas	23	Study for asphaltting completed.	Bad	Asphaltting in 2016.

Source: Ministry of Transport, Public Work and Equipment, March 2015

4.1 NORTHERN CORRIDOR ROUTE IN SOUTH SUDAN

In line with the NCTTCA Agreement under Protocol No. 2, the South Sudan Government designated the following Corridor routes:

- Nimule - Nesitu - Juba.....(192km);
- Nesitu - Torit - Nadapal.....(400km);
- Juba - Lainya - Yei.....(150km);
- Yei - Aba.....(45km);
- Yei - Morobo - Kaya.....(285km);
- Yei - Maridi - Yambio.....(315km); and
- Yambio - Ezo.....(200km).

Currently, the major entry point by road into South Sudanis the Elegu/Nimule border located 109km by road north of Gulu, Uganda. However, there are no current studies conducted in these sections.

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

In addition, the 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. Currently its condition has worsened off.

05.

GOING FORWARD AND
STRATEGIC INTERVENTIONS

The Transport Observatory is a monitoring tool that assesses and measures performance of the Northern Corridor indicators. The results generated and presented to stakeholders are key pointers to the level of fulfilment on business activities within the Corridor.

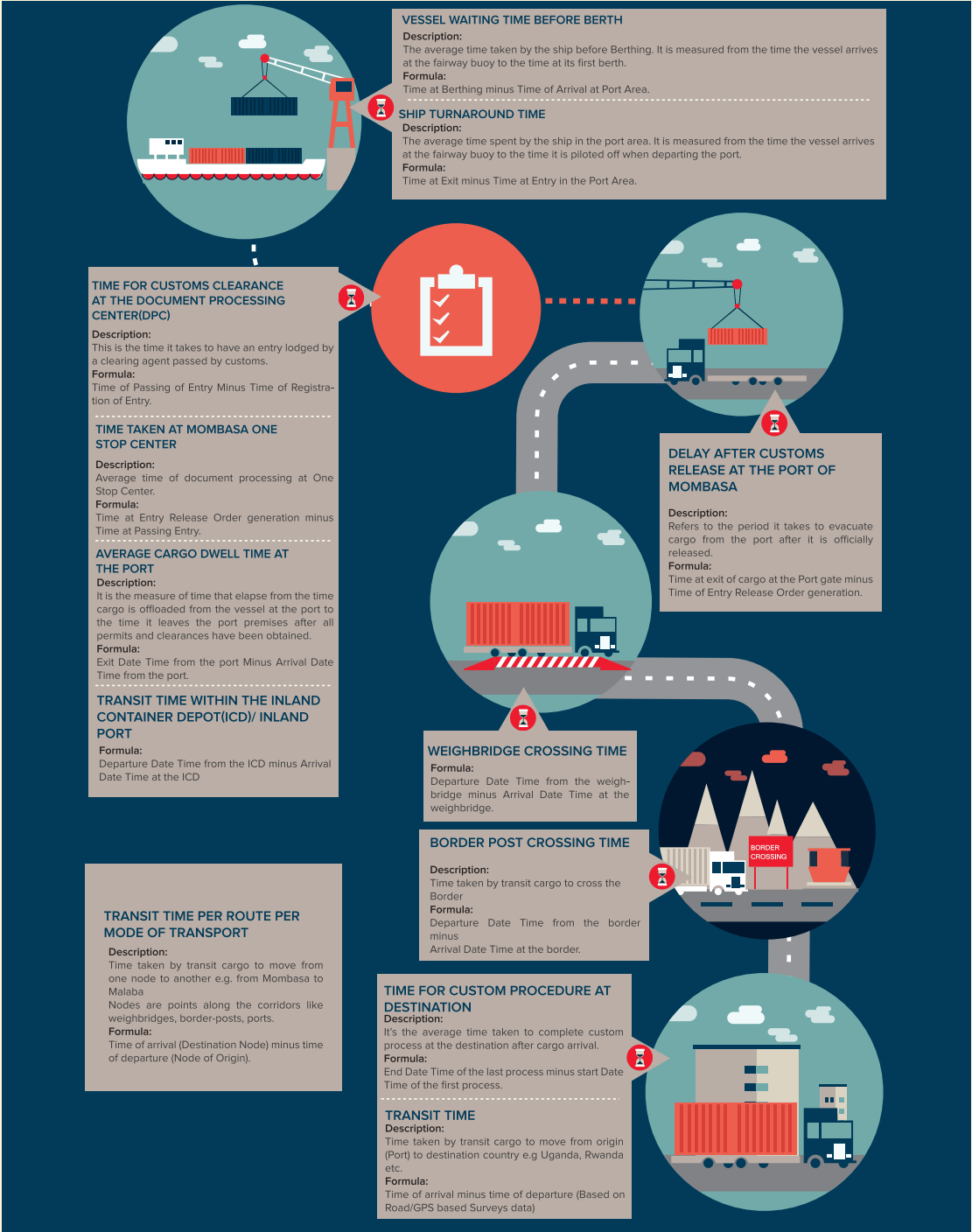
The findings in the report are therefore meant to inform on the achieved goals and challenges for future improvement. It's therefore in the interest of key players to ensure that the recommended areas for improvements are keenly looked at for better understanding in order to inform policy geared towards promoting reduction in the cost of doing business in the region.

The following marks some of the key areas that warrant improvements;

1. Develop "culture of compliance" among shippers, logistics chain providers and Governments entities. Broad initiatives such as the signatories to the Port Community Charter at Mombasa would provide appropriate forums.
2. Assist shippers to understand the impact of last minute changes, including late lodging or amendment of manifest, on overall logistic chain performance.
3. Linking stakeholders ICT systems with observatory to enhance seamless transmission of data.
4. There should be identification of trucks on first weighing (certificate of identification on compliance) to avoid multiple stops at the weighbridges and a comprehensive sensitization of truck drivers on weighing.
5. In Uganda it is evidenced that weighbridge axle compliance has not been fully achieved at most of the weighbridges. This calls for the roll out and implementation of the VLC by all stakeholders and the rollout of the media communication campaign against overloading.
6. Member states to fully domesticate the provisions of the EAC vehicle load control bill.
7. In order to effectively provide information to the users and potential investors as regards registration and licensing of businesses and transport companies, KRA, URA, RRA, OBR and DGDA should regularly put online the list of licensed trucks and Clearing Agents.
8. The indicator on time taken after release at the port shows that traders and transporters should therefore act swiftly as fast as possible to ensure faster evacuation of their cargo from the port after clearance in order to reduce time wastage as a result of laxities on their side.
9. There should be common platform of ECTS in the region as this will ensure cargo integrity and seamless monitoring of transit goods from the origin to the final destination. Data from ECTS to collaborate the GPS survey initiative.
10. Enhancing the Northern Corridor Transport Observatory Portal to capture the cost of doing business and intra-regional trade.
11. Support in strengthening the logistics industry environment in the Member states
12. Stakeholders are further requested to continue providing the Secretariat with data on a timely basis to improve monitoring of the corridor performance and enhance reliability.
13. Improvement in the logistics in Rwanda and promotion of market competition with ultimately reduce transport rates in Rwanda.
14. The port dwell time is depended on other indicators such as the time taken at one stop centre, time taken at Document processing centre and time taken within the port after customs release. Intervening in the under this under these indicators will automatically reduce the port dwell time.
15. There is need to pursue computerization where border post are not yet computerized to hasten clearance processes.
16. Sensitization of drivers/transporters on legal and illegal charges.
17. Need for driving hours to be regulated to enhance road safety

06. ANNEXES

ANNEX 1: INDICATOR GLOSSARY



ANNEX 1: INDICATOR GLOSSARY



RATES AND COST

TRANSPORT COST PER ROUTE AND PER MODE

Description:
Summation of charge by transporter and other cargo handling charges incidental to transportation per Route and/or per section.

PORT TRANSIT CHARGES

Description:
Published tariffs by Stakeholders.

ROAD FREIGHT CHARGE

Description:
The indicator captures the different tariff charges by transporters per road and/or per section.

RETURN OF EMPTY CONTAINERS (GRACE PERIOD, PENALTIES, AND DEPOSIT)

Description:
Published tariffs by Stakeholders.

RAIL FREIGHT CHARGE

Description:
Tariff charged by railway operator per section and/or per route.



VOLUME AND CAPACITY

MOMBASA PORT TOTAL CARGO THROUGHPUT VS TRANSIT TRAFFIC

Description:
Mombasa Port Total Cargo throughput = Summation of weight of all cargo transported through the Port;

Transit Traffic = Summation of weight all cargo transported through the Port destined to other countries. (It includes imports to and exports from other countries). Transit Traffic is part of the total Cargo throughput of the Mombasa port.

VOLUME PER COUNTRY OF DESTINATION

Description:
Summation of weight of all cargo (imports/exports) handled by the Port per country of destination/origin.

RATE OF CONTAINERIZATION OF TRANSIT TRAFFIC AT THE PORT OF MOMBASA

Description:
Total weight of containerized transit cargo divided by Total weight of all transit cargo.

EVOLUTION OF LICENSED FLEET OF TRUCKS PER COUNTRY

Description:
summation of registered (Licensed) vehicles used for international/transit cargo transportation per year and per country.

AVERAGE ANNUAL DISTANCE PER TRUCK IN KM PER YEAR

Description:
Average distance travelled per truck per year.

TRANSPORT CAPACITY BY RAIL (LOCOMOTIVE AND WAGONS)

Description:
Total number of operational locomotives and wagons
Proportion of total cargo carried by railway.



PRODUCTIVITY AND EFFICIENCY

NUMBER OF CHECK POINTS PER COUNTRY PER ROUTE

Description:
Summation of checkpoints (weighbridge, police, customs, Road Toll), by country, by route.

VOLUME OF CONTAINERIZED AND GENERAL CARGO HANDLED PER DAY/MONTH/QUARTERLY AT THE PORT OF MOMBASA

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

RATE OF FRAUD OR DECLARED DAMAGE FOR GOODS IN TRANSIT

Description:
Number of Fraud or Declared Damage cases divide by total Fraud or Declared Damage cases at a node.

Formula:
$$\frac{\text{Number of Fraud or Declared Damage cases}}{\text{Total of Fraud or Declared Damage cases at a node}}$$

WEIGHT COMPLIANCE

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

Formula:
$$\frac{\text{Total compliant trucks in a weighbridge}}{\text{Total trucks traffic in a weighbridge}} \times 100$$

NUMBER OF ACCIDENTS PER ROUTE

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

WEIGHBRIDGE TRAFFIC

Description:
Average number of trucks passing a weighbridge in a day

GROSS MOVES PER SHIP PER HOUR AT THE PORT OF MOMBASA

ANNEX 2: ROAD SURVEY QUESTIONNAIRE



GPS DATA COLLECTION FORM

(INBOUND/OUTBOUND)

CODE DESTINATION
DATE ISSUED

WHAT IS THE NCTTCA?

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 (NCTTCA), 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 NCTTCA 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 NCTTCA 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 route causes of delays for transit traffic on the Northern Corridor and also to understand the associated costs. This will enable the NCTTCA to develop indicators to monitor the performance of the Corridor and to analyse the effects of the implementation of various policies of the NCTTCA member states with a view of providing guidance and recommendation for improvement of the same.

I. DRIVER DETAILS (Optional)

1. Driver's Details.....Age.....

II. VEHICLE DETAILS

1. Vehicle Registration Number (Prime mover).....

2. 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. CARGO LOADING DETAILS

LOADING LOCATION

1. Loading Permit Received on Date (dd/mm/yyyy).....Time (hh:mm).....

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

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):

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

V. OUTBOUND (LEAVING MOMBASA)

Departure Date (dd/mm/yyyy) Time

Arrival at Destination Date (dd/mm/yyyy).....Time.....

STOP NO.	DATE (dd/mm/yyyy)	STOP LOCATION	STOP DETAILS	FEES/ PAYMENTS MADE	
		Name of place	Stop reason code	Fee amount (Specify currency e.g Kshs, Ushs, US D, RWF)	Service fees paid for code
1					
2					
3					
4					
5					
6					
7					
8					
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STOP REASON CODES	
D01	Police/other security checks
D02	Customs checks
D03	Weighbridges
D04	Road Condition
D05	Company check points
D06	Border Post Procedures
D07	Insecurity
D08	Personal Reasons
D09	Vehicle Breakdowns
D10	Inland Terminal Procedures and
D11	Rest/meals
D12	Cargo picking
D13	Cargo Dropping
D14	Others

SERVICE FEES PAID FOR CODES	
So1	Police Fees / Fine
So2	Customs charges
So3	Weighbridge charges
So4	Port charges
So5	Border charges
So6	Repair charges
So7	Personal charges
So8	Vehicle Breakdowns
So9	Other charges(SPECIFY)

VI. INBOUND (RETURN JOURNEY TO MOMBASA)

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):

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

NORTHERN CORRIDOR PERFORMANCE OUTLOOK

Start Journey from (Location)DATETIME.....

Arrival at Mombasa: DATE.....TIME.....

STOP NO.	DATE (dd/mm/yyyy)	STOP LOCATION	STOP DETAILS	FEES/ PAYMENTS MADE	
		Name of place	Stop reason code	Fee amount (Specify currency e.g Kshs, Ushs, US D, RWF)	Service fees paid for code
1					
2					
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4					
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STOP REASON CODES	
D01	Police/other security checks
D02	Customs checks
D03	Weighbridges
D04	Road Condition
D05	Company check points
D06	Border Post Procedures
D07	Insecurity
D08	Personal Reasons
D09	Vehicle Breakdowns
D10	Inland Terminal Procedures and
D11	Rest/meals
D12	Cargo picking
D13	Cargo Dropping
D14	Others

SERVICE FEES PAID FOR CODES	
S01	Police Fees / Fine
S02	Customs charges
S03	Weighbridge charges
S04	Port charges
S05	Border charges
S06	Repair charges
S07	Personal charges
S08	Vehicle Breakdowns
S09	Other charges(SPECIFY)



Northern Corridor
Transit and Transport
Co-ordination Authority



TRADE
MARK
EAST AFRICA

Growing Prosperity Through Trade



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