

NORTHERN CORRIDOR TRANSPORT OBSERVATORY REPORT

10th Issue | May 2017

Trade and Transport Facilitation



**TRANSPORT
OBSERVATORY**
RELIABLE NORTHERN CORRIDOR PERFORMANCE DATA



NORTHERN CORRIDOR TRANSIT AND TRANSPORT COORDINATION AUTHORITY

PARTNERS



DEVELOPMENT PARTNERS



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ABBREVIATIONS

ACPLRWA	Rwanda Long Distance Truck Drivers Association
ASYCUDA	Automated System for Customs Data
BI	Burundi
CCTTFA	Central Corridor Transit Transport Facilitation Agency
CFSSs	Container Freight Stations
DGDA	Direction Générale Des Douanes Et Accises
DRC	Democratic Republic of Congo
DWT	Dead Weight Tonne
ECTS	Electronic Cargo Tracking System
FEC	Fédération des Entreprises du Congo
GDP	Gross Domestic Product
GPS	Global Positioning System
HSWIM	High Speed Weigh-in-Motion
IABT	International Association of Burundi Transporters
ICD	Inland Container Depot
ICT	Information Communication Technology
IR	International Roughness Index
KE	Kenya
KeNHA	Kenya National Highways Authority
KPA	Kenya Ports Authority
KPC	Kenya Pipeline Authority
KRA	Kenya Revenue Authority
KTA	Kenya Transporters Association
LPI	Logistics Performance Index
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
RECTS	Regional Electronic Cargo Tracking System
RRA	Rwanda Revenue Authority

RTDA	Rwanda Transport Development Agency
RVR	Rift Valley Railways
RW	Rwanda
SPSS	Statistical Package for Social Science
SGR	Standard Gauge Rail
SCT	Single Custom Territory
SSFEB	South Sudan Federation of Employers and Business Association
TEUs	Twenty Feet Container Equivalent Units
TMEA	Trade Mark 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
WEO	World Economic Outlook

FOREWORD

The Northern Corridor Transit and Transport Coordination Authority (NCTTCA) Secretariat is pleased to present the 10th bi-annual report of the Northern Corridor Transport Observatory. This report is a sequel to the 9th issue and presents the cumulative performance on all the indicators that are tracked by the Observatory from the month of October 2016 to March 2017. It highlights the results and findings from the analysis of data collected on key indicators affecting trade and transport facilitation.

This report, in addition, identifies key bottlenecks along the Northern Corridor and recommends ways of addressing them so as to enhance the ease of doing business in the Region. Currently we are reporting on more than 31 key performance indicators. There has been a great improvement in terms of implementation of recommendations since inception of the Transport Observatory. 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 improved quality of transport infrastructure. In addition, the report appreciates increase in cargo throughput at the port of Mombasa over the years.

In order to enhance online user experience, the Secretariat has developed the Geographic Information System (GIS) to provide geographical presentation of the Corridor network and performance indicators on a digital map. With these improvements, more and more people are getting interested in the Transport Observatory.

Although the report portrays an improvement in most of the targets, several areas of concern still continue to hamper the logistics chain along the corridor causing a slow-down in the overall performance. Stakeholders are therefore called upon to implement the various action plans and reforms aimed at boosting both the performance and monitoring mechanisms for an efficient transport and the entire logistics chain.

Finally, I wish to appreciate and commend all stakeholders who provided data and information to enable development of the 10th Northern Corridor Transport Observatory report. I further wish to appreciate the Member States Government's commitment to providing enabling environment for smooth trade and transport facilitation and further call upon all partners to support the actualization of the programmed therein the Northern Corridor Transit and Transport Agreement. The future can only get brighter.



Fred TUMWEBAZE

Ag Executive Secretary

ACKNOWLEDGEMENT

The NCTTCA is deeply indebted to the Council of Ministers of the Northern Corridor Member States for their continued support to 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 the 10th Transport Observatory 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 decisions and policies.

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

As the success of developing the report primarily depends on data, the Secretariat would like to extend its sincere appreciation to all stakeholders for their commitment to provide data.

We also wish to acknowledge NCTTCA, KTA and TMEA experts as well as consultants who have continued to work tirelessly to contribute in the success of this activity. Lastly, our warm gratitude goes to everyone for their valuable contributions in supporting the development of the Northern Corridor Transport Observatory.

The NCTTCA Secretariat.

EXECUTIVE SUMMARY

The Northern Corridor transport network links Kenya seaport of Mombasa; the main port of entry and exit to the Region to Uganda, Rwanda, DRC, Burundi and South Sudan. Therefore, the efficient operation of the port is a critical pillar in enhancing movement of goods and stimulating competitiveness of the Region. Indeed the Mombasa Port Community Charter being cognisant of this, identified a set of critical indicators that are monitored regularly to gauge progress in efficiency.

The Northern Corridor Transport Observatory is a corridor performance monitoring tool with an online platform that tracks over 31 performance indicators bi-annually. This is the 10th Issue of the Transport Observatory bi-annual report. The indicators relate to Volume/Capacity, Transport Rates/Costs, Transit time/delays and Efficiency/Productivity.

The performance of the Corridor is measured through a range of indicators whose data is obtained from multiple sources. The main sources for the transport observatory data include: Electronic data from stakeholders' business systems; Global Positioning System (GPS) Surveys; Road Transport Surveys and secondary data from existing reports and policies. Both qualitative and quantitative data is then processed and analysed to develop the TO report.

Mombasa port has handled more and more cargo over the years, the cargo throughput increased from 26.73 million tons in 2015 to 27.36 million tons in 2016. Indeed, Mombasa port is the busiest and the main gateway to East and Central Africa serving a vast hinterland. Ongoing reforms infrastructure improvements at the port of Mombasa have yielded significant results as cargo dwell time has dropped from an average 6.5 days in 2011 to less than 3 days (70 hours) in March 2017. The average containerized cargo dwell time attained in March 2017 outperforms the set target of 72 hours. Time taken in customs clearance at document processing centre decreased from 2.42 hours in April 2016 to 1.91 hours in March 2017.

The vessel average waiting time for the period from March 2016 to March 2017 was about 10 hrs. For the time taken at Mombasa One Stop Centre, there was a significant decrease from 51 hours in April 2016 to 39 hours in March 2017. There was a slight increase from 75.3 hours in March 2016 to 78.4 hours in March 2017 which is beyond the set target of 72 hours for the vessel turnaround. Another key finding is that cargo volume transported by rail declined by 10 percent for local and 32 percent for transit cargo when comparing the performance for the year 2015 and 2016.

The weighbridge compliance has improved with a steady performance of compliance levels of over 90 percent performance for weighbridges in Kenya except for Busia weighbridge whose compliance level was steady at an average of 77 percent during the period under review.

Road condition has greatly improved with 36% of the road network determined to be in good condition; 25% was in fair condition and 39% of the total northern corridor road length was in bad shape an improvement from 64 % in 2014.

The frequency of stoppages by drivers along the corridor was found to be occasioned mainly for rest/meals by drivers and stops for personal reasons which accounted for the highest percentages of 22.1% and 16.9% respectively for all the stoppages. Weighbridges accounted for (13.4%), police checks (11.6 %) and border post procedures (10.4%) among the main reasons for stoppages along the Northern Corridor.

The Transport Observatory also tracks indicators on road safety. It is evident that the causes associated with human error which includes improper overtaking, over speeding, misjudgement and swerving among others accounts for 85% of road accidents.

We believe this information will support our stakeholders to make informed decisions and enable policy makers to identify the bottlenecks that need to be resolved to improve trade and transport facilitation along the Northern Corridor.



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SECTION ONE: INTRODUCTION

INTRODUCTION

1.1 Introduction

The Northern Corridor Transit and Transport Co-ordination Authority (NCTTCA) has the mandate to ensure removal of obstacles to the smooth flow of trade and services along the Northern Corridor so as to ensure efficient and cost effective transit of cargo along the corridor. The corridor links the landlocked countries of Burundi, Rwanda, Democratic Republic of Congo (DRC), South Sudan and Uganda to the Kenyan maritime port of Mombasa. The competitiveness of the Corridor depends on the identification and removal of trade and transportation barriers in order to lower cost of transporting cargo and reduce transit time, as transport costs and time accounts for a greater share of total cost associated with the corridor logistics chain.

Indeed, the Mombasa port is the busiest and the main gateway to East and Central Africa serving a vast hinterland of approximately 204 million (UNDP 2016). Efficient¹ operation of the port is a critical pillar in enhancing movement of goods. Therefore, ensuring minimum congestion, less time and minimal cost improves port efficiency and significantly increases trade volumes.

Currently 33 shipping lines call at the Mombasa port and they provide connectivity to over 80 sea ports worldwide and over one million TEU's annually since 2014.

"Mombasa port has seen continued growth in container traffic and overall cargo throughput. Over the last three years, the Port handled over one million TEU's each year thus enabling Mombasa to feature in the global map of top container Ports. In 2016, the port handled 1.091 million TEUs and the overall throughput grew by 2.4 per cent to post av best-ever performance of 27.36 million tons, against a backdrop of slower than expected global and regional economic growth."



The analysis presented in this report gives a clear picture on over 31 key performance indicators related to volume and capacity, transit time and delays, rates and costs, efficiency and productivity, intraregional trade and road safety for the period October 2016 to March 2017. However, prior information for previous periods has also been included for comparison. See annex 1 for indicators categories and definitions.

¹ *Efficiency is providing desired outcomes/ outputs with the minimum use of resources*

1.2 Key Economic Indicators

Trade is a critical factor in a country's economic growth, national development and economic diplomacy. Economic indicators allow analysis of economic performance and predictions of future performance. In terms of growth and development, it is through trade that a country can create gainful employment, increase national income and promote technological innovation that will enhance efficiency in production of goods and services. Therefore, promoting exports in the region and beyond, expanding access to markets, increasing capital flow into the country, strengthening regional economic communities, and promoting fair trade and equitable bilateral, regional and multilateral trade agreements will enhance the country's trade interests.

The table below presents key economic indicators and projections for the Northern Corridor Member states. The analysis on these indicators such as population, Gross Domestic Product (GDP), ease of doing business and volume of imports and exports of goods and services, frames regional trends on economy and progress toward improving lives and achieving sustainable development.

Table 1: Key Economic Indicators

	Projected Population (000)		GDP Growth (%)			Ease of doing business
	2017	2022	2016	2017	2022	2017
Burundi	9,879	11,123	-0.5	0.001	0.5	157
DRC	86,654	100,456	2.4	2.8	4.9	184
Kenya	46,729	53,519	6.0	5.3	6.5	92
Rwanda	11,825	13,372	5.9	6.1	7.5	56
South Sudan	13,137	16,846	-13.8	-3.5	3.9	186
Uganda	42,319	49,059	4.7	5.0	8.1	115

Source: World Economic Outlook (WEO) Database, 2016: The WEO is released in April and September/October each year.

According to the world economic outlook database estimation, the population in Northern Corridor Member States as a whole is projected to increase from around 210 million in 2017 to 244 million in 2022. Obviously, not all these countries are equally populated and this could be attributable to the population density and size of a country. DRC has the highest population followed by Kenya and Uganda having 50 percent when compared to DRC whereas Burundi has the least total population. The average projected population growth rate in the region is about 2.4 percent. The increase in population predicts a vast market expansion that will drive trade for the member states.

Data on GDP of the six member states varied during 2016 and was driven by diverse factors. The negative GDP growth rates for Burundi and South Sudan in 2016 were mostly attributed to political tensions that continued to cause strains on economic activity.

In 2016, Uganda, Kenya and Rwanda were projected to have positive annual economic growth of between 5 to 7 percent suggesting a fast expanding economic region that is buoyed by a growing population. The projected economies have gradually recovered to record impressive growth despite many challenges.

In Kenya, the growth is attributed to improved performance mainly in the following sectors: Hospitality; Transport and logistics; Information and communication; and Wholesale and retail trade. According to the WEO, the Kenyan economy is projected to expand by 5.3% in 2017.

Economies are ranked on their ease of doing business, from 1–190 by the World Bank. Ease of doing business looks at the regulatory environment to see how it hampers or helps enterprises to conduct business, from starting up and paying taxes to registering property and trading across borders. The ease of doing business rank for Burundi was 157 and Uganda was ranked position 115. South Sudan and DRC rankings were very low at position 186 and 184 respectively out of 190 countries, suggesting that more regulatory reforms are required to realize the envisaged positions and make trading across borders easier.

Compared to other member states, Rwanda rankings are better at position 56. Kenya's ranking in the World Bank's doing business ranking improved from position 129 in 2015 to 108 in 2016 and further to 92 in 2017.

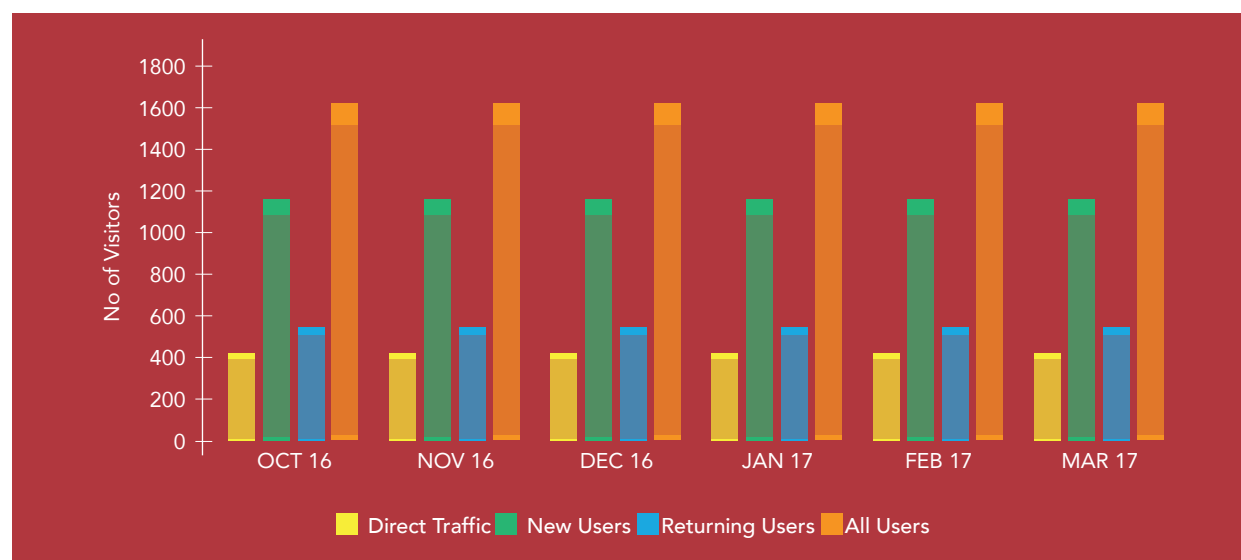
"Challenges such as corruption practices have been a hindrance to effective and efficient service delivery to customers. There is therefore need to reinforce and combine efforts in this area to enhance the business processes and meet customer expectations."

1.3 Northern Corridor Performance Monitoring

The NCTTCA uses various tools to monitor performance of the Corridor in line with its mandate of trade and transport facilitation. Among the tools used for monitoring are; transport observatory, performance dashboard and the transport logistics stakeholder's surveys. Through these monitoring tools, the NCTTCA Secretariat is able to track performance of the Corridor and give objective evidence based recommendations to the stakeholders on policies to be adopted. 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 Mombasa Port and along the transport logistics chain in Kenya on a weekly and monthly basis.

The Secretariat has recorded increasing use of the Transport Observatory by Stakeholders. For the period, January 2015 to March 2017 the online portal has had a total of 41,816 number of online visits to the transport Observatory portals. Out of the total number of visits, 54 percent were new visits, while 26 percent were returning users. Under the same period, most of the online portal visits were through search engines and referral sites (80%) while 20% were through direct access to the Transport Observatory (TO) website. The table 2 below also indicates that the number of visits to the Observatory has been on the rise when comparing 2015 and 2016 from 18,552 visits to 19,021 visits respectively. These results help users to acquire information and data for various reasons such as research, decision making, policy formulation and data.

Figure 1: Number of visitors to the Transport Observatory



Source: Northern- Corridor Transport Observatory September, 2016

Table 2: Trend in number of visitors to the transport observatory

Month	Direct Traffic		New Users		Returning Users		All Users	
	2015	2016	2015	2016	2015	2016	2015	2016
Jan	220	326	816	971	343	398	1,159	1,369
Feb	465	428	990	948	581	521	1,571	1,469
Mar	546	460	1,414	1,097	690	604	2,104	1,701
Apr	336	358	1,139	1,235	502	521	1,641	1,756
May	649	487	1,125	1,359	767	535	1,892	1,894
Jun	478	411	1,100	1,336	691	516	1,791	1,852
Jul	359	455	962	1,015	570	515	1,532	1,530
Aug	364	361	954	1,090	448	469	1,402	1,559
Sep	405	340	875	899	471	440	1,346	1,339
Oct	363	410	1,016	1,149	436	493	1,452	1,642
Nov	287	535	859	1,125	482	652	1,341	1,777
Dec	341	321	946	787	375	346	1,321	1,133
Total	4,813	4,892	12,196	13,011	6,356	6,010	18,552	19,021

Source: Northern- Corridor Transport Observatory 2015 and 2016

Through feedback and regular tracking of the online portals usage, the NC Secretariat is able to understand stakeholder's needs and reasons for visiting the portal. In addition, NCTTCA is engaging the Port Community as part of the measures to galvanize efforts aimed at enhancing efficiency of the corridor operations. Data on the green freight program, road side stations will see the indicators expand from the current 31 indicators and in turn widen scope on number of users.

1.4 Methodology

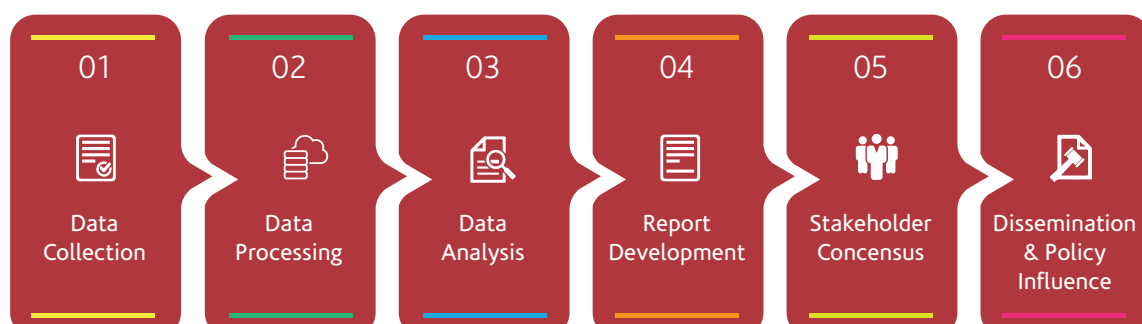
The performance of the Corridor is measured through a range of indicators whose data is obtained from multiple sources. The main sources for the transport observatory report include: Electronic data from stakeholder's business systems; Global Positioning System (GPS) Surveys; Road Transport Surveys and secondary data from existing reports and policies. In this report, electronic data was obtained from port authorities (KPA), revenue authorities (KRA,URA,RRR,OB and DGDA), road authorities and road fund (KeNHA, UNRA, RTDA, Office des Routes Burundi, FONER DRC), Railways Authorities (KRC and RVR), bureau of statistics, transporters associations (KTA,UNTA,FEC,ATAR,ACPLR,ABT) bureau of statistics and central banks.

Qualitative data is collected through visits and respective stakeholders, GPS and road based survey questionnaires from transporters. 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 questionnaire is administered alongside the kits for drivers to capture stop reasons, fees, among other information.

The source of data for specific category of indicators is as shown in the table below: (a detailed indicator description is shown in Annex 1)

CATEGORY	DATA SOURCE
Volume and capacity	Electronic data
Transport rates/costs	Data from users/transporters
Transit time/delays	<ul style="list-style-type: none"> GPS, road surveys Electronic data
Efficiency and productivity	<ul style="list-style-type: none"> Electronic data GPS, road surveys
Intra-regional trade	Electronic data
Road safety	Electronic data

Both qualitative and quantitative data is then processed and analysed to develop the Transport Observatory report. The analysis involves both descriptive and quantitative techniques using various statistical tools to generate graphs and tables for interpretation. Validated information is uploaded to the Northern Corridor online transport portal and report on findings and recommendations disseminated among the member countries as shown below.



The data sets cover six member states and the indicators monitor performance and implementation of NCTTCA policy organs decisions and recommendations.

The NCTTCA has the mandate to ensure removal of obstacles to the smooth flow of trade and services along the Northern Corridor so as to ensure efficient and cost effective transit along the Corridor. It is therefore critical to identify evidence based policies and key initiatives for implementation and stakeholders who are relevant to the success of the planned initiatives. This can only be attained through frequent monitoring and evaluation.

1.5 Current status on implementation of the previous recommendations since 2012

Since 2012, the Northern Corridor Transport Observatory has continued steadily to monitor the Corridor performance and to provide useful information required by policy makers. This is now the 10th issue of the TO report which covers a period of 6 months. Therefore, there are two reports produced yearly. Currently the report tracks performance of 31 key indicators which are likely to increase with the implementation of the green freight program. A number of recommendations have been proposed since inception of these reports. The following are some of the recommendations that have been implemented since 2012 towards a seamless transport corridor.

- Setting up the online database: Online database was set up and is accessible at <http://top.ttcanc.org>
- Quarterly Transport Observatory Reports: Quarterly reports are developed on a timely basis and disseminated to stakeholders and to stakeholder forums.
- Operationalize GPS for data collection: The GPS data collection activity has been operational since 2013. Very useful data has been generated that has since then become a baseline source of information in the road freight transport sector. A case in point is the reference to the Transport Observatory Project (TOP) report in the adoption of the regional electronic cargo tracking system (RECTS).
- Investing in rail to reduce the cost of doing business: Kenya, Uganda, Rwanda and South Sudan committed to the development of a new seamless railway transport system in order to reduce the cost of doing business, increase regional connectivity and enhance regional integration. DRC also signed the NCIP summit protocol for development of the SGR. In the protocol, Member states agreed to the development of the Standard Gauge Rail with the same design standards from Mombasa to Nairobi, Kampala, Kigali, Juba and Kisangani. Currently Kenya has completed the line from Mombasa to Nairobi.
- Implementation of Single Customs Territory (SCT): Rwanda has fully implemented clearance of goods under the SCT framework. Kenya and Uganda also implemented SCT clearance, but for Uganda not all goods are cleared under SCT framework.
- Install HSWIM Weighbridges: All weighbridges in Kenya along the Northern Corridor have implemented high speed weigh –in- motion except Busia weighbridge. Other member states have not implemented the HSWIM. They should however strive to ensure that all weighbridges along the designated Northern Corridor roads are HSWIM and install the static scales on either side of the road at busy weighbridge stations.
- Axle load self compliance by transporters: Rwanda, Burundi and South Sudan are yet to put in place weighbridges to enforce axle load limits. South Sudan is adjusting to the regional axle load limits set through the Common Market for Eastern and Southern Africa (COMESA) and East African Community (EAC) requirements, and which is currently set at a maximum of 56 tones for GVW (Gross Vehicle Weight (GVW).
- Sensitization on the use of the alternative route through Tanzania via Voi-Taita-Taveta which reduces the distance travelled from Mombasa to Bujumbura is underway. Some stakeholders from Burundi are already using this route and reported that it is faster and cheaper.
- Reduce port dwell time: Port Dwell Time has been reducing steadily over time. As at March 2017, dwell time was recorded as 70 hours suggesting tremendous improvement which outperforms performance of 72 hours set target. Kenya Ports Authority reported that the improvement was attributed to interventions which included implementation of the Single Custom Territory, 24/7 clearance and evacuation of cargo from the port, automation of systems and expansion of exit lanes at the gates. Gate 18/20 was expanded with two additional lanes having been introduced to improve truck turn around just to mention but a few.
- Targeted sensitization and results dissemination workshops for policy makers, the trade and transport fraternity and other interested parties to promote the use of the observatory as a decision-making tool. Has been done and is ongoing.
- The stakeholders to use the Transport Observatory information in their policy change processes as well in

diagnosis processes of the various bottlenecks in the corridor logistics. Done and ongoing

- Sensitization on regulations and procedures for clearance through customs and immigration has been done and is ongoing.
- Use of digital scanner to minimize delays or ease verification of goods at the border stations. This has been implemented at some key border stations and the Port of Mombasa.
- Sensitization of truckers was done through issuance of information brochures on clearance procedures and on official charges.
- The free period which is 9 days, has an impact on how fast cargo is evacuated from the Port. Therefore, an approach informed by analytics, should show how to balance between free period and the dwell time target to inform the review process. Not yet done.
- Implementation of the Regional Customs Transit Guarantee (RCTG) and Single Customs Territory (SCT) declaration regime: The SCT declaration has been fully implemented by Rwanda, Kenya and Uganda are also clearing goods under the SCT framework. The RCTG is being used to secure goods whose taxes are not paid at the first station of entry. There is continued engagement with COMESA, EAC and the Member States to further improve the use of the COMESA RCTG.
- Regarding the Implementation of a Regional Unique Consignment Reference (R-UCR), a model for the UCR was proposed by the Secretariat and a format for generating a Regional UCR's agreed by the Member States. Implementation of the agreed format of R-UCR still pending.
- Set up a Weighbridge along the Nimule– Juba road to protect the road from being damaged due to overloaded trucks is yet to be done.
- The One Stop Boarder Post (OSBP) in plan should look at including LAN & WAN infrastructure in the building with power backup systems as mitigation for outages due to heavy rains and power. The OSBP Sourcebook 2nd edition was launched in March 2017 in Kigali. Member states urged to make reference to the Sourcebook to guide operations of OSBP's.
- Follow-up to ensure that transit trucks are only weighed twice at the point of Entry/Exit. Member States agreed to implement HSWIM weighbridge where compliant trucks will not stop at weighbridge stations. Only trucks that a non-compliant at the HSWIM will stop for weighing using static scales.



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SECTION TWO: VOLUME AND CAPACITY INDICATORS

VOLUME AND CAPACITY INDICATORS

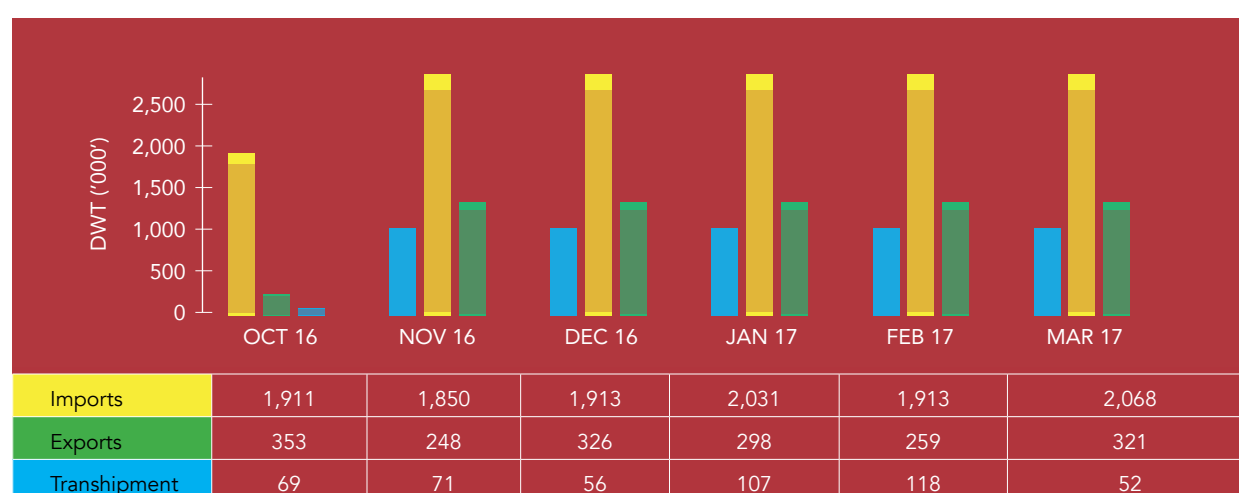
Mombasa port is the major trade gateway to the Great Lakes region. It is one of the top five container ports in Africa and East Africa's biggest port. The government of Kenya has strategically aligned the port of Mombasa and increased investment in infrastructure development at the port to modernize and develop the port to international standards with the objective of increasing cargo throughput.

This section gives performance of the Mombasa Port in terms of volume related indicators for the periods between January 2016 and March 2017 and where possible a comparison is made with Dar es Salaam Port for 2016.

2.1 Cargo Throughput

Cargo throughput is defined as the total quantity of cargo that is handled by the port of Mombasa in a year. The cargo throughput includes imports, exports and cargo transhipped at the Port.

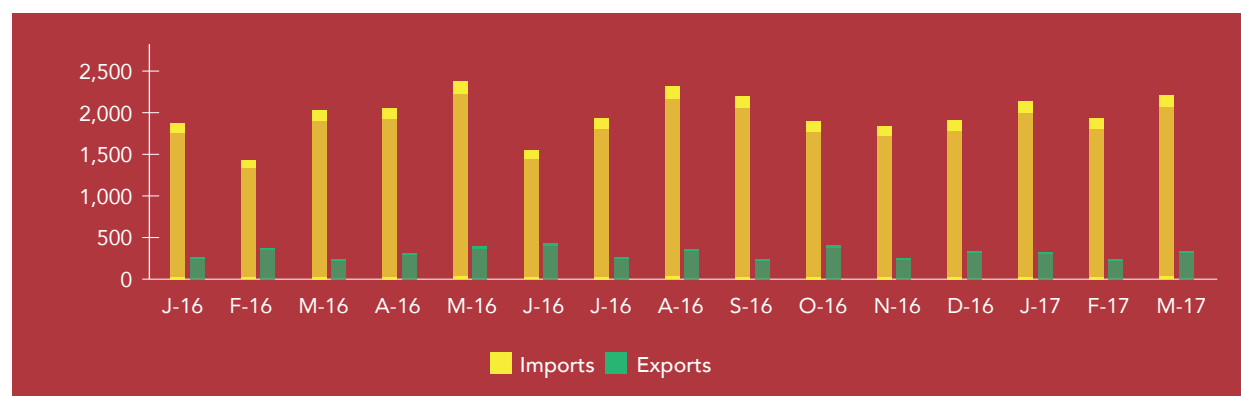
Figure 2: Cargo Throughput ('000' DWT)



Source: KPA, October 2016 to March 2017

Figure 2, shows the imports, exports and transshipment cargo handled at the port of Mombasa during the period October 2016 and March 2017. Total volume of cargo handled during the period under review was 13.97 million tons with an average of 2.33 million DWT per month. It can be noted that Mombasa port majorly handles import cargo (83.7 percent) when compared to exports cargo (13 percent). Transshipment was recorded as 3.3 percent during the period under review.

Figure 3: Overall Imports and Exports from January 2016-March 2017 in Tons

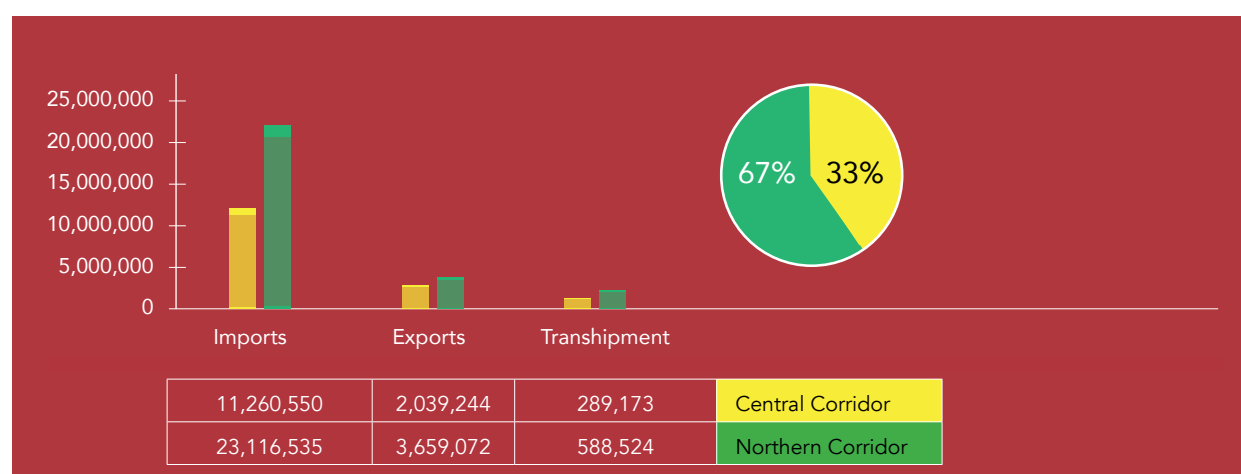


Source: KPA, January 2016 to March 2017

As shown in figure 4, the share of the total cargo through the two East African Ports handled by Mombasa port was (67%) compared to Dar es Salam Port (33%) for the year 2016. Mombasa port has the highest cargo throughput when compared to Dar es Salaam port.

Cargo throughput at the port of Mombasa has been rising over the years to stand at 27.36 million tons in 2016. Cargo throughput at the Dar es Salam Port in 2016 was registered as 13.59 million tons. The growth is driven by the corresponding growth of its captive hinterland economies. Indeed, Mombasa port is the busiest and the main gateway to East and Central Africa serving a vast hinterland and a growing population currently of approximately 210 million people.

Figure 4: Total cargo throughput for Mombasa and Dar es Salam Port in 2016



Source: KPA, CCTFEA, 2016

2.2 Volume per Country of Destination

This indicator is obtained by summation of all cargo's weight handled within the Port per Country of destination. From the data, total weight for transit volume amounted to 10,004,872 DWT with 93% imports and 7% exports. Most of transit volume goes to the Northern Corridor Member States (97.5 percent), 2.3 percent for Tanzania and 0.2 percent to other destinations.

The table 3 shows the volumes of cargo imported by both member countries through Mombasa Port between April 2016 and March 2017. The figures show slight variations in cargo flow starting with lowest volume of cargo being recorded in December 2016 and highest recorded in May 2016.

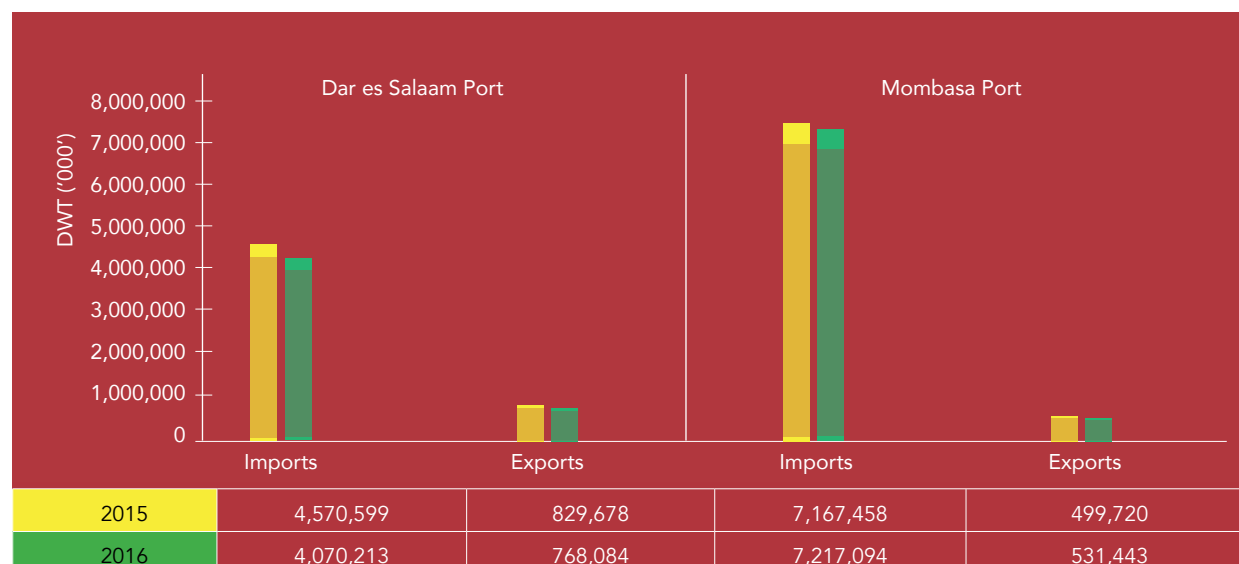
Table 3: Transit Traffic in DWT

IMPORTS												
	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17
BURUNDI	847	16,052	585	528	448	61	300	55	176	9,987	9	5,503
D.R.C.	34,274	26,623	31,047	26,361	28,541	29,787	26,738	25,109	24,521	24,435	22,443	22,293
RWANDA	12,756	11,933	10,268	15,195	17,963	9,881	16,328	10,470	8,774	10,248	14,066	11,304
SOUTH SUDAN	48,623	44,446	51,882	34,986	33,948	29,420	28,620	40,074	40,452	47,178	51,522	54,743
UGANDA	439,111	643,254	441,388	445,753	583,504	585,194	507,132	459,667	398,723	565,541	543,396	638,887
EXPORTS												
BURUNDI	-	-	-	-	-	-	-	-	-	-	-	43
D.R.C.	2,889	4,570	2,970	2,492	3,150	2,285	2,110	2,157	2,071	3,038	2,951	3,351
RWANDA	726	1,032	671	853	1,242	1,332	2,012	1,294	1,271	1,300	995	1,089
SOUTH SUDAN	3,941	3,912	3,940	6,436	3,648	3,537	2,799	3,443	3,664	4,980	5,109	6,892
UGANDA	35,909	35,565	28,212	34,585	36,152	29,667	29,328	39,190	47,530	50,120	51,448	48,386

Source: KPA, May 2016 to March 2017

Figure 5 shows that transit volumes at the Mombasa Port is higher compared to Dar es Salaam port. Tanzania and Kenya are serving some similar landlocked countries through their ports. Some of factors affecting transit volumes include; inefficiencies at the port, delays of cargo in transit to and from the port as well as unrest in some countries.

Figure 5: Transit traffic at Mombasa and Dar es Salaam Ports 2015 and 2016



Source: KPA, CCTFEA, 2015 and 2016

Table 4 below gives the total exports and imports for common countries served by the Northern and Central corridors. DRC uses Tanzania port for most of her exports whereas Uganda uses Mombasa port for most of her exports. This could be attributed to the distance to the nearest port. However, the two ports need to minimize delays, costs and modernize facilities that will handle their cargo efficiently and with speed. Burundi also uses Dar es Salaam port more than Mombasa port.

Table 4: Exports and imports through Mombasa and Dar es Salaam Ports

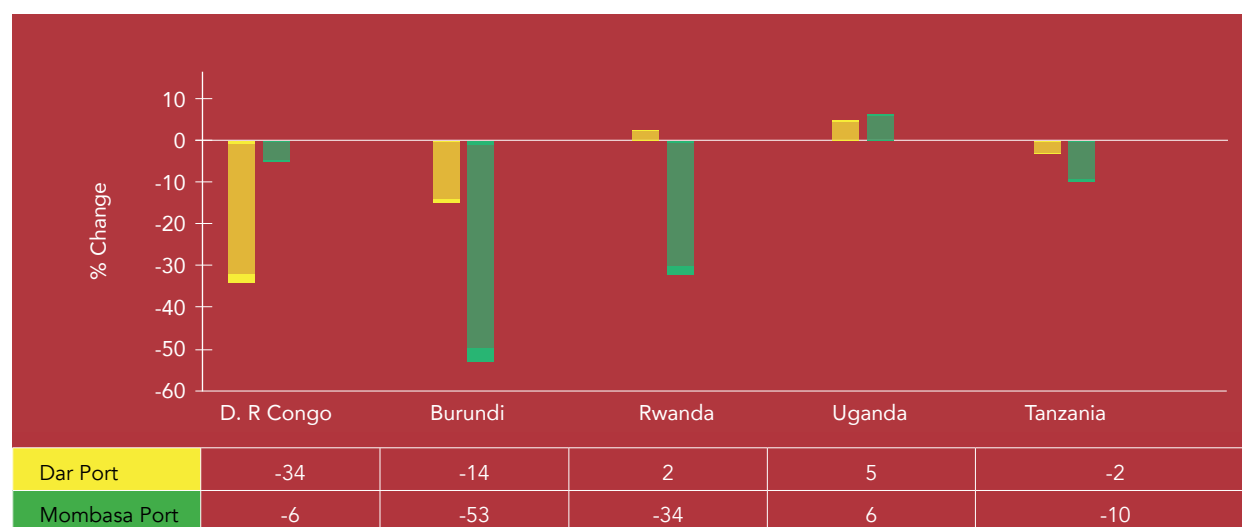
		2015		2016	
Port	Country	Exports	Imports	Exports	Imports
Dar Port	D.R.Congo	521,022	1,194,543	363,701	789,046
	Burundi	14,007	348,806	19,374	301,000
	Rwanda	19,847	819,935	22,348	840,292
	Uganda	703	156,661	796	165,123
	Tanzania	1,364,784	7,328,413	1271,160	7,190,337
Mombasa Port	D.R.Congo	33,156	362,976	35,092	341,843
	Burundi	121	75,690	39	35,755
	Rwanda	18,109	273,815	13,741	180,281
	Uganda	384,418	5,592,914	424,555	5,922,160
	Tanzania	13,898	190,880	11,319	171,238

Source: KPA, CCTFEA, 2015 and 2016

Figure 6 below shows the percentage changes in imports to various countries served by the Northern and Central corridor for a period between 2015 and 2016.

Imports through the Central Corridor and Northern Corridor to DRC, Burundi, and Tanzania decreased. Imports by Rwanda and Uganda through the Central Corridor increased by 2 and 5 percent respectively while imports by Uganda through the Northern Corridor increased by 6 percent.

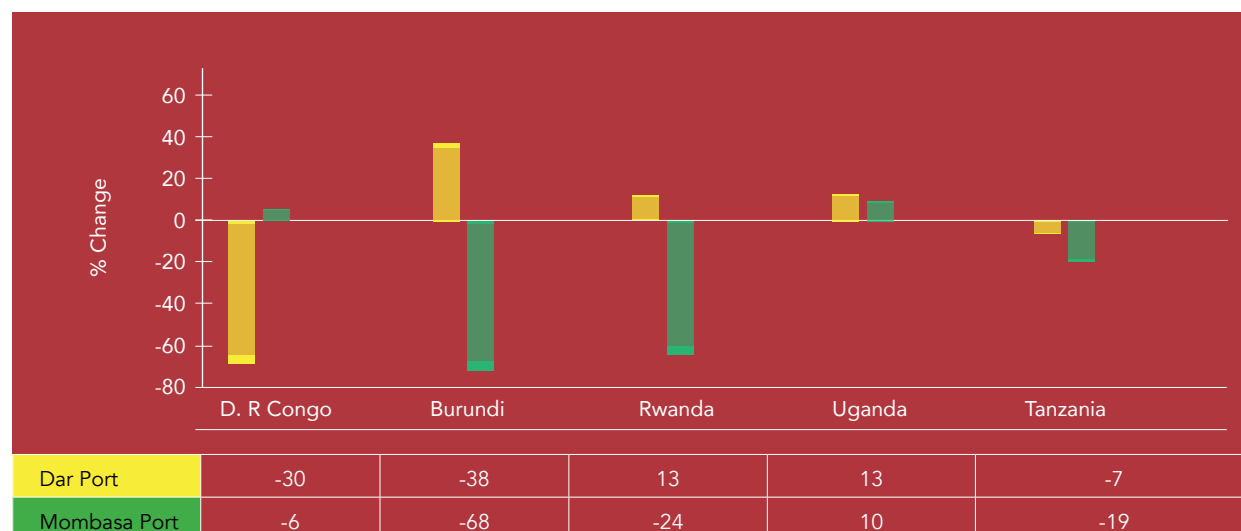
Figure 6: Percentage change in imports through Mombasa and Dar es Salam Port between 2015 and 2016



Source: KPA, CCTFEA, 2015 and 2016

From Figure 7 below, exports through Dar Es Salaam port increased for Burundi, Rwanda and Uganda between 2015 and 2016. Uganda increased its exports through Dar Port by 3 percent more than through Mombasa port as shown in figure 7.

Figure 7: Percentage change in exports through Mombasa and Dar es Salam Port between 2015 and 2016



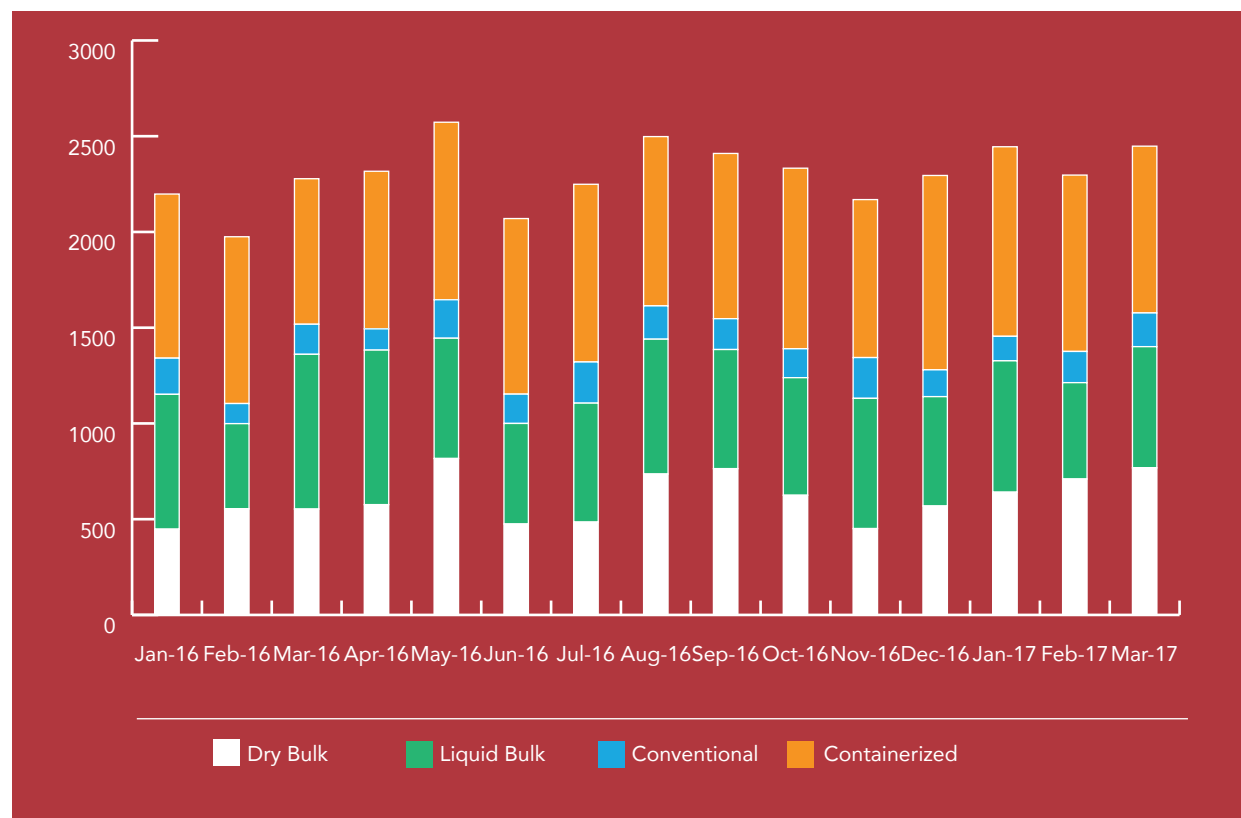
Source: KPA, CCTTFA, 2016

Investment in modernization of ports and infrastructure and the general competition between the ports in Tanzania and Kenya will improve efficiency, resulting in reduced delays and lower costs.

2.3 Rate of containerization

The indicator is total weight of containerized transit cargo divided by total weight of all transit cargo. Containerized cargo has been growing over time hence putting much pressure on the demand of container freights internationally. Figure 8 below shows cargo types in tons at the port of Mombasa verses containerized cargo weights.

Figure 8: Containerized and non-containerized cargo at the Port of Mombasa 2016/2017



Cargo type	Dry Bulk	Liquid Bulk	Conventional	Containerized	Total	Rate of Containerization (%)
Jan-16	448	704	189	857	2198	38.98%
Feb-16	554	445	105	871	1974	44.13%
Mar-16	553	808	157	760	2278	33.38%
Apr-16	576	807	111	823	2316	35.54%
May-16	817	628	201	927	2574	36.03%
Jun-16	475	525	153	917	2070	44.31%
Jul-16	485	621	215	928	2248	41.29%
Aug-16	736	704	174	884	2499	35.39%
Sep-16	764	622	161	863	2409	35.81%
Oct-16	625	614	151	943	2333	40.42%
Nov-16	451	680	213	825	2169	38.02%
Dec-16	569	571	140	1015	2295	44.22%
Jan-17	641	686	128	990	2445	40.49%
Feb-17	710	503	163	921	2296	40.10%
Mar-17	768	633	176	871	2447	35.59%

Source: KPA, January 2016 to March 2017

The rate of containerization ranged between 33% and 44% on a monthly basis with an average of 38.91% over the period under review suggesting that containerized cargo volumes is increasing within the region. With containerization, the types of cargo handled does not play a major role on the transport cost, since cost is defined for different container sizes which in turn has a significant effect on average transportation.

2.4 Transport Capacity by Rail

This indicator analyses the total number of locomotives and wagons against the proportion of total cargo carried by rail.

Cargo leaves the port through the following transport modes: road, rail and pipeline. All the relevant stakeholders need to expand the capacity of these channels to remove the bottlenecks that are currently causing delays. These delays directly influence costs. This part focuses on transport capacity by rail.

Kenya has a rail network of 2,778 km length. The railway line connects the Port of Mombasa to Nairobi - Nakuru - 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 Northern Corridor route for rail transit.

Among the targets stipulated in the 2013 Mombasa Port Community Charter was to ensure efficient cargo offtake from the port of Mombasa to 40 percent by rail. With regard to this and initiative on construction of Standard Gauge Railway (SGR) from Mombasa-Nairobi-Kigali via Kampala was proposed for implementation.

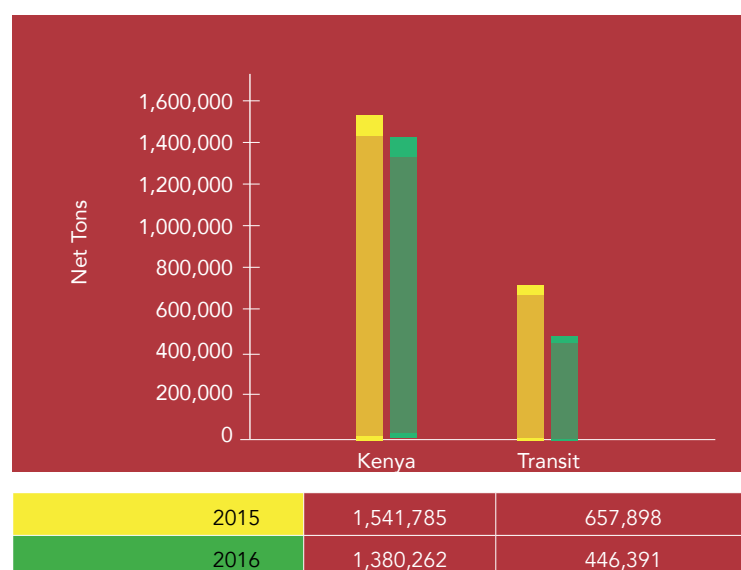


It is expected that if 50% of cargo is transported by rail, Carbon emission on road will be reduced to 40% of the current level. The railway line is designed to carry 22 million tons a year of cargo or a projected 40% of Mombasa Port throughput by 2035. The freight terminals will be located at the Mombasa port and the Inland Container Depots at Embakasi in Nairobi.

Construction of the 609 km-long line began in October 2013 and currently it is completed scheduled to be launched by June 2017. The line will have a total of 33 stations.

Figure 9 below shows proportion of traffic net volume of cargo moved by rail for the period of 2015 and 2016 for both transit and local in tons. It can be noted that there was a significant drop of 10 percent cargo for Kenya and 32 percent for transit cargo. In 2016 cargo for Kenya was 76 percent of the total rail cargo whereas 24 percent represented transit cargo.

Figure 9: Proportion of Cargo Volume transported by rail in tons



Source: KRC, 2015 and 2016

The average locomotives operating for the period under review are shown below.

Table 5: Average Locos Operating


Average Locos Operating	Oct-15	Nov-16	Dec-16	Jan-17	Feb-17	Mar 17
96 (2600hp)	14.2	12.04	12.56	14	12.93	12.78
94 (2910hp)	6.2	7.04	5.76	7	7.84	7.64
93 (2610hp)	15.1	14.19	15.77	13	14.05	14.87
92 (2550hp)	0.7	1	1	1	0.98	0.55
87 (1840hp)	0.8	0.88	0.57	1	0.85	0.68
72 (1240hp)	0	0	0	0	0	0
71 (1240hp)	0				0	0
62 (740hp)	1.5	1.38	5.64	1	2.25	2.65
47 (345hp)	3	2.98	2.86	3	2.89	1.8

Source: KRC data 2015, 2016 and 2017

Table 6: Number of wagons available

Number of Wagons Available for Service	Mar 17
Container Flat (T.W=15.22T & Carrying Capacity=42T)	849
Tanks Oil , Fuel, Gas (TW=19.25T & C.C=51675LTRS)	105
Tanks Other	8
Covered (T.W=15.9T & Carrying Capacity=36.83T)	15
High Sided (incl. Bulk Grain Wagons) (TW=15T & Carrying capacity=34.1T)	22
Drop Sided (TW=17.3T & Carrying Capacity=35.5T)	3
Other	45
Total RVRK Revenue Wagons	1526
Ballast	12

Source: KRC data Jan 2016 – Mar 2017



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SECTION THREE: TRANSPORT RATES AND COSTS

TRANSPORT RATES AND COSTS

Transport rates and costs are the expenses incurred by transporters to move cargo from one place to another. Such expenses are a major obstacle to economic growth. The cost is determined by factors such as: distance, location, infrastructure, administrative barriers, energy and how the freight is carried. A study by World Bank demonstrated that Africa's transport prices were high compared to the value of the goods transported and that transport predictability and reliability were low by international standards. Further, distribution and transportation costs along the Northern Corridor have been more than 35 or 40 percent of final product costs. From the aforementioned it is important to minimize delays and stoppages so as to reduce the cost of goods and services as one way.

It is estimated that the total indirect (hidden) costs per day of delays are approximate at \$384.4 for a loaded truck along the Northern Corridor. Road condition also plays a vital role in transport rates and costs. This report will help policy makers take actions that will reduce transport costs to domestic and regional trade through identifying and quantify the factors behind high prices for road transport. Various regulations such as check points are the major sources of delays as public authorities. There are two standard intermodal shipping container sizes in use throughout the world, the 20 feet and 40 feet. This report features average rates charged by transporters across the region.

3.1 Road Freight charges in Kenya

Table 7 gives a comparison of road freight charges in Kenya to different destinations along the Corridor in US dollars for the period March 2015 and 2017.

Table 7: Transport Rates to various destinations in USD

Route		Distance	Average transport rates		Average cost per KM		No. of Round-Trips per month	
From	To	(Km)	March, 2015	March 2017	Mar-15	Mar-17	March, 2015	March 2017
Mombasa	Nairobi	481	1,057	800	2.20	1.66	11	10
Mombasa	Kampala	1,170	2,751	2,500	2.35	2.14	4	3
Mombasa	Kigali	1,682	4,350	3,300	2.59	1.96	3	2-3
Mombasa	Bujumbura	1,957	4,990	3,984	2.552	2.04	3	2
Mombasa	Goma	1,840	5,058	6,127	2.75	3.33	2	2
Mombasa	Juba	1,662	5,030	4,800	3.03	2.89	2	2

Source: Road Transport Survey March 2015 and 2017

Transport rates in most routes have reduced significantly signifying good improvement in the business environment and also improved road condition has a positive bearing on costs. However, the average transport rates from Mombasa to Goma increased which could be attributed to the distance and other concerns including several border crossing and capital cities through which trucks have to cross. It is also clear the differences on the average cost are influenced by factors that vary depending on the destination route.

The number of return trips has remained fairly constant. This is mainly influenced by distance to respective destinations for instance the highest number of road trips was recorded from Mombasa to Nairobi trip recorded due to the short distance covered. Bujumbura, Goma and Juba recorded the lowest number of 2 trips per month.

3.2 Road Freight charges in Burundi

Table 8 summarizes transport charges per container to and from Bujumbura in USD for 20 foot containers for the period March 2017. It also shows the number of round-trips achieved for the different destinations.

Number of road trips made during the period under review, are very minimal this may be due to the long distance covered and high costs. There was no trip made from Bujumbura to Juba. The report recommends a qualitative survey to determine inefficiencies and bottlenecks along the corridor and recommend ways that could lead to increased roundtrips, truck turnaround and hence operational efficiency for transporters.

Table 8: Tariff and of Round-Trips in Burundi

Importations		Rate in USD			
From	To	Distance	Rate per Ton	Rate per Km per Ton	No of trips
Mombasa	Bujumbura	1,957	200	9.79	
Nairobi	Bujumbura	1,476	180	8.20	
Juba	Bujumbura	1,441	N/A	N/A	
Kigali	Bujumbura	275	50	5.50	
Kampala	Bujumbura	788	140	5.63	
Goma	Bujumbura	431	80	5.39	
Exportations		Rate in USD Per Ton			
From	To	Distance	Rate in USD Per Ton	Rate per KM Per Ton (USD)	No of trips
Bujumbura	Goma	431	80	5.39	2
Bujumbura	Kampala	788	60	13.13	2
Bujumbura	Kigali	275	40	6.88	3
Bujumbura	Juba	1,441	N/A	N/A	0
Bujumbura	Nairobi	1,476	130	11.35	1
Bujumbura	Mombasa	1,957	160	12.23	1

Source : « Association des Transporteurs Internationaux du Burundi », March 2017

From the qualitative information gathered, it was established that besides trading with Central Corridor, most of the goods to Burundi are from Kenya. Some of the goods transported include; iron, steel, cement and other construction materials. Most goods from Kenya originate from Nairobi and Mombasa. There are two alternative routes from Kenya to Bujumbura. Use of the Taita Taveta road and Namanga road through Tanzania is the shortest and cheapest route to access Mombasa and Nairobi respectively. Furthermore, on Nairobi – Namanga route, the road is paved although there are a few road blocks.

On the other hand, road toll in Tanzania is 152 dollars with designated points for stoppages. The main challenges experienced while using this alternative route include; policies between Kenya and Tanzania not harmonized for instance the use of single and double tyres, network challenges at the border, corruption and some charges by the municipal council. However, it is important to note that transport rates are reducing substantively and this is attributable to competition between the two corridors (Northern and Central).

3.3 Road Freight charges in DRC

Table 9 provides various costs incurred for both 20 feet and 40 feet for imports and exports transport tariff from and to Goma to various destinations along the Northern Corridor. The costs/charges include port charges, clearing fees, road toll fees paid per respective destination. Data shows that 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. Imports from Mombasa attract higher freight charges than other destinations due to the distance.

Table 9: Transport rates in DRC

Imports		Rate (\$)	
From	To	20 feet container	40 feet container
Mombasa (KE)	Goma (DRC)	3,250	6,500
Nairobi (KE)	Goma (DRC)	1,680	3,360
Juba (SS)	Goma (DRC)	-	-
Kigali (RW)	Goma (DRC)	-	-
Kampala(UG)	Goma (DRC)	1,060	2,120
Bujumbura (BI)	Goma (DRC)	-	-
Exports			
Goma (DRC)	Bujumbura (BI)		
Goma (DRC)	Kampala (UG)	1,120	2,240
Goma (DRC)	Kigali (RW)	-	-
Goma (DRC)	Juba (SS)	-	-
Goma (DRC)	Nairobi (KE)	1,680	3,360
Goma (DRC)	Mombasa (KE)	1,820	3,640

Source: FEC, March 2017

Table below provides a summary of the average number of round trips made by transporters from Goma to other destinations. There was no return cargo from Goma to Bujumbura, Kigali and Juba.

Table 10: Average of Round trips done to the following destination in a month

From	To	Number of round trips
Goma (DRC)	Bujumbura (BI)	-
Goma (DRC)	Kampala (UG)	2
Goma (DRC)	Kigali (RW)	-
Goma (DRC)	Juba (SS)	-
Goma (DRC)	Nairobi (KE)	1
Goma (DRC)	Mombasa (KE)	1

3.4 Road Freight charges in Rwanda

The table 11 below provides freight charges involved to move a 20/40-foot container in Rwanda. It is much expensive to transport cargo from Kigali to Juba is higher at 7000 USD compared to other destinations.

Table 11: Transport Rates to various destinations in USD

Imports			Rate (\$)
From	To	Distance - Km	20/40 feet container (trip)
Mombasa (KE)	Kigali (RW)	1,682	4500
Nairobi (KE)	Kigali (RW)	1,201	3300
Juba (SS)	Kigali (RW)	1,166	-
Bujumbura (BI)	Kigali (RW)	275	1800
Kampala (UG)	Kigali (RW)	513	2000
Goma (DRC)	Kigali (RW)	156	1000
Exports			
Kigali (RW)	Goma (DRC)	156	1000
Kigali (RW)	Kampala (UG)	513	1600
Kigali (RW)	Bujumbura (BI)	275	1800
Kigali (RW)	Juba (SS)	1,166	7000
Kigali (RW)	Nairobi (KE)	1,201	2000
Kigali (RW)	Mombasa (KE)	1,682	3000

Source: ACPLRWA

Table 12 provides a summary of the average number of round trips made by transporters from Kigali to other destinations. The results indicate that the highest number of round trips made were to Goma, an average of 10 trips. There was no return trip to Bujumbura.

Table 12: Number of Round trips done to the following destination in a month

From	To	Distance - Km	Number of Round Trips
Kigali (RW)	Goma (DRC)	156	10
Kigali (RW)	Kampala (U)	513	7
Kigali (RW)	Bujumbura(BI)	275	-
Kigali (RW)	Juba (SS)	1,166	1 to 1.5
Kigali (RW)	Nairobi (KE)	1,201	4
Kigali (RW)	Mombasa (KE)	1,682	2 to 2.5

Source: ACPLRWA

3.5 Road Freight charges in South Sudan

Table 13 below provides a summary of rates charged by transporters in South Sudan.

Table 13: Road Freight Charges per destination in USD

Imports		Rate (\$)	
From	To	20 feet container	40 feet container
Mombasa (KE)	Juba (SS)	6,000	6,000
Nairobi (KE)	Juba (SS))	-	-
Kampala(UG)	Juba (SS))	3,000	3,000
Bujumbura (BI)	Juba (SS))	-	-
Kigali (RW)	Juba (SS)	-	-
Goma (DRC)	Juba (SS)	-	-
Exports			
Juba (SS)	Goma (RDC)	-	-
Juba (SS)	Kigali (RW)	-	-
Juba (SS)	Bujumbura (BI)	-	-
Juba (SS)	Kampala (UG)	1,500	1,500
Juba (SS)	Nairobi (KE)	3,000	3,000
Juba (SS)	Mombasa (KE)	3,000	3,000

Source: South Sudan Business Association

3.6 Road Freight charges in Uganda

Freight charges in Uganda are presented in the table below based on container type. The results in table 14 indicate that rates are based on the utilization of the truck irrespective of the container sizes. Export from Uganda, except those destined to Kigali, showed a significant decrease in freight charges as compared to same period 2015.

Table 14: Road Freight Charges per destination in USD

	From	To	Distance (KM)	Average transport rates	
				March, 2015	March 2017
Imports	Mombasa	Kampala	1,169	2,800	2,200
	Nairobi	Kampala	688	1,500	1,400
	Juba	Kampala	653	-	-
	Bujumbura	Kampala	788	1,800	450
	Kigali	Kampala	513	1,200	800
Exports	Goma	Kampala	669	1,500	550
	Kampala	Goma	669	3,200	3,000
	Kampala	Kigali	513	2,080	1,650
	Kampala	Juba	653	3,200	1,941
	Kampala	Nairobi	688	500	600
	Kampala	Mombasa	1,169	900	800

Source: UNTA, March 2015 and 2017

Table 15 provides a summary of the average number of round trips made by transporters from Kampala to other destinations. It is indicative that transporters from Kampala make more trips to Kigali and Nairobi in a month compared to other destinations.

Table 15: Number of Round Trips

From	To	Containers	Tankers
Kampala (UG)	Bujumbura(BI)	3	4
Kampala (UG)	Juba (SS)	4	4
Kampala (UG)	Goma (DRC)	3	4
Kampala (UG)	Kigali (RW)	5	6
Kampala (UG)	Nairobi (KE)	5	6
Kampala (UG)	Mombasa (KE)	4	5

Source: UNTA, March 2017

From the qualitative data, the main issues identified were high cost of transportation due to insecurity, high insurance costs fresh insurance cover needed because South Sudan is not under COMESA Yellow Card Insurance Scheme and also the cost of VISA is still 50 USD yet article 43 of the Northern Corridor Agreement calls for abolishing VISA fees. In addition, there are hidden costs that contribute to high transport cost. For instance, there are still some roadblocks along the transit routes which leads delays due to many stoppages.

Kenya uses High Speed Weigh in Motion weighbridges which make them very effective. However, when the same cargo is weighed at Ugandan weighbridges they don't tally there is therefore need for harmonized weighbridge machines and interface. Uganda uses mobile weighbridges which are also affected by weather.

It can be concluded that transport rates and costs vary widely among member states. Therefore, it is incumbent upon policy makers to work on eliminating the logistical and infrastructural bottlenecks that may exist. A research based survey is recommended to identify the costs and delays so that they can be addressed.



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SECTION FOUR: PRODUCTIVITY AND EFFICIENCY

PRODUCTIVITY AND EFFICIENCY

The efficiency of the transportation sector is a key driver of the competitiveness and growth of an economy. An efficient port plays an important role in trade and transport facilitation since it enhances competitiveness, allowing countries to trade goods and services on time and with lower transaction costs. Ports act as gateways for road, rail and inland waterway networks. Being efficient simply means reducing the amount of wasted inputs, thus it is imperative to make investments to develop trading capacities such as ports and roads improvements, improved efficiency in customs administration and adoption of e-services use. The performance of public transport is also vital to facilitating mobility in a timely and, cost-effectivemanner. As such ensuring Mombasa port efficiency is particularly relevant, as port costs and time account for a greater share of total cost associated with the logistics chain.

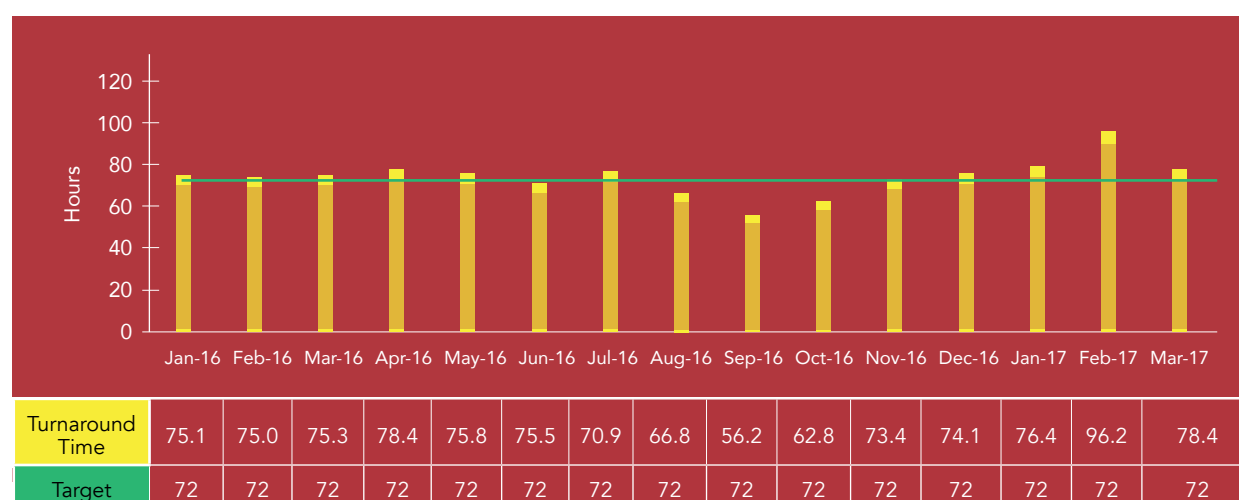
Ports that are more efficient are often preferred over ports that are less efficient since enhanced port efficiency has a large and positive effect on trade flows. What is worst is when these highly competitive ports exist in the same region as aggressive competition is bound to exist. There have been concerted efforts by relevant stakeholders to address inefficiencies and minimize cost of transportation at the port of Mombasa. This section attempts to discuss performance of key productivity and efficiency indicators, identifies the factors responsible for the efficiency improvements and provides insights into the types of policy approaches that could enhance performance in the future.

4.1 Ship turnaround time

This indicator is measured from the time the vessel arrives at the Port area (Fairway Buoy) to the time it leaves the port area.

The ship turn-around time is an accumulation of the two critical times, ship working time at berth and waiting time or the time the ship spends in port before and after it is served from its arrival within the limits of the port up to its departure. Figure 10 gives performance for ship turnaround from 2016 to March 2017.

Figure 10: Containerized Ship Turnaround Time



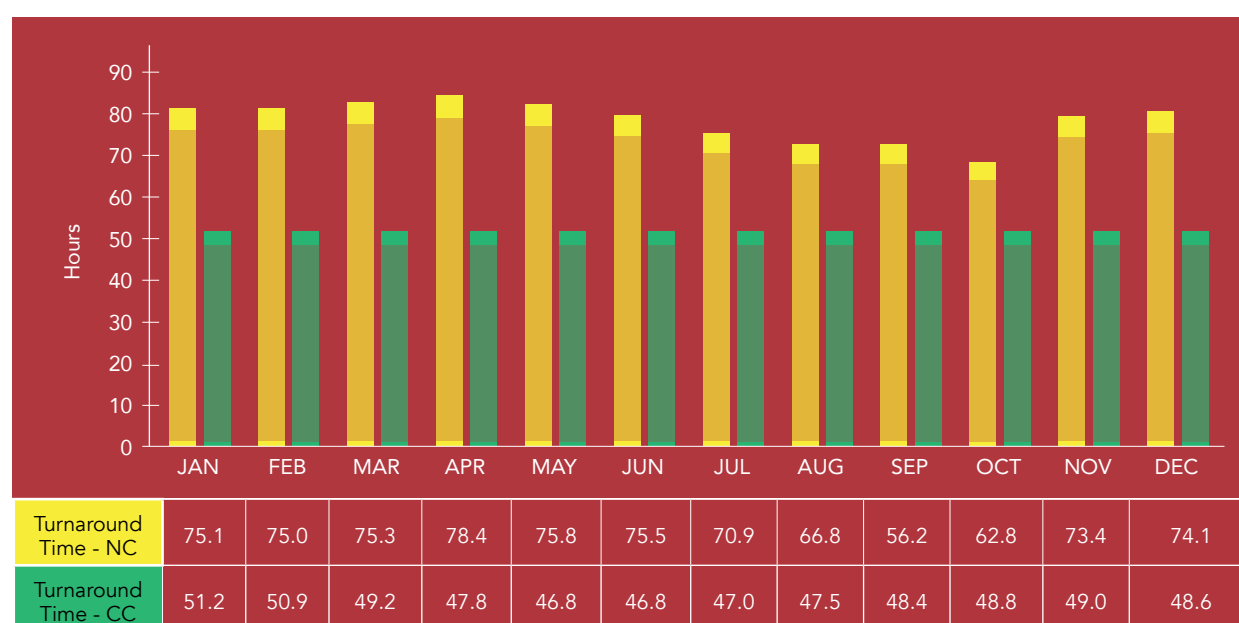
Source: KPA, January 2016 to March 2017

The ship turnaround time target of 72 hours (3 days) was surpassed between July and October 2016. The performances for Ship Turnaround time for the period January 2016 to March 2017 have been within the confines of the set target, with September 2016 posting the lowest average Ship Turnaround time of 56.2 hrs. Some of the initiatives towards realization of this indicator include: availability of equipment, improved productivity of the gangs and the implementation of Fixed Berthing Window by KPA from August 2015 to date.

Figure 11 below compares Ship Turnaround Time in 2016 between the ports of Mombasa and Dar es Salaam. It is noted that turnaround for Dar es Salaam Port is steady at an average of 48.5 hours over the period. The turnaround time for Dar decreased slightly from 51.2 hours in January 2016 to 48.6 hours in December 2016.

On the other hand, the Ship Turnaround Time for Mombasa port also registered a steady performance during the year from 75.1 hours in January to 74.1 hours in December 2016 with an average of 71.6 hours. This performance is slightly higher when comparing the two corridors, suggesting that is more efficient in turnaround time.

Figure 11: Turnaround time comparison for central and northern corridors (2016)

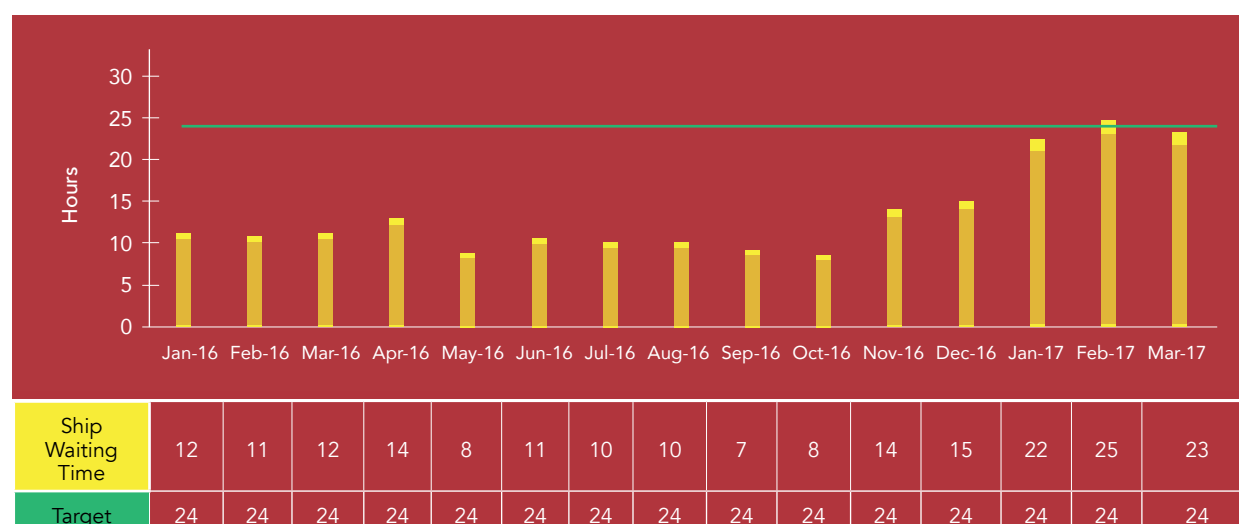


Source: KPA and Tanzania Ports Authority data 2016

4.2 Ship Waiting Time (Hours)

This time is measured from the time the vessel arrives at the fairway buoy to the time of its first berth.

Figure 12: Vessel waiting before berth



Source: KPA, January 2016 to March 2017

The graph above clearly indicates that waiting time significantly went down with 2016 registering an average of 11 hours against the target of 24 hours. These shows great performances at the port of Mombasa implying initiatives being implemented are yielding desired outputs. This could be due to the stringent pre-planning; the terminal knows in advance the vessels that will arrive and as such plan the berthing of vessels accordingly.

Nevertheless, there was a substantial increase in ship waiting time for the period January to March 2017 compared to the rest of the period under study. The main cause was bunching of vessels; vessels arriving at the same time as a result of some vessels failing to meet their scheduled time of arrival. Furthermore, there are vessels wait at their convenience especially those on the Fixed Berthing Window which arrive earlier than scheduled. The report recommends that shipping lines must arrange better scheduling of their mainliners so that feeder vessels do not have to wait to be served.

4.3 Quality of transport infrastructure within the Northern Corridor Road Network

A well-developed intermodal transport network ensures a seamless, faster and more reliable movement of cargo. This is important as time spent in traffic congestion results in wasteful expenditure on fuel, out of pocket expenses as well as time which could have been utilized in other productive activities. This is a major bottleneck for smooth functioning of any transportation network.

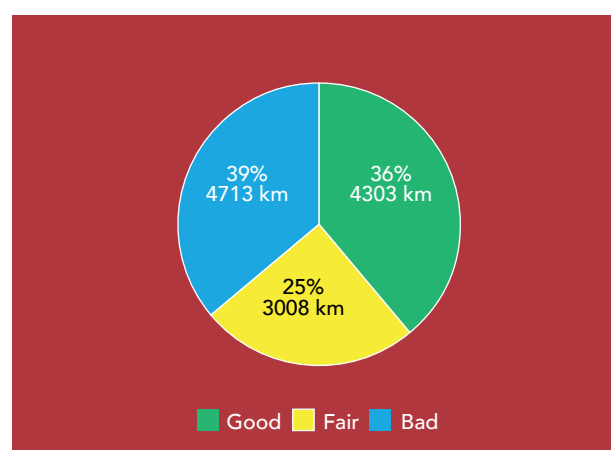
High quality road network increases the potential of any economic system by helping both consumer and producer for the goods to hit the market in a short time at the least cost. The scope of this section is limited to the quality of road infrastructure. Where data exists, IRI is provided. IRI not only helps in terms of determining road user costs but also provides road pavement performance. Roads are designed to cater for both structural and functional requirements of traffic and the entire travelling public. Essentially, the quality of service determines the level of condition to which a road is allowed to fall before a certain treatment is triggered.

The entire Northern Corridor road networks cover approximately 12,024 Km in length distributed as follows:

567 Km in Burundi; 3,853 Km in DRC; 1,205 Km in Kenya; 785 Km in Rwanda; 3,543 Km in South Sudan and 2,071 Km in Uganda. This analysis helps to highlight areas needed for improvement and harmonization of standards and policies in the infrastructure sector.

According to data collected and presented from the roads authorities in six member states, it was determined that from overall 12,024 km road length, only 36% of the road network was in good condition; 25% was in fair condition and 39% of the total Northern Corridor road length was in bad shape as shown in figure 13 below. Data shows that South Sudan contributes to the highest 3351 Km (71.1%) of the bad roads along the Corridor. The section of Nadapal - Kapoeta - Torit- Nesitu is awaiting construction and will improve road condition by 10 percent.

Figure 13: Summary of road condition for the Northern Corridor



Country	Good	Bad	Fair	Length-Total
Burundi	418	92	57	567
DRC	1,562	1,382	909	3,853
Kenya	808	228	169	1,205
Rwanda	644	141		785
South Sudan		192	3,351	3,543
Uganda	871	973	227	2,071
TOTAL- KM	4,303	3,008	4,713	12,024

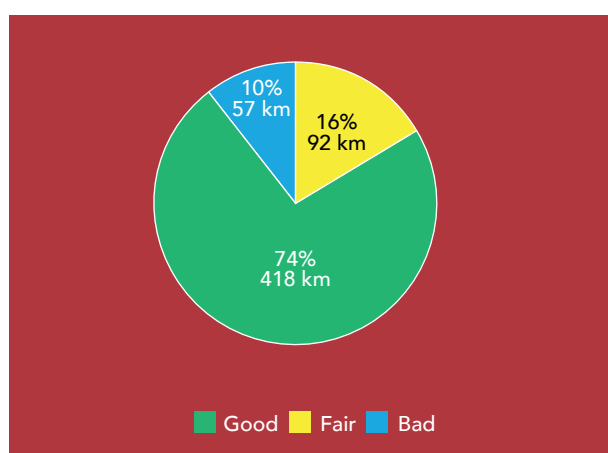
The road transport is fully liberalized and it accounts for more than 96% of the total transit traffic flow within the northern Corridor. This is bound to change though given the impending of launch of the standard gauge railway line between Mombasa and Nairobi in June, which is projected to divert about 40% of the containerized cargo from road transport. It is important to determine the efficiency and capacity of the transport modes since they have direct impact on transport costs. Poor infrastructure translates to higher transport costs, delays and negative economic consequences.

A well-maintained road infrastructure is therefore essential to corridors economic and social development. Maintenance of the road infrastructure calls for structured planning, taking into account the life-cycle costs of the fabric of the roadway (or pavement) and the consequences for road users in terms of delays and risk of accidents at lane changes and closures associated with the execution of maintenance.

a) Road conditions in Burundi

Majority of the roads in burundi are paved and is in good tarmac status except some sections of about 129 km which is still in bad status as shown in figure 14 below. However, plans are underway to improve/ upgrade.

Figure 14: Road condition in Burundi



Source : Office des Routes, March 2017

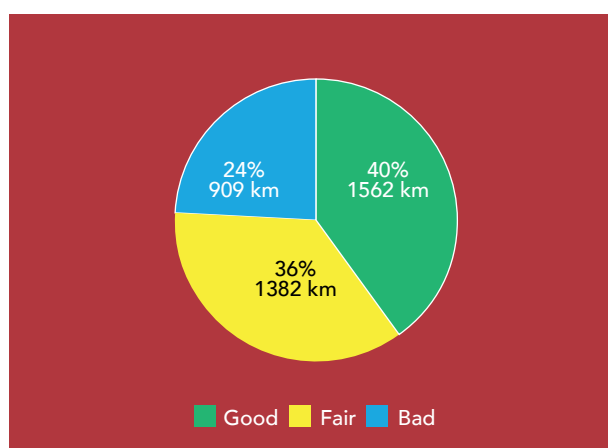
The following sections require improvement

From	To	Good	Fair	Bad
Kanyaru Haut	Gatumba	117		22
Ruhwa	Bujumbura	51	20	10
Kanyaru bas	Gitega	80		25

b) Road conditions in DRC

From figure 15 below, approximately 40 percent (1,562 Km) of the road condition in DRC is in a good state, 36 percent (1,382 km) fair condition and 24 percent an equivalent of 909 km is in bad state. However most of the sections under bad state were reported to be under construction or rehabilitation and will be better when the upgrade is completed.

Figure 15: Status of the road in DRC



Route as per NC Agreement	Good	Fair	Bad	Length (Km)
Axe Kisangani - Isiro - Aru	477	255	262	994
Komanda-Bunia -Mahagi	90	171	0	261
Axe komanda - Beni - Kasindi	163	18	24	205
Beni - Butembo - Rutshuru -Goma - Bukavu	97	268	176	541
Ishasha-Rutshuru-Bunagana	35	49	6	90
Bukavu-Kisangani	262	253	201	716
Axe Bukavu-Kindu-Lubutu	319	339	231	889
Bukavu-Uvira -Kalundu	119	33	9	161
TOTAL-KM	1,562	1,386	909	3,857

Source: Office De Routes, DR Congo, March, 2017

c) Road condition in Kenya

Table below provides status on road conditions in Kenya measured by international roughness index. Kenya roads are crucial because they form an un-avoidable link to other Member states. 67percent of the roads in Kenya are in good condition paved and tarmac, 219 percent in fair condition and 14 percent in bad condition. The ongoing roads infrastructure upgrading is expected to bring more improvements. furthermore, there are ongoing plans on expansion of nairobi- Mombasa Highway.

Table 16: Road condition in Kenya

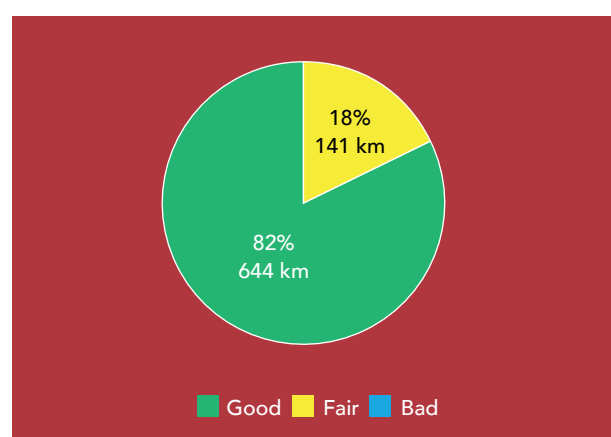
Route	Section	Length (Km)	Roughness Index (IRI)	Current Condition
Malaba -Mombasa	Mau summit-Timboroa	38	3	Good
	Timboroa – Eldoret	80	2	Excellent
	Eldoret – Webuye	70	3	V. Good
	Webuye – Malaba	60	3	V. Good
	Mau summit-Gilgil	90	3	Good
	Gilgil-Rironi	89	4	Good
	Roroni-Sultan Hamud	143	2	Excellent
	Sultan Hamud - Mtito Andei	132.7	5	Fair
	Mtito Andei - Voi	95.1	6	Fair
	Voi- Bachuma Gate	54.1	8	Poor
	Bachuma Gate- Maji Ya Chumvi	52.9	2	Excellent
	Maji Ya Chumvi- Miritini	35.2	4	Good
	Miritini - Mombasa	13.938	9	Poor
	Mau Summit - Busia			
Mau Summit - Busia	Mau Summit – Kisian	150.1	2	Excellent
	Kisian - Busia	101	6	Very Poor

Source: Kenya National Highways Authority (KeNHA) data March 2017

d) Road condition in Rwanda

From figure 16 below, it can be seen that about 82 percent of the Northern Corridor road network in Rwanda is paved and in good condition whereas 18percent is in fair condition.

Figure 16: Road condition in Rwanda



The following section sections need improvement

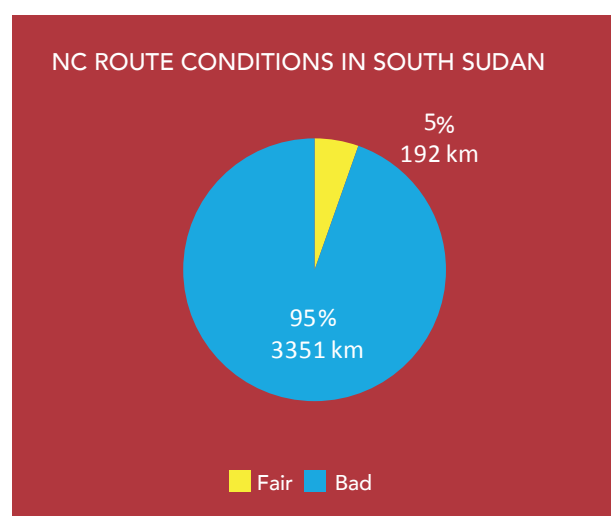
Route	Good	Bad	Fair	Length-Total
Kagitumba-Akanyaru Haut	232	116	-	348
Huye- Buhinga- Rusizi	145			145
Gatuna-Kigali	78			78
Kigali-Musanze-Rubavu	150			150
Rusizi-Bugarama	39			39
Cyanika-Musanze		25		25
Total-Km	644	141	-	785

Source: Rwanda Transport Development Agency, March 2017

e) Road condition in South Sudan

South Sudan has the most underdeveloped roads networks when compared to her peers in the Northern Corridor. However, to address this, the country has prioritized the construction of several roads and bridges in the country in the wake of increasing trade with other member states and neighboring countries. From the data in figure 17 below, a total of 3,351 km of the corridor road in South Sudan is in bad condition. This accounts for 95 percent whereas only 5 percent (192 km) of road condition is in fair state

Figure 17: Road conditions South Sudan



The table below gives status of the sections

Route / Road	Pavement type	Works Status	Planned	Road condition (Km)		
				Good	Fair	Bad
Nimule - Nesitu - Juba	Paved	Constructed	Maintenance	-	192	
Nadapal - Kapoeta - Torit - Nesitu	Gravel	Designed	Awaiting construction	-		335
Juba - Lainya - Yei - Kaya	Gravel	N/A	N/A	-		225
Yei - Maridi	Gravel	N/A	N/A	-		180
Juba - Mundri - Maridi - Yambio - Nabiapai	Gravel	N/A	N/A	-		427
Yambio - Tambura - Wau - Aweil	Gravel	N/A	N/A	-		591
Wau - Kwacjok - Agok - Mayom - Bentiu	Gravel	N/A	N/A	-		520
Juba - Bor - Ayod - Malakal	Gravel	N/A	N/A	-		614
Mundri - Rumbek - Wau	Gravel	N/A	N/A	-		459

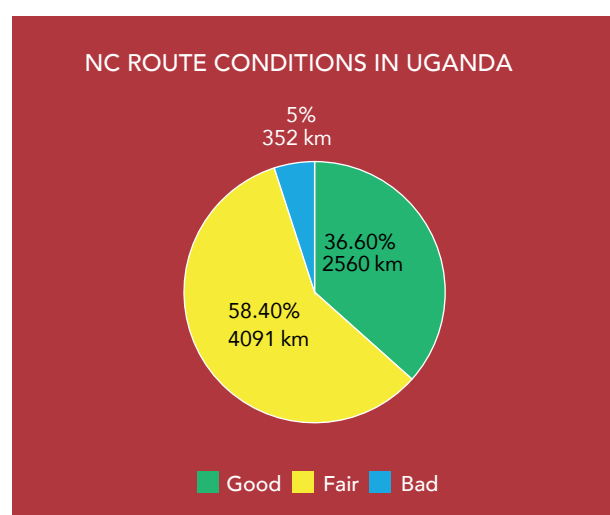
Source: South Sudan Roads Condition September 2016

South Sudan has designated a number of routes and their associated borders as part of the northern Corridor route as shown in the table above. These are Nimule – Nesitu – Juba (192km) which is fully constructed; Nadapal - Kapoeta - Torit - Nesitu (335km) design works have been completed and the road is awaiting construction; Juba – lainya – Yei - Kaya (225km); Yei – Maridi (180km). Most of the road is gravel and not in good condition.

f) Road condition in Uganda

Uganda has designated a number of routes as part of the Northern Corridor route as shown below. in March 2017, it was determined that 42 percent of the total corridor road length was in good condition, 47 percent of the total road length was in fair condition and 11 percent was in bad shape, requiring urgent rehabilitation/reconstruction works. Moreover, most sections were reported to be under construction or rehabilitation.

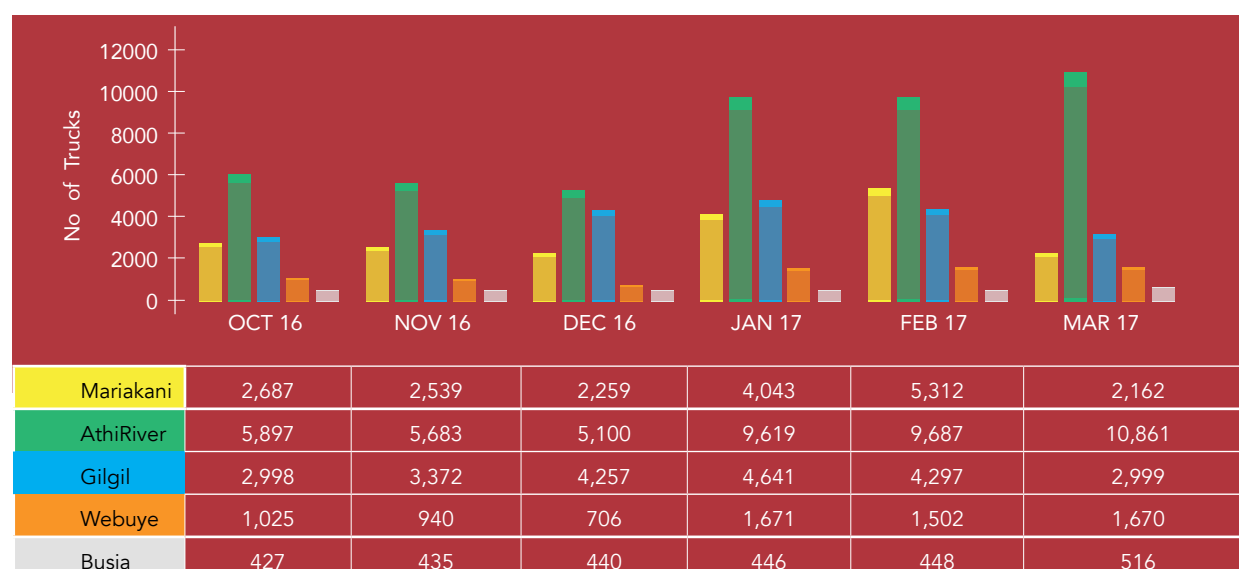
Figure 18: Road condition in Uganda



4.4 Weighbridge Traffic

This Indicator measures the average number of trucks weighed per day at a particular weighbridge along the Northern Corridor.

Figure 19: Average daily weighed traffic for Kenya Weighbridges



Source: KeNHA, Kenya October 2016 to March 2017

Figure 19, shows monthly average daily traffic weighed from October 2016 to March 2017. Athi River recorded the highest traffic over the period and it's attributable to cargo that are originating from Namanga route, Nairobi City and its environs. This traffic further reduces almost by half as registered at Gilgil weighbridge partly due to cargo being offloaded in Nairobi City which is one of the main destination centres. Busia registered the least traffic over the period under review.

The low traffic at Busia weighbridge could be due to the fact that sections of the route are under construction there by transporters opting to use the alternative route through Malaba.

4.5 Weight Compliance at the Weighbridge

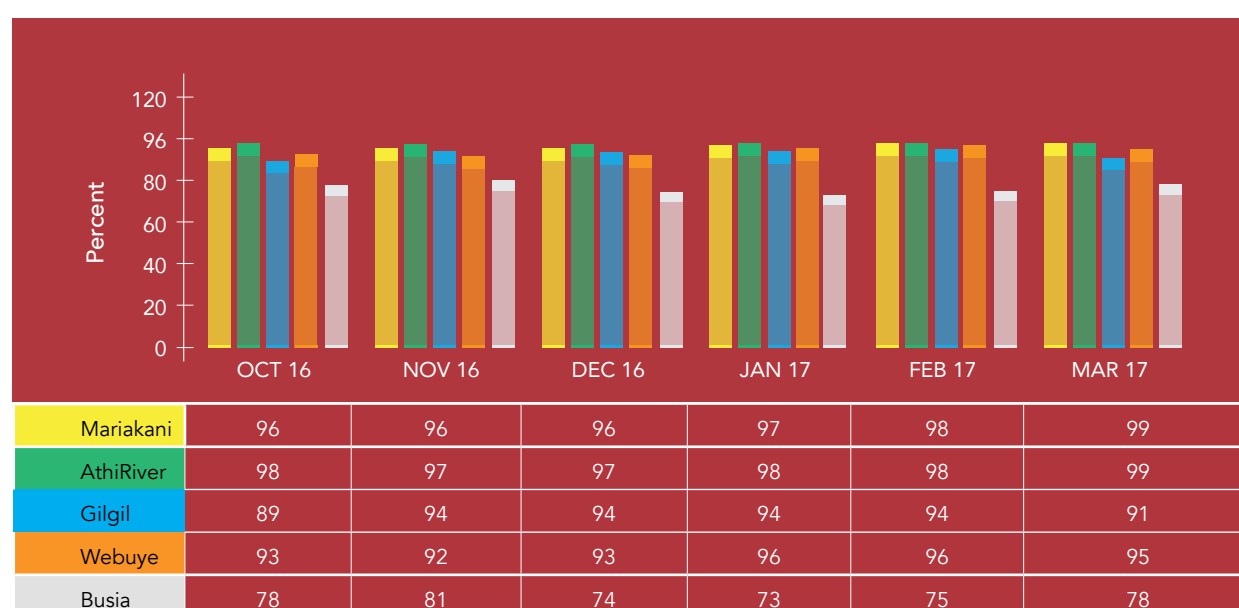
The indicator measures the percentage of trucks that comply with the gross vehicle weight and the vehicle axle load limits before and after re-distribution of cargo as stipulated in the EAC Vehicle Load Control Act.

The management of axle-loads for heavy trucks is a very important aspect of the road policy. Overloading on axle leads to faster deterioration of the road pavement while exceeding vehicle load gross limits destroys bridges. Therefore, trucks are expected to comply with the set vehicle load limits to protect the road infrastructure. Rwanda, Burundi and South Sudan are yet to operate weighbridges in enforcement of vehicle load limits.


South Sudan is to adjust to the regional vehicle load limits set through the Common Market for Eastern and Southern Africa (COMESA) and East African Community (EAC) requirements, and which is currently set at a maximum of 56 tons on GVW. Vehicle load limit enforcement is based on both Gross and Axle load limits.

From the figure below the weighbridges in Kenya recorded a steady performance in terms of compliance levels of over 90 percent performance except for Busia weighbridge whose compliance level was steady at an average of 77 percent during the period under review. Low compliance at the Busia weigh weighbridge could be attributed to most of cargo through Busia are exports originating from Kenya and the Busia weighbridge offers the first opportunity for the loaded trucks to be weighed. The vehicle load limit target of 100% compliance has not yet been attained.

Figure 20: Weight Compliance Level at weighbridges in Kenya



KeNHA, Kenya October 2016 to March 2017



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SECTION FIVE: TIME AND DELAYS

TIME AND DELAYS

The main objective of the Northern Corridor is to expedite timely movement of goods (imports and exports) between countries which in turn should increase economic integration and synergy for the social and economic wellbeing of their citizens. Costs and time related indicators are key variables in determining efficiency². Therefore, ensuring minimum congestion, less time and minimal cost improves port efficiency and significantly increases trade volumes. The inefficiencies may arise from longer time taken to complete a trade transaction and the attendant costs directly related to administrative processes during movement of goods within the domestic markets and across the borders. Both public and private sector stakeholders should commit to undertake measures that will increase efficiency of the Mombasa port and the Northern Corridor. This will provide direct benefits of trade for societies and economies at large.

This section analyses and presents some key findings on time related indicators including transit time and time taken for business processes, border crossing time and delays at major nodes. The data on transit time and delays within the Northern Corridor is obtained from electronic data sources including customs business systems; Electronic Cargo Tracking System (ECTS) and the GPS survey results.

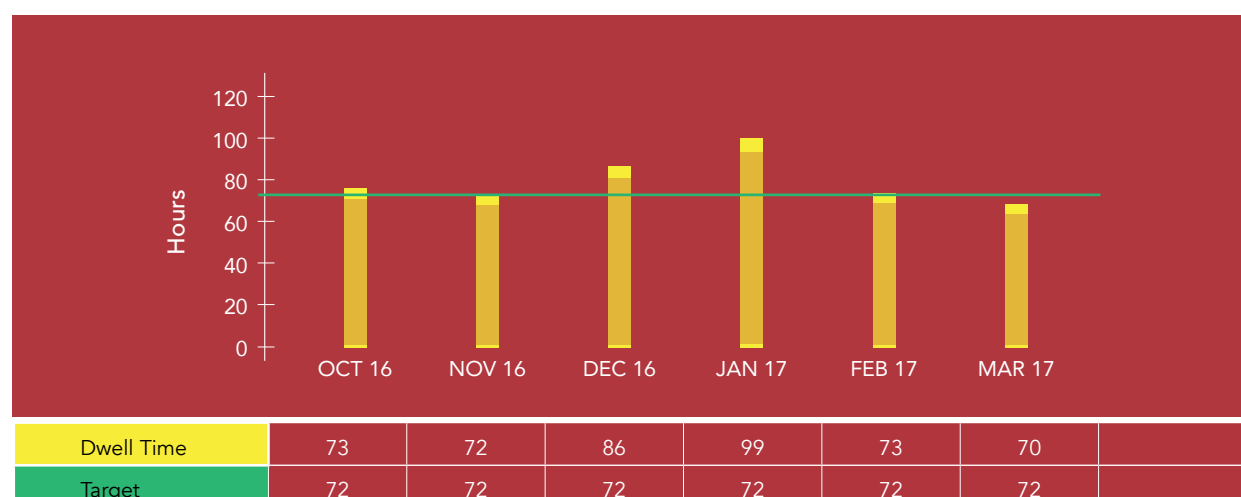
5.1 Dwell time at Mombasa port

Cargo Port Dwell Time is the measure of time that elapses from the time cargo is offloaded at the Port to the time it leaves the Port premises.

Figure 21 shows performance trend for the port of Mombasa from October 2016 to March 2017. The average containerised cargo dwell time target of 72 hours was surpassed in March 2017 which had a performance of 70 hours. Among the initiatives that have been implemented towards realization of this target include; conducting joint verification at all cargo freight stations in Mombasa, pre-clearance of cargo before docking of any vessel among others.

It can also be noted that port dwell time for January 2017 was 99 hours a significant increase from 86 hours in December 2016. Kenya Ports Authority (KPA) reported that this increase was attributable to congestion at the port which arose from several rehabilitations in and around the port hence affecting flow of traffic and cargo evacuation. In addition, the challenges associated with the introduction of Single Customs Territory for the transit containers caused by lack of full integration between ASYCUDA++, SIMBA and KWATOS which resulted in a large proportion of transit containers being cleared manually also led to poor performance.

Figure 21: Containerized cargo dwell time at the Port Oct 2016 to Mar 2017

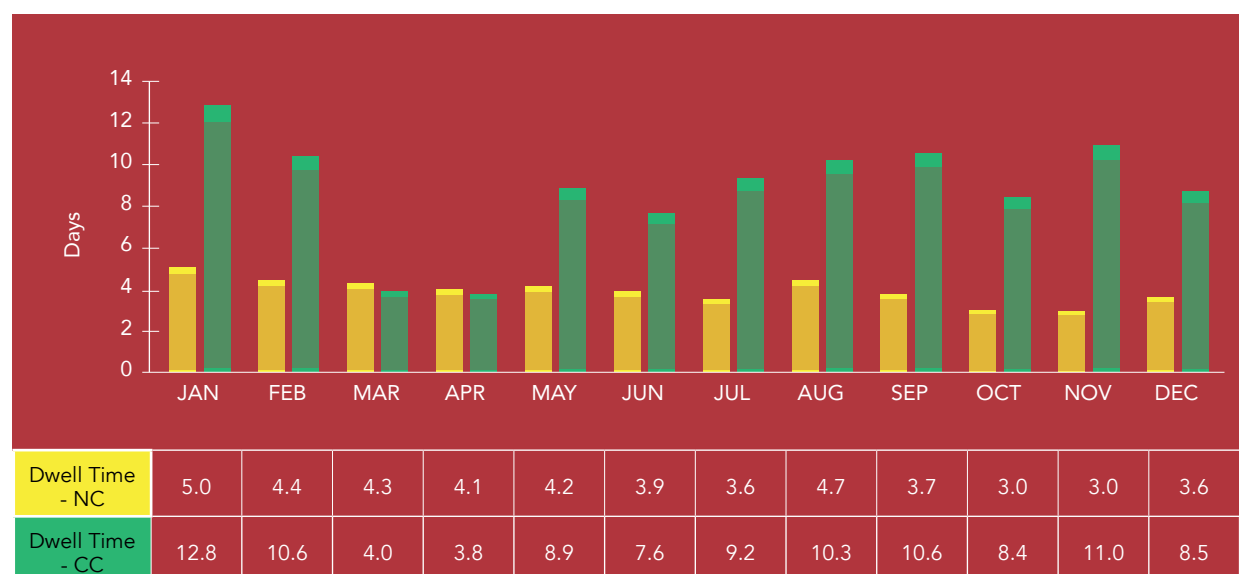


Source: KPA data October 2016 - March 2017

² Efficiency is providing desired outcomes/ outputs with the minimum use of resources

Figure 22 shows a comparison between Dar es Salaam Port in Central Corridor and Mombasa Port in Northern Corridor. The average container dwell time for transit cargo for Northern Corridor shows a steady decrease in 2016 whereas the trend for Central Corridor is inconsistent. The cargo dwell time target for Central Corridor is 5 days while for the Northern Corridor is 3 days. This still calls for concerted efforts to be channelled towards reducing the container dwell time for both Corridors.

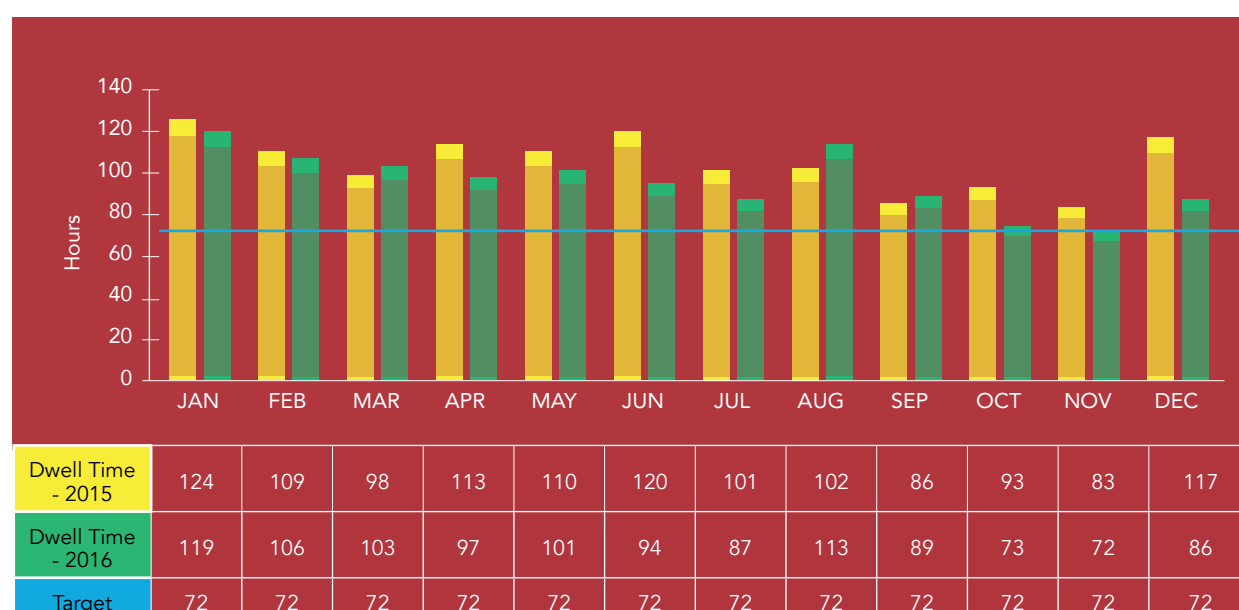
Figure 22: Dwell time comparison for Central and Northern Corridors (2016)



Source: KPA and Tanzania Ports Authority data 2016

The figure below shows a significant decrease in cargo dwell time at Mombasa port when comparing 2015 and 2016; averages recorded are 104 hours and 95 hours respectively; which shows an average of 9 percent change.

Figure 23: Containerized cargo dwell time at Mombasa Port (2015, 2016)



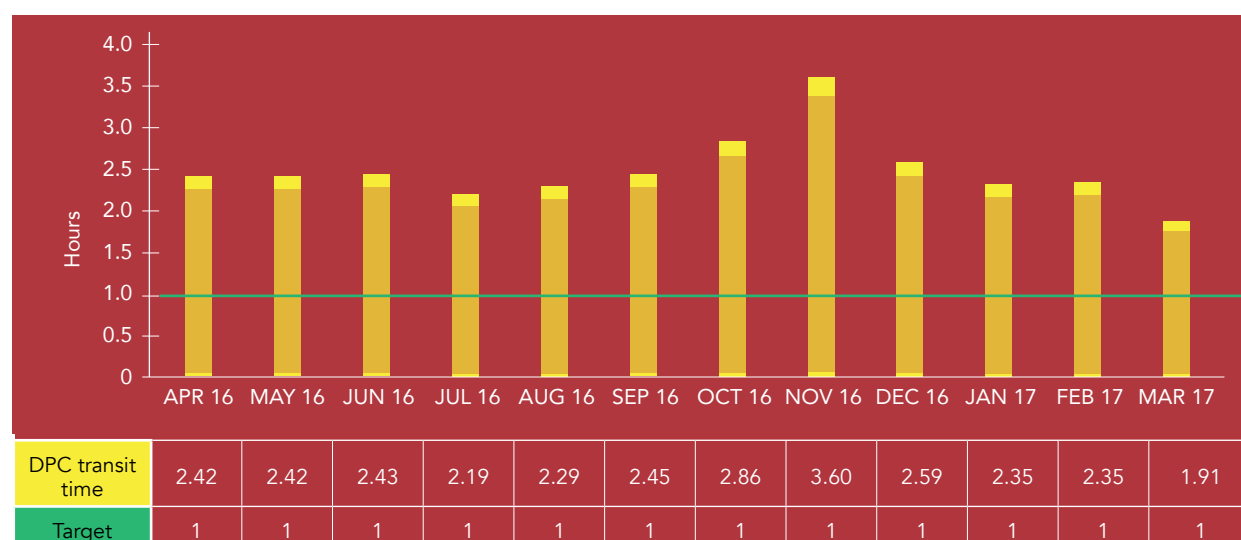
Source: KPA data January 2015- December 2016

5.2 Time for customs clearance at the DPC

This refers to the time taken by Customs to pass an entry lodged by a clearing agent. This time contributes to the total port dwell time.

The data shows a wavering trend in performance from April 2016 to March 2017. The performance was erratic between September and November 2016 after which it stabilizes up to March 2017. Delays in customs clearance at DPC during this period is partly due to the SIMBA system instability; documents awaiting processing in between the shifts and the quality of declaration by the relevant agents and other stakeholders. This time has a target time of 1 hour. It is evident that more efforts are needed to be implemented for speeding-up clearance of cargo processes by respective stakeholders involved to realize the target of one hour.

Figure 24: Time Taken at the Document Processing Centre (DPC)



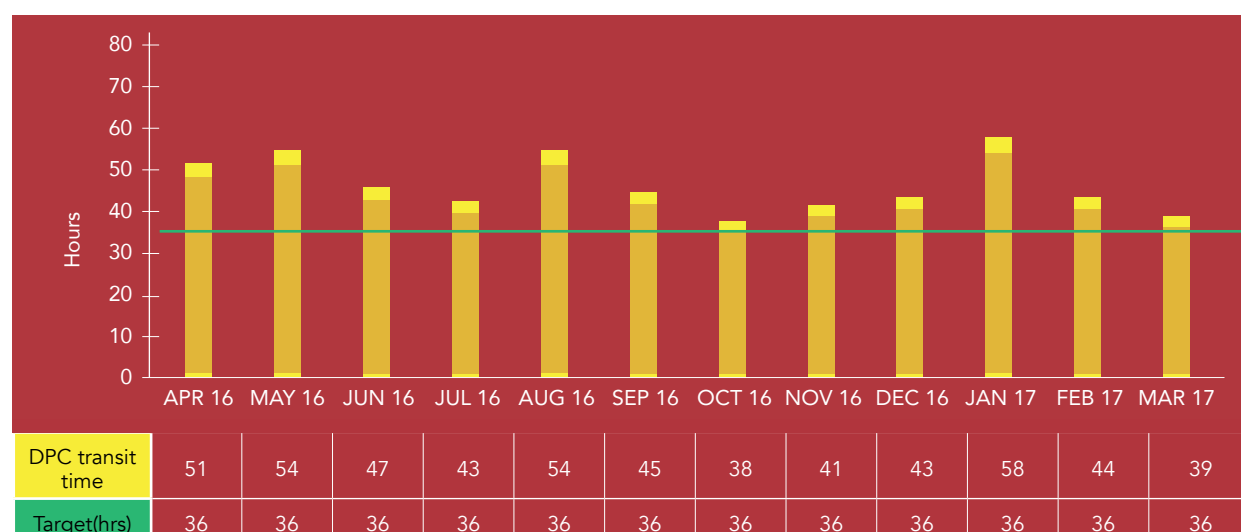
Source: KPA data

5.3 Time taken at Mombasa one stop center (OSC)

One Stop Centre Clearance Time measures the average time between passing of customs entry which has been registered and issuance of release order.

Figure 25 below illustrates the trend for time taken at Mombasa One Stop Centre (OSC). Time taken at OCS significantly decreased from 51 hours in April 2016 to 39 hours in March 2017. Despite the positive performance, the indicator did not meet the 36 hrs target. This could be partly attributed to uncoordinated joint verification of cargo and late submission of documents by clearing agents at the OSC thus contributing to delays.

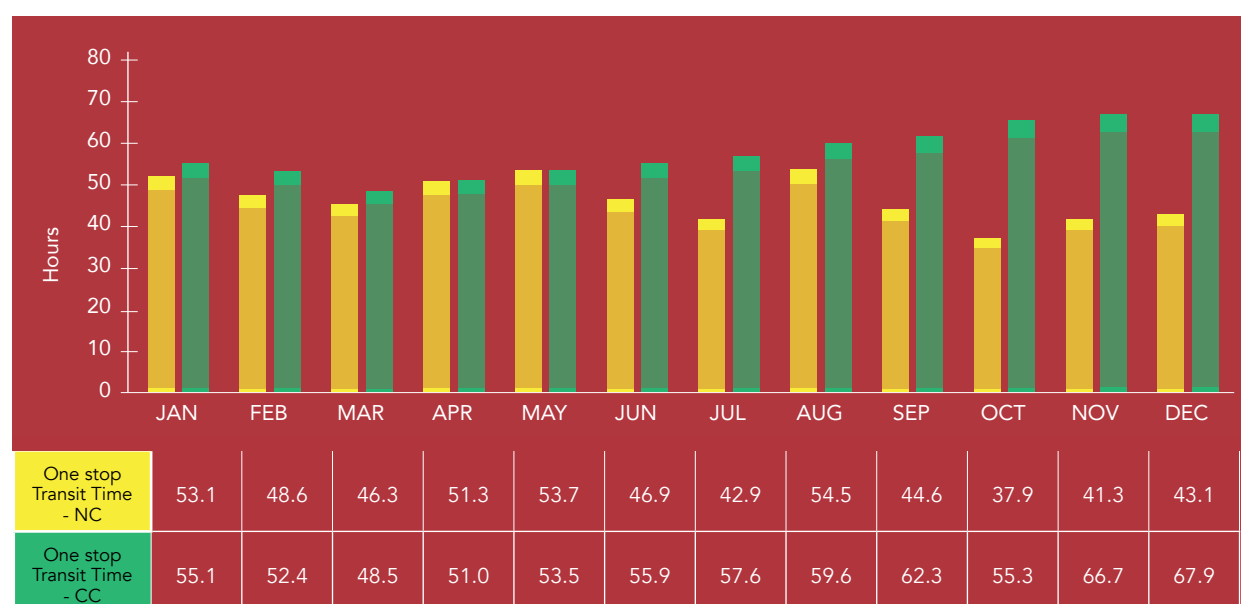
Figure 25: Time taken at One Stop Centre



Source: KRA data Apr2016-March 2017

Figure 26 shows a comparison in time taken at the one stop centre i.e. the average time between passing of a registered customs entry and issuance of release order between Central and Northern Corridor. The graph shows that the trend for Central Corridor is slightly increasing from April to December 2016 whereas the trend for Northern Corridor seems lower but not consistent. The report recommends a thorough survey to be done to establish the causes of delays.

Figure 26: Time taken at one stop centre comparison for Central and Northern Corridors (2016)

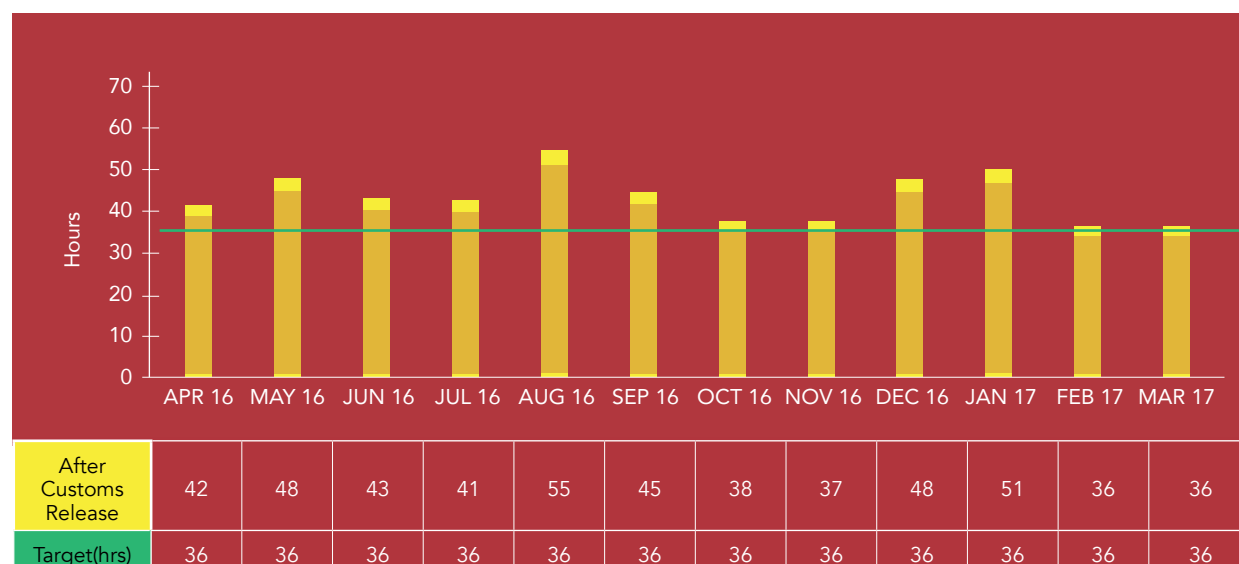


Source: KRA and CCTFA 2016

5.4 Delay after customs release

The indicator refers to the time that elapses between customs release and evacuation of cargo from the port.

Figure 27: Delay after Custom Release



The delay after customs release recorded 36 hours in March 2017 having decreased from 42 hours in April 2016 as illustrated in the figure above. Analysis show that release time target is about to be met as committed in the port charter suggesting there has been an improvement in the elimination of bottlenecks that cause delay in evacuation of cargo from the port after release in the past one year. The activities aimed at improving this indicator are yielding desired results. Some of the activities aimed at improving performance of this indicator that have been implemented include: Automating gate clearance procedures, dedicating special gates to Container Freight Stations (CFSs), creating more exit lanes at the gates, improvement of transport infrastructure around the port and ensuring 24 hour operations.

5.5 Transit Time in Kenya

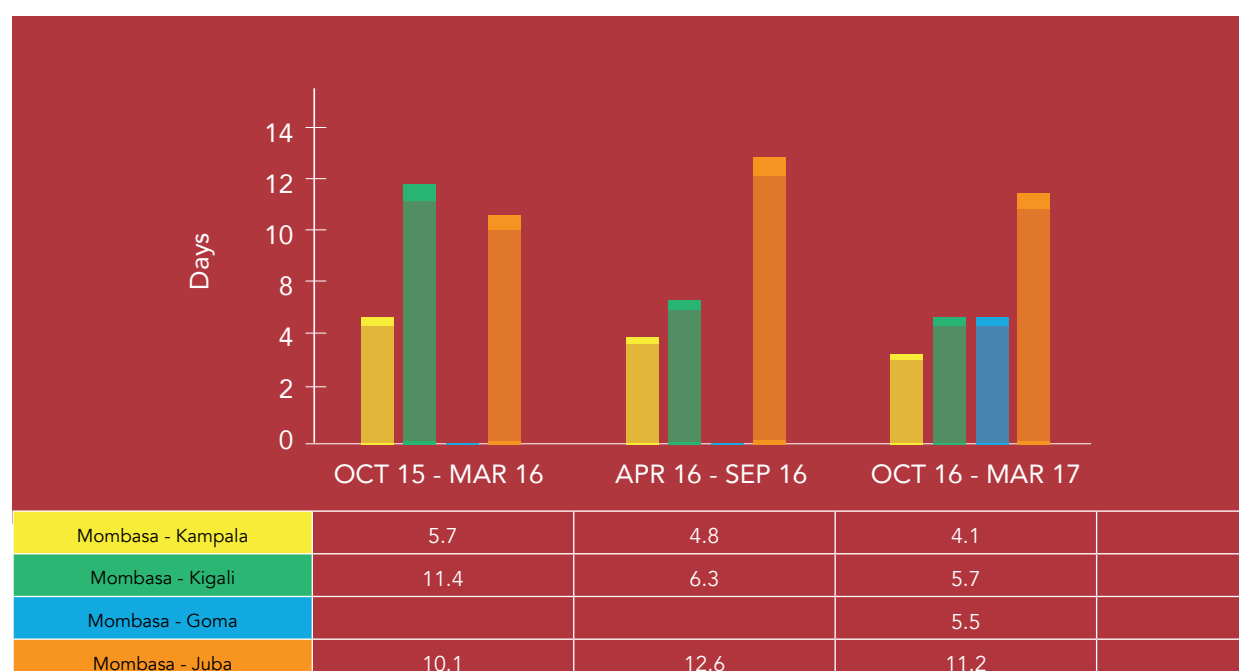
a) Global Positions System (GPS) data

GPS is geo-zoned from Changamwe in Mombasa to respective destinations. Transit time is key indicator of efficiency on the Corridor. Figure 28 shows the transit time from Mombasa to other destinations along the Northern Corridor as captured through Global Positions System devices that are installed on selected sample of trucks plying the Corridor. The GPS tracks time from the when the truck leaves Mombasa up to arrival at the various destinations.

The data shows that transit time from Mombasa to Kigali and Juba declined during the period from October, 2016 to March 2017. The performance can be further improved given that the minimum recorded for the period were, 40 hours, 60 hours and 105 hours for Kampala, Kigali, and Juba respectively

This transport time is greatly affected by stoppages along the Corridor. Some of the main stoppage reasons include; drivers' personal reasons, police checks, weighbridges, company checks, road conditions, custom checks among other reasons that are tracked under the section on road survey in this report. Some of the measures that have been put in place to minimize stoppages and improve transit time include the implementation of the high speed weigh in motion (HSWIM) weigh bridges, one stop border points, establishment of the Northern Corridor Transit Patrol Unit among others.

Figure 28: Trends in road transit time from Mombasa to Various destinations from November 2016- March 2017

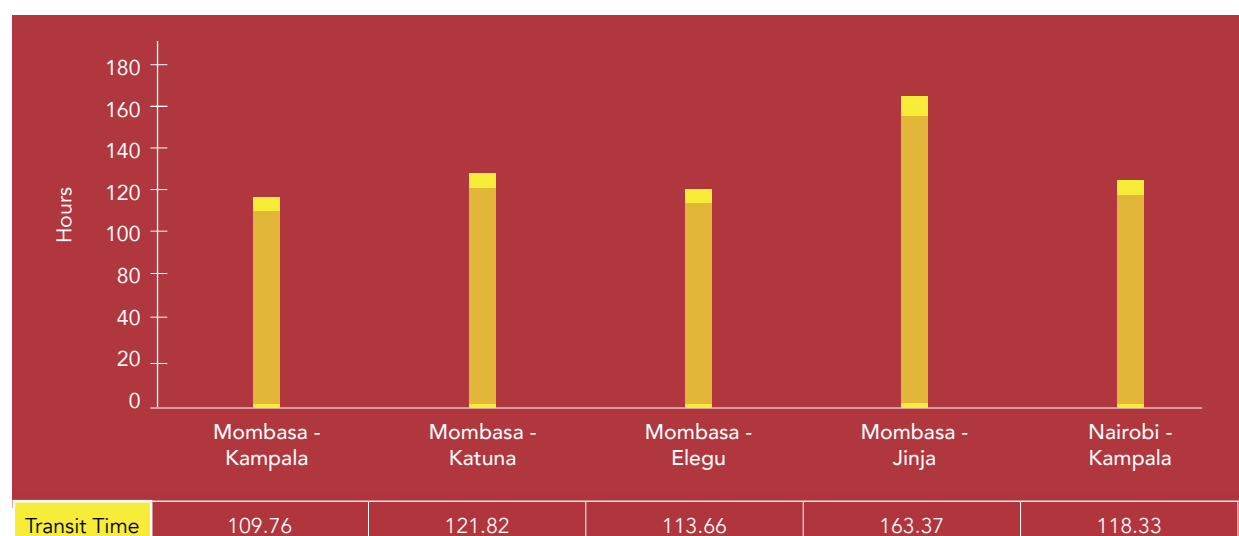


Source: GPS survey

The Regional electronic cargo tracking system for February and March, 2017 shows that the transit time from Mombasa to Kampala, Katuna and Elegu was 4.6, 5.0 and 4.7 days respectively .

Transit time from Mombasa to Jinja and from Embakasi ICD in Nairobi to Kampala was higher in comparison with destinations with longer distances such as Mombasa-Kampala. This could be attributed to longer time to clear and disarm the ECTS for trucks destined to ICDs in the cities. It was observed that whereas border stations work 24/7, inland stations where cargo is deposited pending clearance do not operate 24/7.

Figure 29: Transit times form Mombasa and Nairobi using RECTs



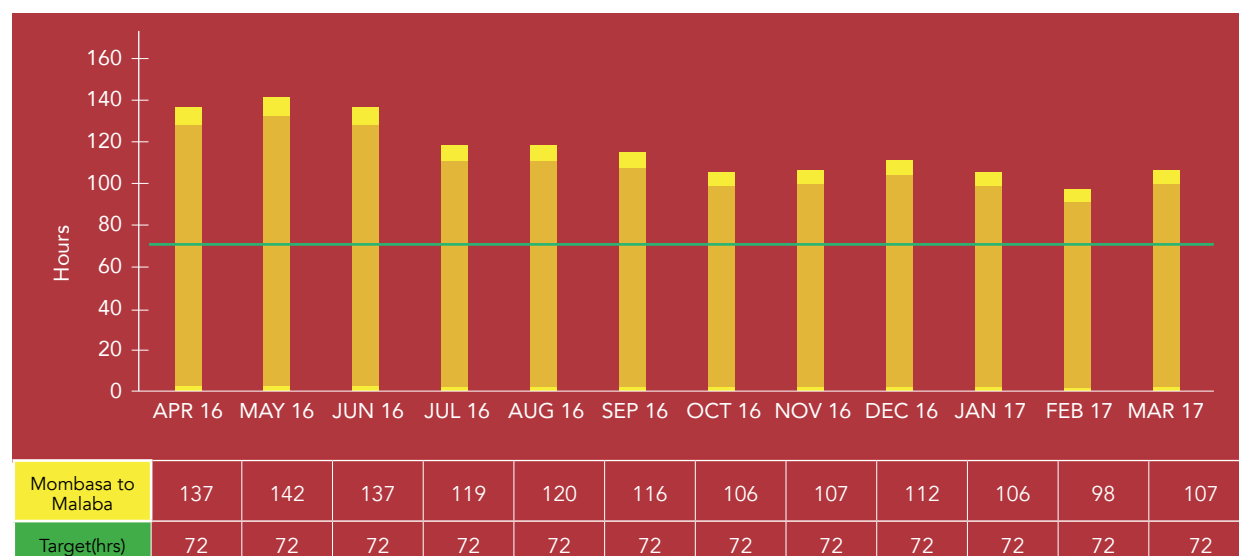
Source: RECTS, Feb-March, 2017

a) Transit Time using KRA SIMBA System Data

This measures the period from the time release order is issued by customs at the Port of Mombasa to the time the export certificate is generated by KRA after cargo crosses the Kenya- Uganda border points of Malaba and Busia. The distance from Mombasa - Malaba is 933 kilometres and 947 kilometres to Busia.

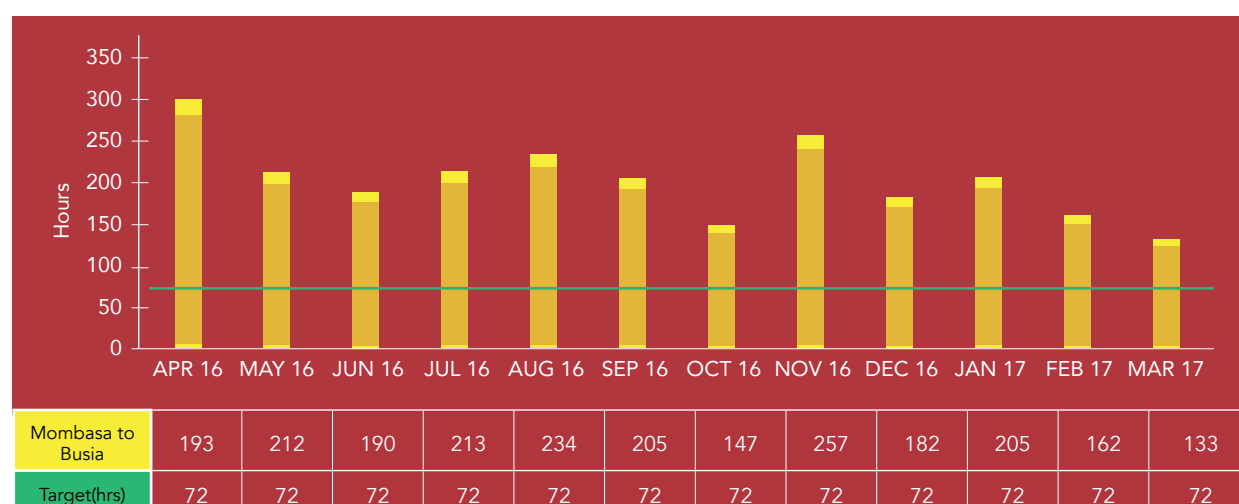
Figure 30 and 31 shows the transit time between Mombasa to Malaba and Mombasa to Busia.

Figure 30: Transit Time from Mombasa to Malaba (hrs.)



Source: KRA (SIMBA system), April 2016 to March 2017

Figure 31: Transit time from Mombasa through Busia



Source: KRA (SIMBA system), April 2016 to March 2017

The target transit time for cargo from Mombasa to Malaba border point is 72 hours. Figure 28 shows the trend in transit time on this section of the Northern Corridor from April 2016 to March 2017. The data shows that transit has improved over the period under review moving from a high of 142 hours in May 2016 to a low of 98 hours in February 2017. Similarly, average transit time from this trend shows improvement in time taken to move cargo from Mombasa to Busia improved from 193 hours in April 2016 to 133 hours in March 2017 albeit with fluctuations peaking at 257 hours in December 2016 the data shows that transit time has declined over the period under review with the Malaba route showing stable performance compared to the Busia route. Both routes are still far from attaining the 72 hours' target.

There is a big variation between the transit time recorded using the GPS data and that using the Customs Systems data. This is because the former measures the actual time when the trucks commence their journeys to the actual time when they arrive at the destination point. Whereas the Customs Systems data is from the time a release order is issued to the time an export certificate is generated. There are delays by truckers to commence their journey after being released to proceed on transit on one hand and on the other hand there are delays for Customs to generate export certificates after goods have exited the country.

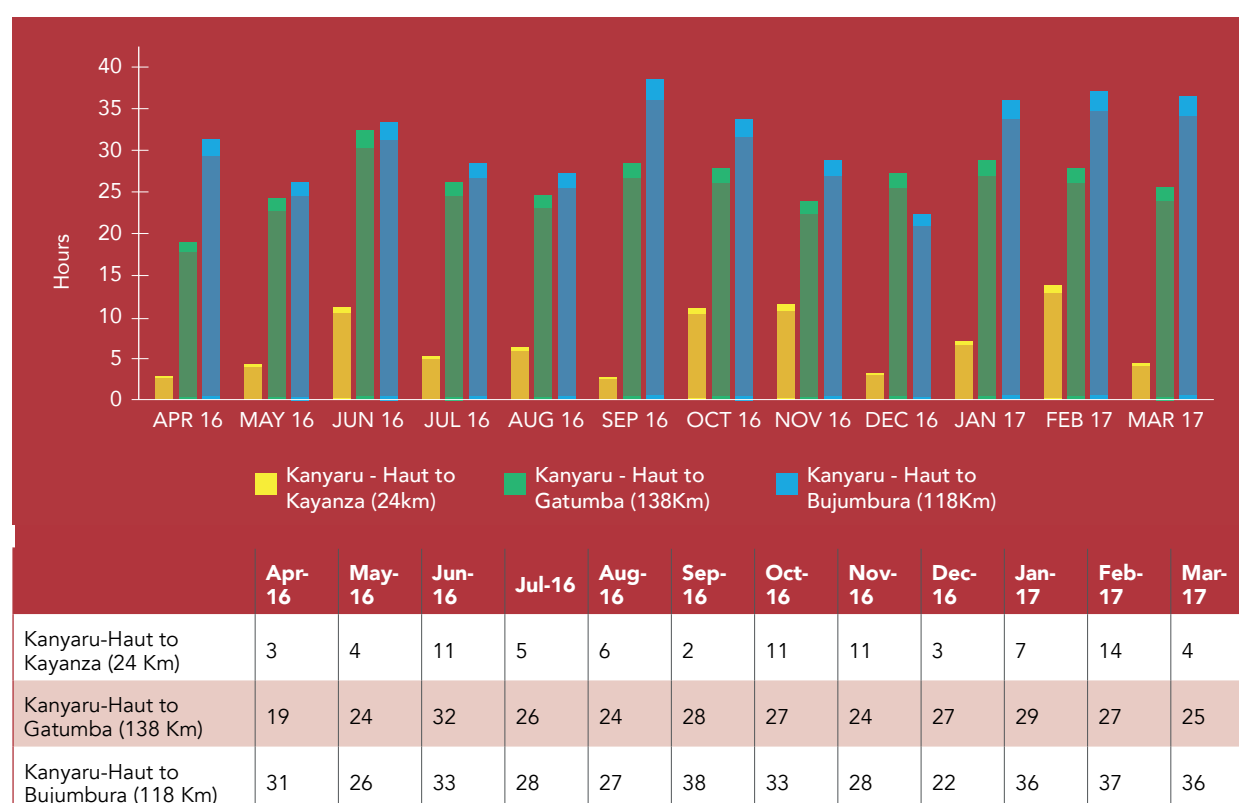
Initiatives to eliminate barriers to free movement along the corridor will remain a key agenda. This includes addressing the problem of traffic congestion in urban areas along the Northern Corridor including the port city of Mombasa. The construction of bypasses in Nairobi, Eldoret, Kisumu, Kampala and Mukono, dualling of part of the Nairobi-Mombasa road, Kampala – Jinja road, Kampala – Mpigi and Kampala – Wobulenzi, construction of interchanges along the Corridor are some of the steps that will address the barriers associated with inadequate infrastructure and rationalization of the number and standardization of speed humps constructed along the Corridor.

Moreover, efforts to minimize the number of checkpoints and time taken at these checkpoints are necessary to reduce time taken to move cargo along the Corridor. According to the East Africa Logistics Performance Survey, 2014, there were 1.5 checkpoints for every hundred kilometres translating to about 14 checkpoints on each of the Corridors arteries.

5.6 Transit Time in Burundi

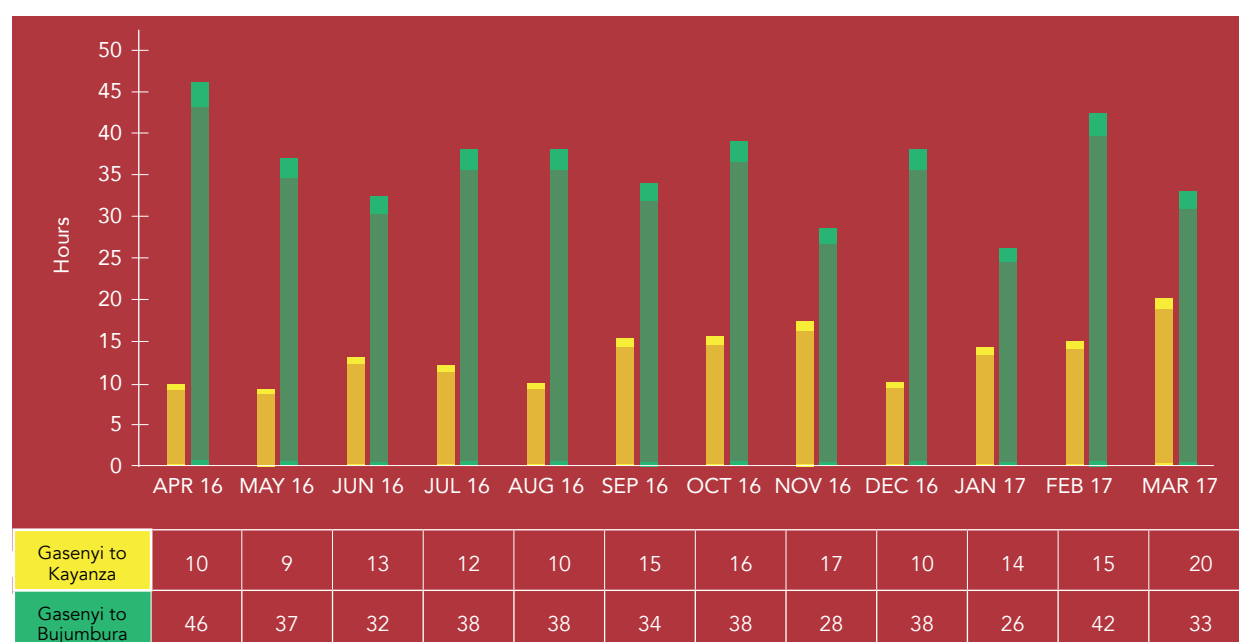
This report tracks transit time from Kanyaru- Haut to three main destinations: Bujumbura (118 Kms), Kayanza (24 Kms) and Gatumba (138Kms). The average transit time for the Kanyaru- Haut to Kayanza route was 6.17 hours, while Gatumba was 26 hours and Bujumbura was 31.25 hours. This shows that transit time to Bujumbura was more than to Gatumba despite the fact it is a shorter distance. This is a result of the delays in receipt of trucks into the customs areas at destination and retirement of transit bonds.

Figure 32: Transit Time from Kanyaru- Haut to Bujumbura, Kayanza and Gatumba



Source: OBR, April 2016 to March, 2017

Figure 33: Transit Time from Gasenyi to Bujumbura and Kayanza (hrs)



5.7 Transit Time in DRC

The report tracks transit time from the border point of Bunagana to Goma. This route has a distance of 82.9 Km. It is noted that the observations on this route were quite few with the months of December 2016 and January 2017 only registering one observation. This means the average figures may not be adequate for conclusive analysis. Nonetheless, available data shows very high transit time with a minimum of 84.4 Hours and a maximum of 216.7 hours. Literally this means trucks use a minimum of three and a half days to cover a distance of 82.9 kilometres on the other hand it may reflect the delays in clearance of cargo once received in DRC.

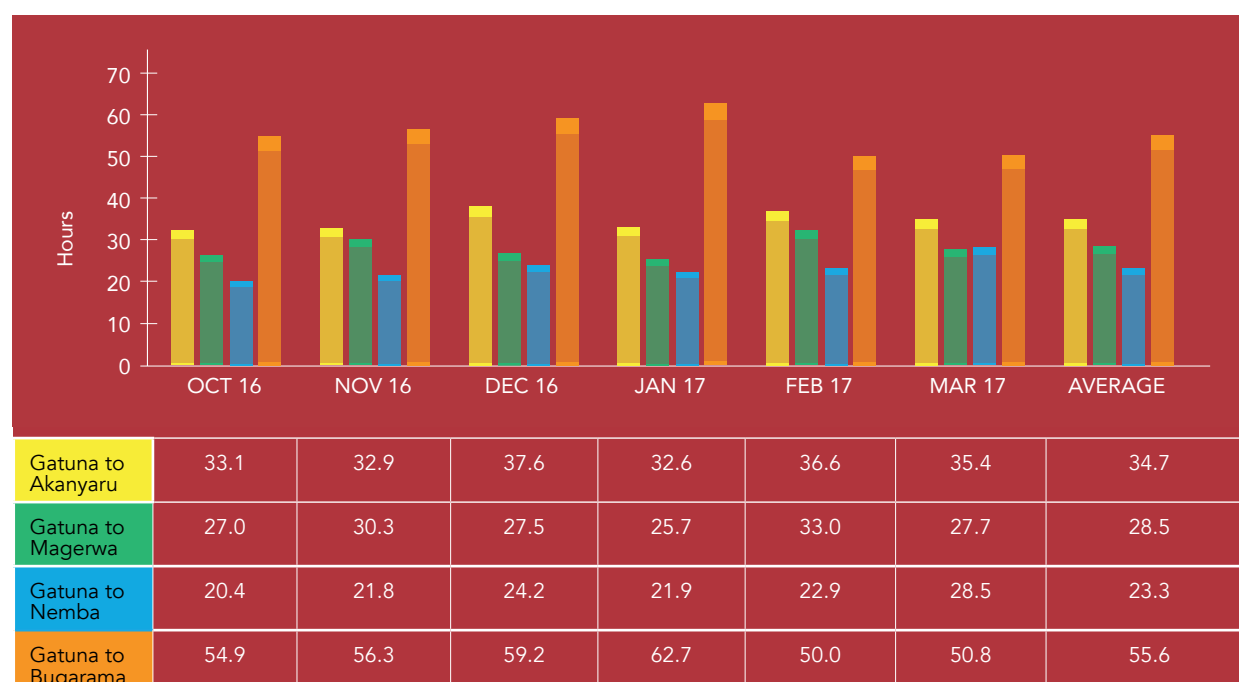
BUREAU_ENTREE	BUR_DEST	Month	Year	Avg Transit Time	Count
BUNAGANA	GOMA	October	2016	84.49	5
BUNAGANA	GOMA	November	2016	140.61	2
BUNAGANA	GOMA	December	2016	122.58	1
BUNAGANA	GOMA	January	2017	194.75	1
BUNAGANA	GOMA	February	2017	216.69	3
BUNAGANA	GOMA	March	2017	156.01	4

5.8 Transit Time in Rwanda

The section of the Northern Corridor from Kigali to Mombasa covers a total distance of 1,685km. There are four destinations from the main border point of Gatuna. These are Akanyaru (238 km), Magerwa (81km), Nemba (150km) and Bugarama Haut (410 Km). Figure 34 shows the average time taken from Gatuna to the respective destinations over the period October 2016 to March 2017. The average time taken in hours was 34.7 hours to Akanyaru, 28.5 hours to Magerwa, 23.3 hours to Nemba and 55.6 hours to Bugarama.

It can be noted that Gatuna – Magerwa is the slowest route averaging 2.8 Kms per hour compared to Gatuna – Bugarama that averaged 7.3 Kms per hour over the review period. Magerwa is Rwanda's main handling facility and is located in the centre of the city this could explain the slower speed as truck go through clearance.

Figure 34: Transit time in Rwanda



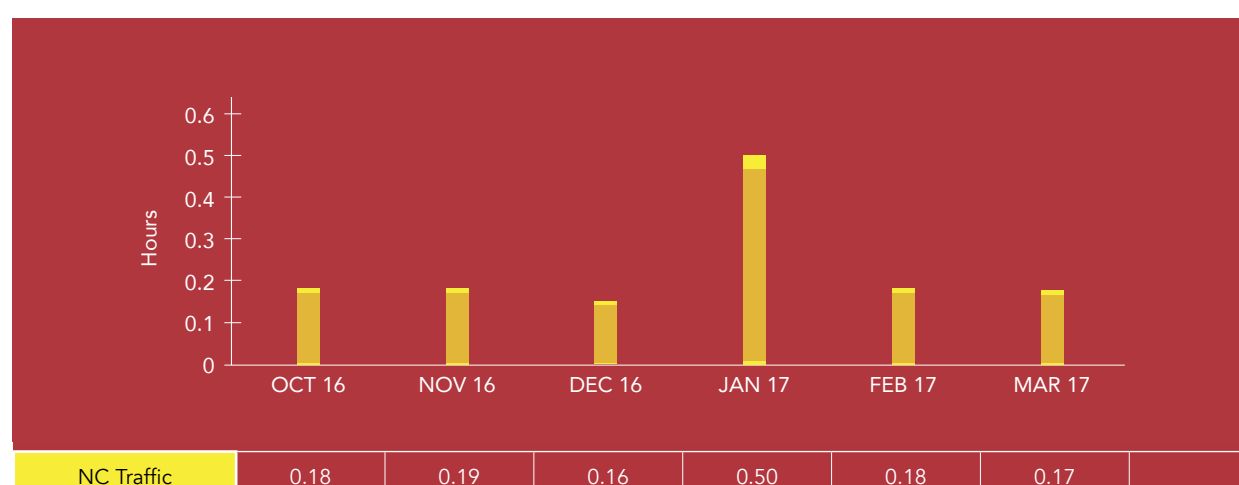
Source: (RRA, October 2016 – March 2017)

5.9 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 MAGERWA gate to departure of the truck from the terminal exit gate after offloading the container/cargo in Magerwa.

Figure 35 shows the cargo dwell time within Magerwa for cargo from Gatuna originating from the Northern Corridor.

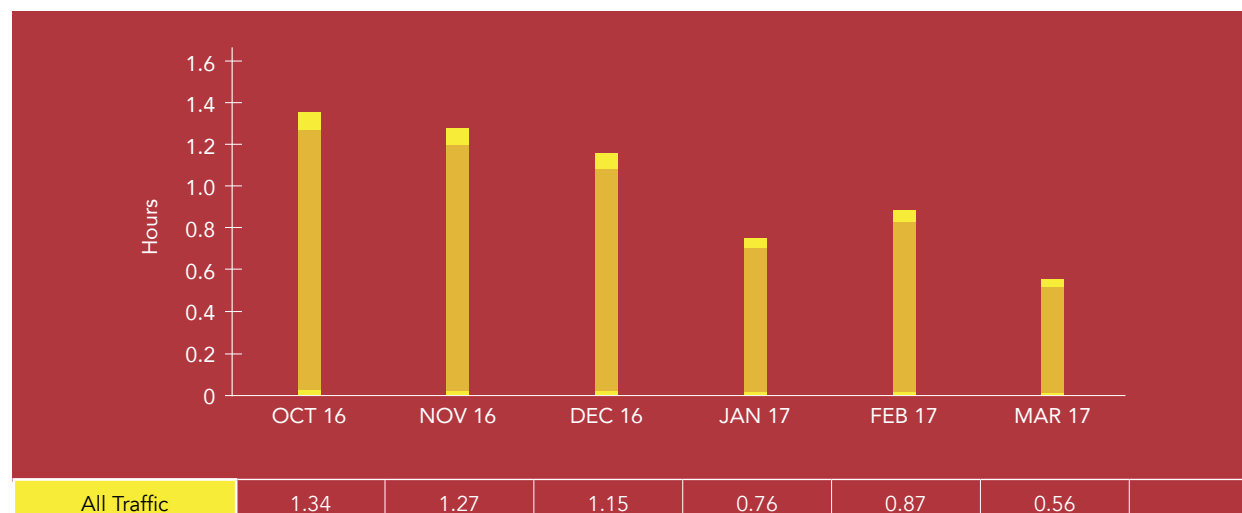
Figure 35: Dwell time within Magerwa in Hours



Source: (RRA, October 2016 – March 2017)

In addition, the report also analysed the dwell time of all traffic including that originating from other routes other than the Northern Corridor. Figure 36 shows the dwell time within Magerwa in hours for all traffic. The data shows that dwell time decreased over the review period from 1.34 hours in October 2016 to 0.56 hours in March 2017. This indicates considerable achievement in reduction of dwell time.

Figure 36: Dwell time within Magerwa in Hours for all traffic



Source: (RRA, October 2016 – March 2017)

5.10 Transit Time in Uganda


Transits time in Uganda; this indicator tracks the time taken to move cargo from the two border points of Malaba and Busia to the various destinations as shown in the figure below.

Figure 37 below shows the transit times in Uganda using the electronic cargo tracking system. Not all goods are tracked using ECTS. The time taken varies depending on the destinations. From the analysis, Malaba- Kampala takes longer despite the Short distance compared to other destinations. This ranged between an average of 46 to 73 hours. Delays could be associated with acknowledgement of receipt of cargo and clearance at the final destination. It takes longer using Busia-Katuna (630km) which is a shorter route than Malaba - Katuna (668km). Similarly, Malaba-Mpondwe route takes shorter time despite longer distance than Busia - Mpondwe. Delays are attributed to the delays in acknowledging arrival/receipt of trucks at customs destination in the Customs Business Systems as well as infrastructure bottlenecks along the way.

Figure 37: Transit time in Uganda using electronic cargo tracking system



Source: URA, customs ECTS data



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SECTION SIX: INTRA-REGIONAL TRADE

INTRA-REGIONAL TRADE

Growth of intra-regional trade is recognized as one of the key factors towards achieving greater economic growth and regional integration for the Northern Corridor Member States. Therefore, enhancing trade among the six Member States forms the core aim of integration process. This section analyses the potential trade impact of the six Member States from which policy recommendations will be provided to capitalize on the full potential of Northern Corridor trade route in the area of intraregional trade. The data used was obtained mainly from institutions in charge of national statistics in every Member State. Some provided data on both informal and formal trade while others provided only for formal trade.

6.1 Trade between Burundi and Other NC Member States

Over the last decade, Burundi has experienced a problem of trade deficit. Being a land locked country it faces economic challenges including high transport costs, narrow export base among others. Table 17 shows a summary of the imports and exports between Burundi and other Members States of the Northern Corridor.

In 2016, total value of imports was \$109.7 million and a total of \$51.6 million for exports. The main exports are led by Coffee which represents 26.7 percent of the total exports from Burundi, followed by Tea, which accounts for 20.6 percent. Other top exportable items from the country are gold, wheat flour and beer. The top export destinations of Burundi are DRC, Kenya and Uganda. Major importable products of the country are foodstuffs, refined petroleum products and capital goods. Burundi's main imports partners are Kenya and Uganda.

Trade volumes for both exports and imports have been fluctuating over the months in 2016. The drop is notable from August to December in 2016.

Table 17: Summary of formal Trade (USD), Burundi

EXPORTS TO (USD):				
Month	DRC	KENYA	RWANDA	UGANDA
Jan-16	2,624,288.0	1,685,237.0	841,248.0	97,457.0
Feb-16	3,048,636.0	1,637,831.0	757,250.0	247,253.0
Mar-16	3,096,639.0	1,540,178.0	594,529.0	419,066.0
Apr-16	2,840,134.0	1,943,924.0	371,490.0	210,352.0
May-16	2,147,854.0	1,436,105.0	658,955.0	621,768.0
Jun-16	2,360,550.0	1,061,168.0	431,365.0	400,565.0
Jul-16	2,369,685.0	1,131,508.0	516,907.0	138,631.0
Aug-16	1,774,153.0	514,251.0	420,619.0	377,569.0
Sep-16	1,768,846.0	589,433.0	319,826.0	270,474.0
Oct-16	1,735,590.0	451,805.0	294,226.0	405,442.0
Nov-16	1,650,575.0	1,175,496.0	191,815.0	354,565.0
Dec-16	2,221,988.0	1,302,785.0	223,995.0	341,870.0
TOTAL	27,638,939.0	14,469,723.0	5,622,225.0	3,885,011.0

IMPORTS FROM (USD):				
	DRC	KENYA	RWANDA	UGANDA
Jan-16	249,989	4,174,908	462,620	2,701,100
Feb-16	278,257	4,094,467	566,350	6,204,771
Mar-16	346,852	4,558,232	1,837,910	3,365,160
Apr-16	285,013	3,638,675	837,515	2,749,605
May-16	344,486	4,213,611	1,111,085	3,850,563
Jun-16	387,330	3,703,631	2,961,882	2,736,455
Jul-16	544,988	4,914,429	1,552,678	2,937,945
Aug-16	629,301	4,981,369	757,067	4,279,840
Sep-16	343,836	3,266,426	758,706	5,003,309
Oct-16	135,427	3,243,517	1,195,291	4,466,630
Nov-16	146,835	3,310,233	678,280	3,743,607
Dec-16	75,973	3,660,631	309,849	3,112,517
TOTAL	3,768,287	47,760,130	13,029,232	45,151,502

Source: Burundi Bureau of Statistics. Jan-Dec 2016: 1 dollar = 1654.6 Francs Burundian as the exchange rate in 2016

DRC had the largest trading volume with Uganda with a total of USD 406,040,214 (47.6%) in imports and USD 6,463,568 (31%) in exports over the period running from January 2016 to February 2017, the next largest trading partner is Rwanda with 26% imports and 41.4% exports followed by Kenya with 23.4 % imports and 1% exports and then Burundi with 3% imports and 18% exports. Considering trade in the region, DRC is a net importer. This could be explained by the reason that the main export commodities of DRC are minerals which find market in countries outside the Northern Corridor Member's States.

Table 18: Summary of formal Trade (USD), DRC

EXPORTS TO (USD):				
Country Name	BURUNDI	KENYA	RWANDA	UGANDA
Jan	249,989	154,962	449,376	637,076
Feb	278,257	122,905	457,465	441,074
Mar	346,852	44,319	507,971	364,390
Apr	285,013	60,122	751,510	191,386
May	344,486	119,137	818,897	284,256
Jun	387,330	101,674	868,244	367,904
Jul	544,988	180,743	551,107	508,626
Aug	629,301	254,521	676,212	288,712
Sep	343,836	-	737,118	560,220
Oct	135,427	115,018	678,625	664,024
Nov	146,835	120,504	587,167	453,906
Dec	75,973	415,186	510,943	303,146
Jan-17	-	35,203	511,726	412,372
Feb-17	-	241,176	525,103	986,476
TOTAL	3,768,287	1,965,470	8,631,464	6,463,568

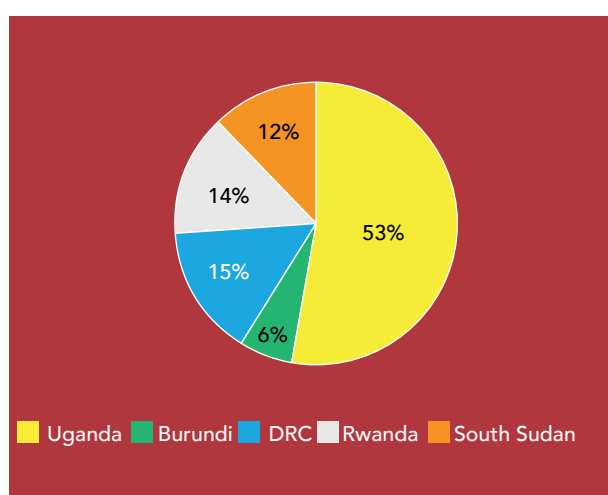
IMPORTS FROM (USD)				
Country Name	BURUNDI	KENYA	RWANDA	UGANDA
Jan	2,624,288	15,384,261	12,663,153	30,699,334
Feb	3,048,636	15,339,939	14,071,379	20,961,204
Mar	3,096,639	15,848,636	16,808,002	26,361,970
Apr	2,840,134	16,969,665	14,660,099	26,314,614
May	2,147,854	14,986,754	15,792,464	29,687,048
Jun	2,360,550	17,161,016	1,028,974	29,210,056
Jul	2,369,685	14,790,359	18,223,926	30,664,182
Aug	1,774,153	20,050,826	18,231,084	35,666,598
Sep	1,768,846	-	17,197,102	33,938,460
Oct	1,735,590	16,373,353	16,927,973	30,472,856
Nov	1,650,575	15,523,740	18,525,394	31,174,392
Dec	2,221,988	11,627,588	19,148,401	28,701,976
Jan-17	-	11,230,116	18,472,885	25,124,022
Feb-17	-	14,450,005	18,423,306	27,063,502
TOTAL	27,638,939	199,736,258	220,174,143	406,040,214

6.2 Trade between Kenya and Other NC Member States

Kenya posted total value of approximately 1.1 trillion USD (81%) for exports with an average of 97 million USD per month in the year 2016. Import value was recorded as USD 267,381,533 (19%) with an average of 22 million USD per month during the same period. This shows that Kenya is a net exporter to the Northern Corridor Region.

The largest destination for Kenya's exports is Uganda (53%), DRC (15%) and Rwanda (14%) as shown in the figure below. Kenya's major exports include: tea, coffee, horticultural products and sisal & sisal products. Other commodities include fish and fish products, nuts, dairy products, processed foods among others.

Figure 38: Share of Kenya Exports



Kenya major imports include: tobacco, machinery and transportation equipment, petroleum products, oils, motor vehicles, iron and steel, agricultural products, paper and paper products, pharmaceuticals, fertilizer, construction materials. Main import partner is Uganda accounting for over 90 percent of Kenya's total imports among member states.

Figure 39: Share of Kenya Imports

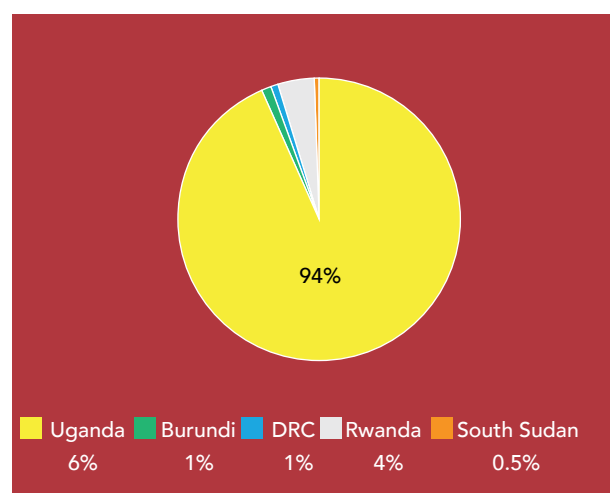


Table 19 below gives a summary of imports and exports between Kenya and other Northern Corridor Member States for the period January 2016 to February 2017.

Table 19: Summary of formal Exports (USD), January 2016 to Feb 2017

EXPORTS TO (USD**):					
Country Name	BURUNDI	DRC	RWANDA	SOUTH SUDAN	UGANDA
Jan	6,804,623	15,384,261	13,532,109	12,151,999	46,435,583
Feb	7,412,488	15,339,939	12,894,234	11,969,930	47,069,478
Mar	6,218,746	15,848,636	15,105,507	31,726,665	62,682,603
Apr	5,166,762	16,969,665	15,927,912	11,358,110	63,429,749
May	5,093,835	14,986,754	12,213,938	16,882,164	42,205,833
Jun	5,495,387	17,161,016	15,993,842	13,662,979	46,635,001
Jul	8,645,719	14,790,359	14,219,372	6,529,852	61,751,756
Aug	5,368,798	20,050,826	17,050,929	8,658,087	49,725,532
Sep	343,836	-	9,385,914	-	74,779,756
Oct	4,227,662	16,373,353	9,492,402	6,915,633	37,292,649
Nov	4,032,797	15,523,740	11,124,708	10,120,766	46,096,712
Dec	3,791,534	11,627,588	20,312,977	12,605,570	43,112,613
Jan-17	4,221,884	11,230,116	10,116,375	7,631,570	43,932,942
Feb-17	4,163,562	14,450,005	11,168,098	9,463,699	48,129,637
TOTAL	70,987,633	199,736,258	188,538,317	159,677,024	713,279,844

IMPORTS FROM					
Country Name	BURUNDI	DRC	RWANDA	SOUTH SUDAN	UGANDA
Jan	163,488	154,962	529,358	7,619	17,693,393
Feb	230,253	122,905	273,863	-	11,786,934
Mar	200	44,319	1,027,084	20,680	10,333,651
Apr	19,747	60,122	914,448	-	8,140,224
May	1,323	119,137	513,239	1,762	12,689,191
Jun	6,906	101,674	524,970	4,501	16,967,492
Jul	71,658	180,743	561,354	2,293	9,537,468
Aug	81,412	254,521	872,718	3,105	14,389,895
Sep	1,768,846	-	4,167,816	-	82,467,788
Oct	39,520	115,018	627,251	648	22,510,689
Nov	24,113	120,504	643,693	8,161	30,631,503
Dec	5,495	415,186	497,237	2,389	14,927,065
Jan-17	6,527	35,203	391,066	33,986	21,261,746
Feb-17	31,075	241,176	662,948	2,842	22,680,037
TOTAL	2,450,563	1,965,470	12,207,044	87,986	296,017,075

Source: Kenya National Bureau of Statistics

**** Note:** The currency has been converted from Kenya shilling to USD using 102.53 as the exchange rate from October 2016 to February 2017

The data analysed shows that Kenya exports more to the region (81%) with a sizable amount being attributed to informal trade. Table 20 below gives the summary of re-exports in the region. Kenya re-exported goods USD 87 Million worth from October 2016 to February 2017.

Table 20: Re-exports (USD)

Re-exports (USD**)					
Country Name	BURUNDI	DRC	RWANDA	SOUTH SUDAN	UGANDA
Oct	1,021,808	1,876,371	1,261,154	7,060,460	14,876,747
Nov	1,270,274	2,686,930	861,107	1,141,105	5,356,276
Dec	1,638,152	2,263,547	976,881	1,682,546	7,069,556
Jan	1,866,250	1,892,118	1,107,629	8,623,738	8,548,991
Feb	1,467,752	1,457,772	1,216,031	2,116,653	7,209,412

Source: Kenya National Bureau of Statistics

**** Note:** The currency has been converted from Kenya shilling to USD using 102.53 as the exchange rate

Table 21 below summarises trade for Kenya between October, 2016 and February, 2017. It is noted that the value of re-exports declined by 14 per cent during the period under review.

Table 21: Summary for the period (all countries trading with Kenya)

Trade	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17
Imports	1,123,389,088	1,261,435,621	1,199,752,047	1,470,210,007	1,276,149,806
Domestic Exports	346,647,031	436,907,843	414,626,080	426,266,529	427,658,543
Re-Exports	63,489,864	47,373,137	40,673,078	50,099,636	40,093,638
Total Exports	4,000,278	4,723,444	4,440,769	4,646,247	4,562,230
Total Trade	10,996,014	12,349,507	11,745,118	14,385,039	12,491,450
Balance of Trade	(10,917,981)	(12,257,367)	(11,658,492)	(14,294,405)	(12,402,454)

Source: Kenya National Bureau of Statistics.

6.3 Trade between Rwanda and Other NC Member States

Table 22 shows the value of commodities exported and imported between Rwanda and other Northern Corridor Members States. The total export volume for 2016 was valued at \$328 Million representing 51.5 percent of total trade while imports stood at \$ 310 Million representing 48.5 percent. It is also noteworthy that there was remarkable decline in trade between Rwanda and South Sudan over the period under review.

Among the main exports of Rwanda in 2016 are refined petroleum, tea, coffee, minerals (tin ores, niobium, tantalum, vanadium and zirconium ore) and rice. From the results, much of the formal export is between Rwanda and DRC followed by Kenya. On the other hand, the main imports include; cement, raw sugar, vegetable fats and oils, soap, palm oil, fish, maize, packing containers, products of iron or non-alloy steel, salt, paints and varnishes, footwear, sugar, soap, scrap metals, cars and cigarettes. The top import origins of Rwanda were Uganda and then Kenya.

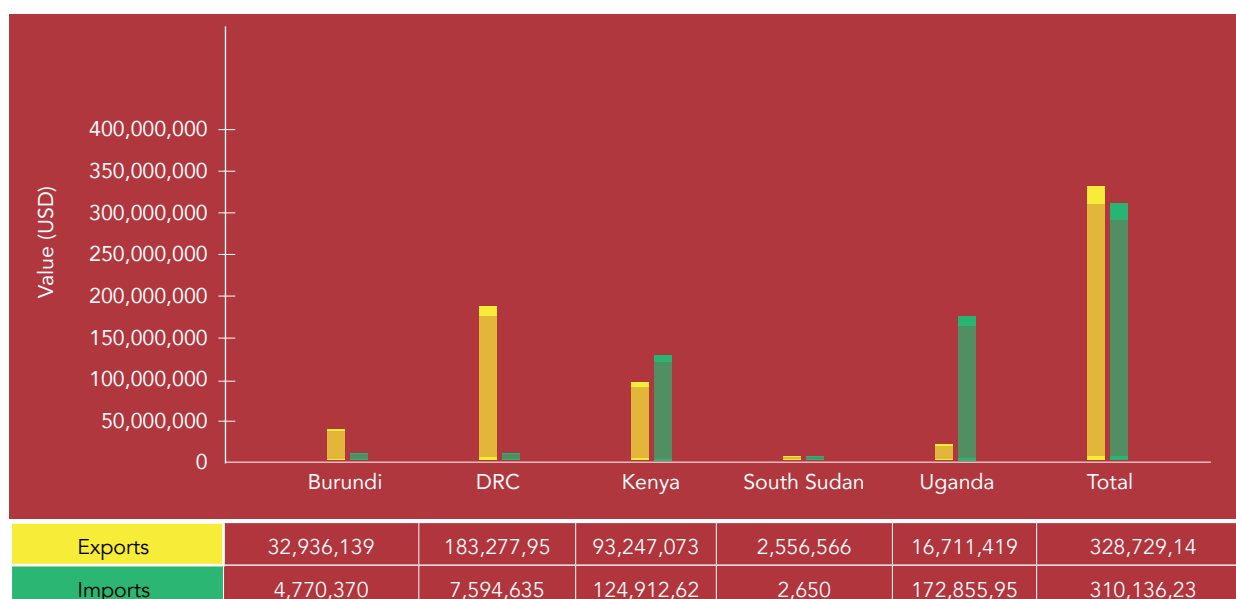
Table 22: Summary of formal exports and imports, January 2016 to March 2017

EXPORTS TO (USD):					
EXPORTS	BURUNDI	DRC	KENYA	SOUTH SUDAN	UGANDA
Jan	1,116,882	12,663,153	9,603,399	23,469	3,048,552
Feb	2,820,750	14,071,379	9,278,766	110,377	738,279
Mar	4,379,658	16,808,002	10,854,424	-	851,915
Apr	2,439,555	14,660,099	9,993,354	1,015,457	1,065,310
May	5,658,736	15,792,464	9,212,458	996,971	792,011
Jun	513,394	1,028,974	2,743,374	10,056	2,484,690
Jul	2,196,150	18,223,926	6,956,058	77,268	1,186,860
Aug	1,990,951	18,231,084	5,593,952	40,548	2,262,826
Sep	1,720,015	17,197,102	4,167,816	42,884	1,756,752
Oct	3,055,204	16,927,973	5,522,745	112,848	1,164,573
Nov	2,652,727	18,525,394	9,679,827	19,422	896,253
Dec	4,392,117	19,148,401	9,640,900	107,267	463,397
Jan-17	2,357,131	18,472,885	9,978,108	40,898	633,606
Feb-17	1,740,752	18,423,306	7,830,668	54,746	2,188,501
Mar-17	671,357	22,465,313	7,891,000	266,924	2,096,920
TOTAL	37,705,379	242,639,456	118,946,849	2,919,133	21,630,445

IMPORTS FROM					
EXPORTS	BURUNDI	DRC	KENYA	SOUTH SUDAN	UGANDA
Jan	623,374	449,376	9,828,094	-	11,995,835
Feb	445,282	457,465	10,805,431	-	12,077,591
Mar	487,072	507,971	12,647,254	51	16,335,968
Apr	561,563	751,510	10,779,526	-	13,029,240
May	468,782	818,897	10,481,931	-	15,125,012
Jun	624,847	868,244	11,049,827	1,590	14,300,618
Jul	761,074	551,107	11,269,859	-	14,201,343
Aug	230,650	676,212	11,737,069	-	16,147,017
Sep	174,706	737,118	9,385,914	-	15,333,384
Oct	134,825	678,625	8,518,966	-	13,792,483
Nov	175,169	587,167	9,285,371	1,009	13,977,725
Dec	83,026	510,943	9,123,380	-	16,539,740
Jan-17	252,082	511,726	8,758,837		11,651,744
Feb-17	168,963	525,103	8,718,928		13,353,407
Mar-17	254,669	689,362	9,519,164		16,078,023
TOTAL	5,446,084	9,320,826	151,909,551	2,650	213,939,131

Source: National Bank of Rwanda, March, 2017

Figure 40: Share of Rwanda Imports and Exports



INFORMAL TRADE

Table 23 below summarises informal trade for Rwanda between October, 2016 and March, 2017. Uganda is by far Rwanda's largest informal imports source in the Northern Corridor with total merchandise of imports amounting to \$ 103million while Burundi is the least with USD 1 million as total import value. Total merchandise imports from DRC accounted for USD 3.5 million whereas Kenya accounted for USD 54.6million. The largest import sectors are; agro-processing sector, horticulture and manufacturing. Kenya was the leading export country for Rwanda during the period under review with total amount of USD 56 million followed by DRC with total merchandise trade accounting of \$24 million. Export to Burundi in this period amounted of \$1.6million and Exports to South Sudan accounted of USD 281,460.

Table 23: Informal trade in Rwanda

COUNTRY	EXPORTS VALUE (USD)	IMPORTS VALUE (USD)
BURUNDI	1,669,669	1,069,043
DRC	24,385,793	3,535,692
KENYA	56,112,882	54,649,120
SOUTH SUDAN	281,460	
UGANDA	5,711,253	103,044,787
	88,161,057	162,298,642

Source: RRA

6.4 Trade between South Sudan and Other NC Member States

Table 24 provides a summary of intra-regional trade between South Sudan, Uganda, Rwanda and Kenya. Uganda is the top import origin country and export destination for South Sudan and accounted for 78.5 % of all combined imports and 98% of exports to the region. Both imports and exports have remained stable in 2016 and 2017. Exports to Uganda increased from USD 441,428 in October 2016 to USD 622,418 in February 2017.

Table 24: Summary of formal exports and imports, South Sudan in USD

EXPORTS TO			
Country Name	KENYA	RWANDA	UGANDA
Jan	7,619	-	185,602
Feb	-	-	165,672
Mar	20,680	51	426,592
Apr	-	-	564,076
May	1,762	-	636,992
Jun	4,501	1,590	529,324
Jul	2,293	-	203,558
Aug	3,105	-	602,148
Sep	-	-	280,042
Oct	648	-	441,428
Nov	8,161	1,009	493,662
Dec	2,389	-	564,456
Jan-17	33,986		505,782
Feb-17	2,842		622,418
TOTAL	87,986	2,650	6,221,752

IMPORTS FROM			
Country Name	KENYA	RWANDA	UGANDA
Jan	12,151,999	23,469	36,947,188
Feb	11,969,930	110,377	39,851,048
Mar	31,726,665	-	35,767,442
Apr	11,358,110	1,015,457	51,337,950
May	16,882,164	996,971	51,806,260
Jun	13,662,979	10,056	49,100,238
Jul	6,529,852	77,268	14,058,632
Aug	8,658,087	40,548	21,952,070
Sep	-	42,884	30,023,254
Oct	6,915,633	112,848	31,060,478
Nov	10,120,766	19,422	60,428,516
Dec	12,605,570	107,267	56,786,732
Jan-17	7,631,570	40,898	56,648,962
Feb-17	9,463,699	54,746	56,796,768
TOTAL	159,677,024	2,652,210	592,565,538

6.5 Trade between Uganda and Other Northern Corridor Member States

Table 25 below provides a summary of formal intraregional trade volumes between Uganda and the other Northern Corridor Member States.

Table 25: Uganda Formal Intra-Regional Trade (USD)

Formal Export to (USD):						
YEAR	MONTH	BURUNDI	DRC	KENYA	RWANDA	SOUTH SUDAN
2016	Jan	6,446,036	30,699,334	60,920,514	26,803,322	36,947,188
2016	Feb	5,388,062	20,961,204	59,210,706	25,903,338	39,851,048
2016	Mar	8,918,880	26,361,970	48,422,898	36,507,836	35,767,442
2016	Apr	6,185,198	26,314,614	44,273,416	26,945,250	51,337,950
2016	May	8,806,728	29,687,048	64,319,634	31,136,198	51,806,260
2016	Jun	6,620,898	29,210,056	78,232,524	28,494,634	49,100,238
2016	Jul	7,683,680	30,664,182	57,770,514	31,598,488	14,058,632
2016	Aug	11,175,090	35,666,598	58,985,728	32,951,672	21,952,070
2016	Sep	9,012,960	33,938,460	82,467,788	38,227,352	30,023,254
2016	Oct	7,967,212	30,472,856	97,283,772	38,028,676	31,060,478
2016	Nov	6,035,672	31,174,392	111,076,500	32,681,648	60,428,516
2016	Dec	5,986,784	28,701,976	84,852,542	37,230,836	56,786,732
2017	Jan	6,126,278	25,124,022	38,744,166	32,102,658	56,648,962
2017	Feb	7,385,828	27,063,502	14,875,232	25,661,018	56,796,768

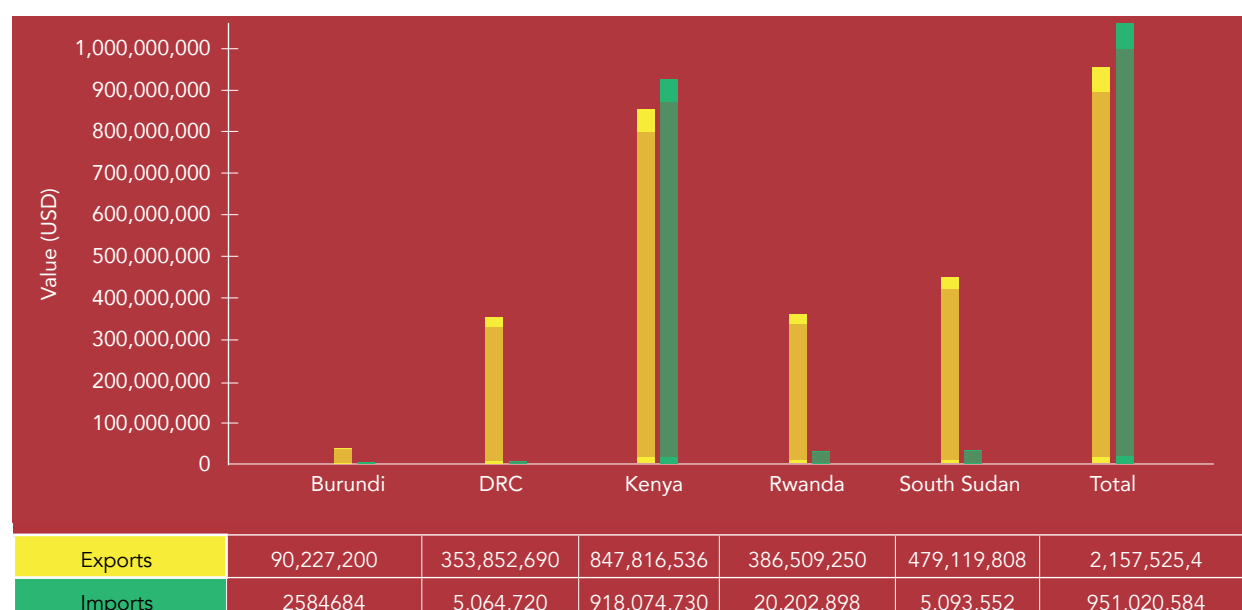
Formal Imports from (USD):						
YEAR	MONTH	BURUNDI	DRC	KENYA	RWANDA	SOUTH SUDAN
2016	Jan	282,682	637,076	74,440,118	1,678,050	185,602
2016	Feb	182,576	441,074	70,687,226	1,779,346	165,672
2016	Mar	158,054	364,390	98,721,160	1,794,708	426,592
2016	Apr	212,486	191,386	86,172,624	1,668,420	564,076
2016	May	328,384	284,256	69,006,522	2,447,358	636,992
2016	Jun	172,262	367,904	75,151,928	1,927,924	529,324
2016	Jul	118,120	508,626	63,651,632	1,798,656	203,558
2016	Aug	231,872	288,712	77,055,830	1,428,506	602,148
2016	Sep	289,814	560,220	74,779,756	1,393,338	280,042
2016	Oct	244,608	664,024	69,241,548	2,029,732	441,428
2016	Nov	271,936	453,906	85,381,430	1,039,430	493,662
2016	Dec	91,890	303,146	73,784,956	1,217,430	564,456
2017	Jan	92,110	412,372	76,860,252	1,839,364	505,782
2017	Feb	68,044	986,476	90,687,252	1,329,814	622,418

Source: UBOS, 2016 - 2017

Uganda mostly exports agricultural products, 80 percent of total exports. The most important exports are coffee, tea, cotton, copper, oil, fish, cement, maize, sugar, beans, tobacco, vegetable fats and oils, sorghum. Others include; palm oil, iron/steel bars, cereals, broken rice, carboys, bottles, flasks, jars, pots of kind used for parking goods, wheat flour. Its top imports by value are refined petroleum, packaged medicaments, palm oil, cars and delivery trucks.

The figure below shows the share of trade between Uganda and the other Northern Corridor Member States. Uganda is a net exporter. Kenya takes the largest share of both exports and imports with Uganda at 27% and 30% respectively followed by South Sudan (16%) exports and (1%) imports.

Figure 41: Share of Uganda Imports and Exports



Uganda exports more to the region with a sizable amount being attributed to informal trade. In 2016, the total informal trade in Uganda summed to around US\$ 421 million excluding Burundi and South Sudan from which 87 percent represents exports and 13 percent represents imports. Kenya and DRC were both the leading net exporters and importers for Uganda as shown in table 31.

Rice, wheat flour, coffee, groundnuts, beans, cassava, cooking oil, salt, palm oil, bananas, onions, yeast, cement, clothes, fruits, maize grains, sorghum grains, juice, perfume, and fertilizers accounted for the bulk of the total informal cross border import value.

INFORMAL EXPORTS						
YEAR	MONTH	DRC	KENYA	RWANDA	SUDAN	TANZANIA
2016	Jan	16,363,975	7,302,032	2,329,251	4,664,839	4,828,761
2016	Feb	16,236,466	6,857,394	2,092,976	4,769,779	4,948,577
2016	Mar	15,309,794	6,587,698	1,914,171	4,389,319	4,442,839
2016	Apr	16,261,445	5,939,329	1,844,705	4,579,255	2,891,482
2016	May	17,033,405	5,290,976	1,951,635	4,772,949	1,119,611
2016	Jun	21,510,582	4,821,800	2,508,764	5,040,045	1,583,677
2016	Jul	18,631,646	5,597,383	4,027,469	828,528	2,548,703
2016	Aug	18,578,219	5,808,525	3,119,751	1,188,361	2,344,738
2016	Sep	18,022,859	6,019,666	2,704,167	1,550,443	2,140,612
2016	Oct	18,063,652	9,400,189	3,172,058	2,985,479	4,865,668
2016	Nov	20,922,362	8,200,818	3,537,232	3,233,865	5,258,209
2016	Dec	24,299,255	7,300,223	4,263,609	3,564,237	6,324,623
2017	Jan	21,441,978	8,745,980	2,962,251	4,501,253	12,244,377
INFORMAL IMPORTS						

YEAR	MONTH	DRC	KENYA	RWANDA	SUDAN	TANZANIA
2016	Jan	1,844,811	2,120,584	218,736	182,749	1,031,645
2016	Feb	1,683,830	2,248,663	291,583	279,672	413,176
2016	Mar	1,611,483	1,995,391	233,061	211,111	659,856
2016	Apr	1,524,347	2,519,910	347,124	166,818	992,278
2016	May	1,437,217	3,044,424	461,187	122,449	1,324,697
2016	Jun	1,320,026	1,977,527	167,651	141,790	1,073,061
2016	Jul	1,147,101	2,392,320	264,010	307,406	637,683
2016	Aug	1,245,857	2,454,147	212,532	233,775	839,170
2016	Sep	1,345,482	2,517,076	161,331	160,582	1,038,262
2016	Oct	1,913,137	1,786,502	39,730	189,354	1,931,678
2016	Nov	2,510,781	1,568,217	46,530	169,390	1,733,680
2016	Dec	2,680,344	1,991,073	51,666	344,256	1,308,613
2017	Jan	2,879,419	2,127,368	299,880	211,004	671,504

Source: UBOS, 2016 - 2017

It is noted that countries in the region specialize in almost similar goods. Lower border costs will allow them to more easily obtain raw materials and intermediate inputs from their neighbours. Sizeable volume of goods under informal cross border trade include agricultural produce, animal and animal products and goods manufactured within the region. Eliminating NTBs in the region will boost greater intraregional trade that further contributes to expanding exports and regional growth.



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SECTION SEVEN: FINDINGS FROM THE GPS AND ROAD SURVEY

FINDINGS FROM THE GPS AND ROAD SURVEY

7.1 Introduction

The NCTTCA Secretariat conducts road transport surveys to gather information relating to operations and efficiency of the transit route from transporters and truck drivers. Data is collected using questionnaires which are administered by the Northern Corridor field supervisor. The questions range from cargo origin and destination, vehicle registration and type, type of cargo, duration and reasons for stoppages. Different indicators including weighbridges crossing time, border posts crossing time, delays and transit time were monitored as explained below. In addition, GPS Kits are provided to truck drivers when they are about to start their journey from Mombasa to different destinations and are collected on return. Where a GPS kit has not been issued, data is also obtained from transporters GPS fleet management systems. Different indicators including weighbridges crossing time, border posts crossing time, delays and transit time are generated as shown in the section below.

7.2 Methodology

a) GPS data collection

Using passive GPS devices issued to drivers that are to undertake a trip, The GPS kit is attached to a truck and turned on as the truck commences its journey, and it records the stoppage points by location and the duration of the stoppage. Data from Transporters own tracking systems are also downloaded to supplement the data from the GPS.

Destinations	Month	GPS Devices
Goma	October to March	57
Juba	October to March	42
Kigali	October to March	40
Kampala	October to March	287

b) Questionnaire administration

Drivers are first trained on how to fill the questionnaires before they commence the trips. After the training, they are issued with questionnaires which they fill on their own providing details of the trip including where they stopped, why they stopped and if they paid any fee and the purpose for which this fee was paid. The field supervisor also administers questionnaires to drivers who have just come from trips to provide information on stoppages made, this is mainly aided by tracking data downloaded from the transporters own GPS fleet tracking system. Lastly drivers are interviewed on their experience along the Northern Corridor and the major hindrances to smooth flow of trucks.

Sampling and Distribution

Table 27: Sampling and distribution

Destination	Frequency	Percent	<p>Table 27 shows the distribution of trucks according to country of destination. It shows that 83.2% of the cargo was destined for Uganda accounting for the largest part of tracked cargo leaving the Mombasa port followed by South Sudan (5.8%), Rwanda and DRC each with 4.6%, Kenya (1.4%) and 0.2 % for Burundi.</p>
Kenya	6	1.4	
DRC	19	4.6	
Uganda	342	83.2	
Rwanda	19	4.6	
Burundi	1	0.2	
Sudan	24	5.8	
Total	411	100	

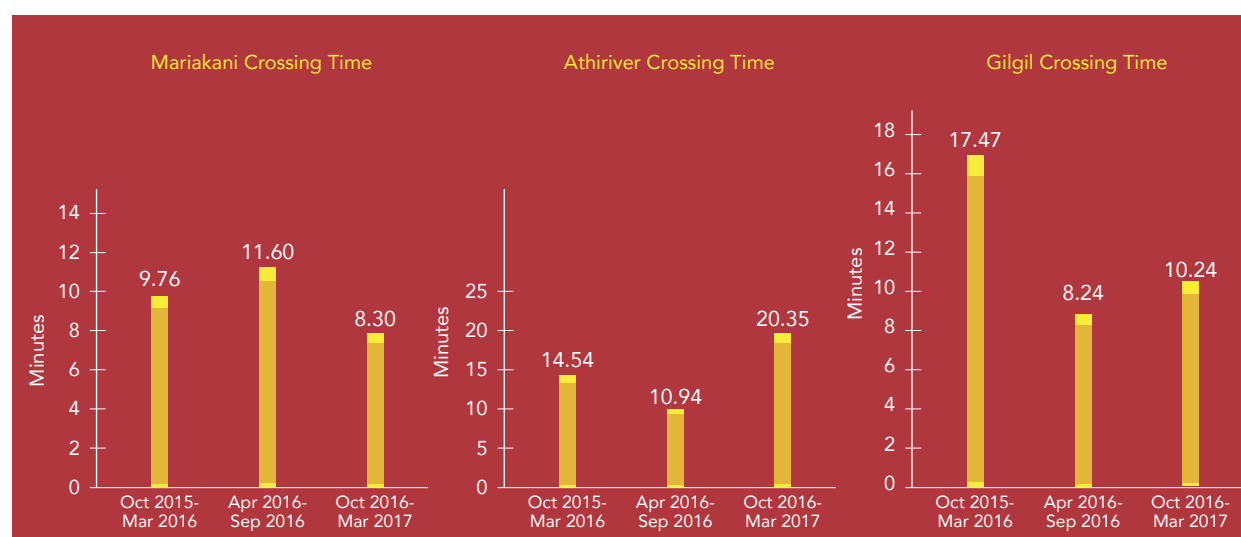
Table 28: Distribution of the sampled cargo type per destination

Destination	Cargo form			Total	<p>Table 28 above gives distribution of the type of cargo currying trucks sampled.</p> <p>Approximately around 73 percent of cargo tracked was containerized, 25 percent is loose cargo and 1 percent in Tanker form. During the survey exercise, the response rate was recorded to be significantly high for some destinations compared to others as a result of multiple reasons. Some of the notable reasons for this include the limited volume of cargo to some destinations, 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.</p>
	Container	loose cargo	Tanker		
Nairobi	6	0	0	6	
Kampala	219	93	7	319	
Kigali	17	1	0	18	
Juba	20	4	0	24	
Bujumbura	1	0	0	1	
DRC	18	0	0	18	
Total	281	98	7	386	

7.3 GPS findings on crossing times at weighbridges and border

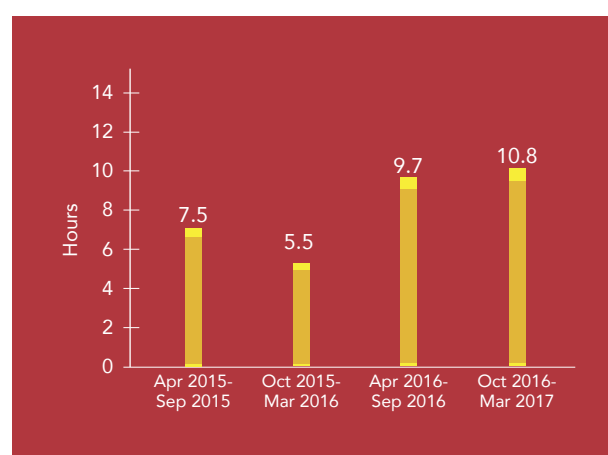
Crossing times at weighbridges is a major determinant of time taken to transport cargo along the Northern Corridor. Figure 42 shows the average weighbridge crossing at the Mariakani, Athi River and Gilgil weighbridge stations. The data shows that the average crossing time for Athi-River weighbridge station for the trucks that fail at the HSWIM scale and are diverted to the fixed scale has doubled between October, 2016 and March 2017. Mariakani weighbridge crossing time reduced from an average of 11.6 minutes to 8.3 minutes.

Figure 42: Average crossing times at Weighbridge Stations (October 2015 to March 2017)



In addition, border crossing times are also critical to improving transit time for cargo destined for other countries. Figure 43 shows the crossing time at the Malaba border. The crossing time is seen to fluctuate greatly over the period.

Figure 43: Average crossing time at Malaba Border (November 2016 to March 2017)

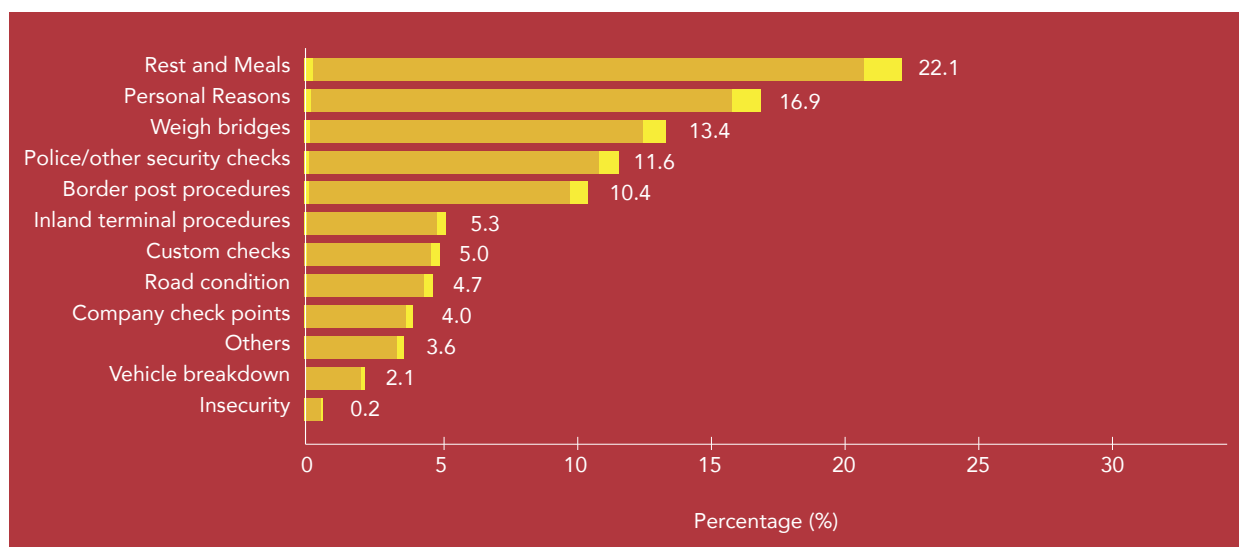


7.4 Stoppages for Cargo along the Northern Corridor

Stoppages along the Corridor are major drivers of inefficiency on the Corridor. Stoppages and other delays occasion high administrative and operation cost for moving goods along the Corridor and is a hindrance to trade in the region. The frequency of stoppages by drivers along the Corridor is occasioned by various factors. Figure 44 shows the various factors that lead to stoppages for outbound cargo with their respective percentage of occurrence. Outbound cargo is cargo that leaves the port of Mombasa to inland destinations.

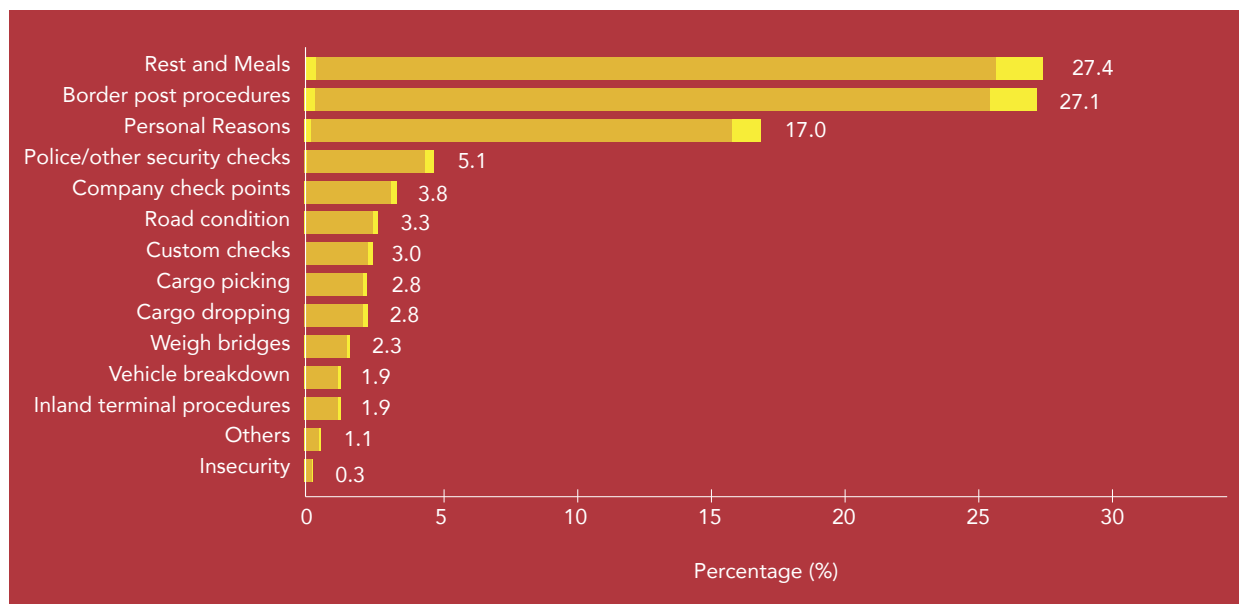
The chart below shows that rest/meals by drivers and stop for personal reasons account for the highest percentages (22.1% and 16.9% respectively) for all the stoppages for outbound cargo. Weighbridges (13.4%), police checks (11.6%) and border post procedures (10.4%) are the other main reasons for stoppages along the Corridor.

Figure 44: Reasons for Stoppage for Outbound Cargo



On the other hand, figure 45 also shows a similar trend in stoppage reasons for inbound cargo out of all the recorded stops, with rest and meals having the highest frequency at 27.4% followed closely by border post procedures at 27.1% then personal reasons at 17% and police and other security checks at 5%.

Figure 45: Reasons for Stoppage for inbound Cargo



Generally, during the survey period, most of the outbound and inbound stops made by drivers were due to rest and meals and personal reasons

7.5 Prevalence stoppage locations

Stop Location	Frequency	Reason for stopping
MALABA - UGANDA	253	Border post procedures
MARIAKANI	230	Weighbridge
MALABA - KENYA	211	Border post procedures
MTITO ANDEI	211	Rest and meals/ Personal reasons
MALABA	188	Personal reasons
MAUNGU	186	Personal reasons
MLOLONGO	176	Weighbridge
GILGIL	174	Weighbridge
SALGAA	166	Rest and meals
WEBUYE WEIGHBRIDGE	113	Weighbridge
MACHAKOS JUNCTION	112	Personal reasons
ELDORET	111	Rest and meals/ Personal reasons
BUSITEMA	105	Weighbridge/Rest and meals/ Personal reasons
KANDUYI	103	Rest and meals
MAGAMAGA	102	Weighbridge
MAKINDU	102	Rest and meals/ personal reasons
VOI	99	Police/ other security checks
JUAKALI	94	Rest and meals/ personal reasons
MAI MAHIU	91	Rest and meals/ personal reasons
NAKURU	91	Company check points Traffic
SULTAN HAMUD	79	Personal reasons
BURNT FOREST	78	Police/Other security checks
MASIMBA	73	Police/other security checks
TARU	73	Road condition
BUSOWA	70	Rest and meals/ personal reasons
TORORO CEMENT	70	offloading

These many stops translate into poor efficiency due to delays that enters into the cost side of doing business within the Northern Corridor. The resulting outcome is high transport cost for the traders which translate to high product prices for consumers hence worsening off the livelihood.



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SECTION EIGHT: ROAD SAFETY

ROAD SAFETY

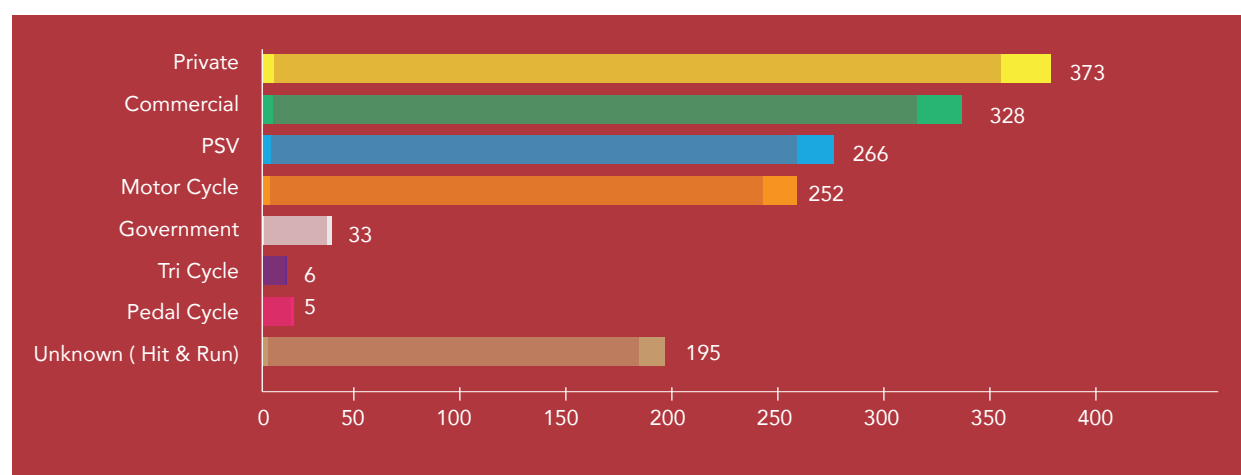
Road safety is one of the performance indicators whose tracking started recently. Road accidents have adverse share to the economy of the country, as a result of the high costs of road traffic accidents. For instance, it places a heavy burden, not only on national economies but also household finances. Many families are driven deeply into poverty by the loss of breadwinners and the added burden of caring for members disabled by road traffic injuries.

Against this background, the governments have invested by implementing traffic laws that will see reduced road accidents. However, there are still cases of road accidents. Figure below gives a breakdown for the categories of victims involved in road accidents using data from Kenya National Transport and Safety Authority (NTSA). The data applies to the whole country; systems are being put in place to obtain data for specifically along the Northern Corridor routes.

8.1 Fatalities based on Type of Vehicle

Figure 46 shows the distribution of fatalities based on type of vehicle on the Northern Corridor for the period October 2016 to March 2016. Most of the fatalities were attributed to accidents caused by privately owned vehicles (30%) followed by commercial vehicles (26%) and Public service vehicles (21%).

Figure 46: Distribution of Fatalities based on Type of Vehicle



Source: National Transport and Safety Authority

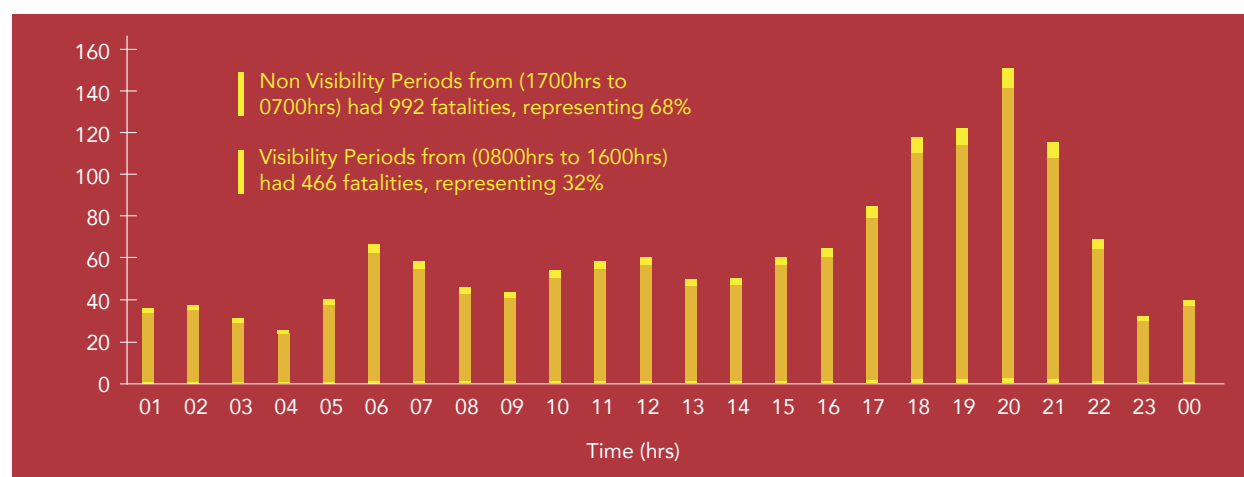
Table 29 shows the frequency of fatalities on different sections on the Northern Corridor in Kenya. Road safety data was not available for the other member states. On the Northern Corridor, a total of 254 fatal cases were reported. Majority of the cases were reported on the Nairobi – Naivasha stretch with 44 cases followed by the Nakuru – Eldoret stretch with 39 cases. This data shows the sections that are fatality prone and require focused interventions to stem the number and severity of accidents.

Table 29: Fatalities on the Northern Corridor- October 2016- March 2017

ROAD/SECTIONS	FATALITIES
NAIROBI - MLOLONGO	24
MLOLONGO - KONZA	29
KONZA - MTITO ANDEI	38
MTITO ANDEI - VOI	18
VOI - MOMBASA	7
MOMBASA - KILIFI	13
KILIFI - MALINDI	10
NAIROBI - NAIVASHA	44
NAIVASHA - GILGIL	10
GILGIL - NAKURU	17
NAKURU - ELDORET	39
ELDORET - MALABA	1
BUNGOMA - MALABA	3
BUSIA - MALABA	1
TOTAL	254

Information provided by the NTSA shows that there are several factors that cause road accidents. Figure 47 shows most of the accidents occur during day time with the lowest visibility accounting for 68% of all accidents that were reported. The poor visibility time of the day runs from 1700 hrs to 0700 hrs. This suggests that road infrastructure and signage needs to be enhanced to ensure improved road safety for those who drive at dusk and thereafter.

Figure 47: Distribution of Fatalities based on Time



From the data, the leading causes of road accidents over the period November 2016 to March 2017 were associated with human error which includes improper overtaking, over speeding, misjudging clearance, swerving among others. According to NTSA this accounts to over 85% of road accidents. Mechanical issues accounted for 10% and environmental factors accounted for 5%. This suggests that, addressing factors that lead to human error need to be addressed. This include enforcement of traffic laws, increased awareness on road safety for road users.

A photograph of a high-speed train, possibly a Shinkansen, on a track. The train is white with a red stripe and is moving towards the viewer. The background shows a cloudy sky and some infrastructure. A large red diagonal shape overlays the top right portion of the image, and a grey diagonal shape overlays the bottom right portion.

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SECTION NINE: SUMMARY OF FINDINGS AND RECOMMENDATIONS

SUMMARY OF FINDINGS AND RECOMMENDATIONS

9.1 Summary

This report shows that the port of Mombasa has seen an increase in cargo throughput over the years, the cargo throughput increased from 26.73 million tons in 2015 to 27.36 million tons in 2016. The vessel turnaround performance indicator fluctuated around the set target of 72hrs between 56.2 hours and 78.4 hours. In addition, port dwell time improved from significantly from 103 hours in March 2016 to 70 hours in March 2017. The average containerized cargo dwell time target was hit in March 2017 outperforming the 72 hours set target.

Another key determinant of efficiency is the time used in document processing and other clearance procedures. The report shows that time taken in customs clearance at document processing centre decreased from 2.42 hours in April 2016 to 1.91 hours in March 2017. For time taken at Mombasa one stop centre, there was a significant decrease from 51 hours in April 2016 to 39 hours in March 2017. The performance indicates improvement in efficiency.

Weighbridge compliance is an important indicator of efficiency along the corridor. Over the reviewed period weighbridge compliance has improved with average compliance levels of 95 percent performance for weighbridges in Kenya except for Busia weighbridge whose compliance level was steady at an average of 78 percent during the period under review

Another key finding is that cargo volume transported by rail declined by 10 percent for local and 32 percent for transit cargo when comparing 2015 and 2016.

There is a decline in average transport rates along the corridor except for the Mombasa- Goma route which recorded an increase in transport costs. However, there are variations in transport rates on the different sections of the corridor with Mombasa- Nairobi having the lowest rate of 1.66 USD per kilometre for TEUs and Mombasa-Goma having the highest rate of 3.33 USD.

Road condition has greatly improved with 36% of the road network determined to be in good condition; 25% was in fair condition and 39% of the total northern corridor road length was in bad shape an improvement from 64 % in 2014.

The percentage of transit volumes at the Dar es Salaam port is higher compared to Mombasa port. Lower percentage of transit traffic at Mombasa port could be attributed to over 60 percent of cargo throughput handled at the port is domestic. i.e. for Kenya.

Road survey data shows that 83.2% of the tracked cargo was destined for Uganda accounting for the largest part of tracked cargo leaving the Mombasa port followed by South Sudan (5.8%), Rwanda and DRC each with 4.6%, Kenya (1.4%) and 0.2 % for Burundi.

The frequency of stoppages by drivers along the corridor is occasioned by various factors. Mainly rest/meals by drivers and stop for personal reasons account for the highest percentages (22.1% and 16.9% respectively) for all the stoppages. Weighbridges (13.4%), police checks (11.6 %) and border post procedures (10.4%) are the other main reasons for stoppages along the corridor.

Lastly, road accidents continue to be a challenge along the Northern Corridor. From the data provided on the Kenyan section of the Corridor, it is evident that the causes associated with human errors which include improper overtaking, over speeding, misjudging clearance, swerving among others accounts for 85% of road accidents, in addition most accidents occur between dusk and dawn and mainly involve private and commercial vehicles.

9.2 Recommendations

1. The decrease in the transit cargo volumes to Burundi, Rwanda and DRC through the port of Mombasa is partly due to the longer distance and more number of border crossing points that the cargo has to traverse when using the Northern Corridor as compared to the Central Corridor. There is an alternative route which is shorter and which will involve fewer border crossing points through Tanzania via Taveta. The NCTTCA Secretariat in collaboration with EAC and the CCTTFA should undertake a survey of the transit route through Tanzania via Taveta to Burundi and to Rwanda geared towards promoting this route as an alternative transit route for cargo to and from Mombasa port.
2. To enhance quick response towards addressing operational challenges at the border stations, the NCTTCA Secretariat should support Member States in formation of Cross Joint Border Committees at the key border stations where they do not exist. Furthermore, should periodically generate and issue performance reports on the key border crossing performance indicators to the respective border stations as a way of monitoring performance. The Member States urged to provide the raw data to support generation of the reports.
3. Stakeholders should be sensitized on the operations of the SGR and the procedures for handling and clearance of cargo by the SGR which are to be transshipped in Nairobi should be developed and circulated to stakeholders to support smooth intermodal transport interchange. Furthermore, transport links for accessing and evacuation of cargo at the SGR terminal at Embakasi ICD – Nairobi should be developed to enhance efficiency of the ICD in cargo evacuation. Furthermore, transport services at the SGR terminals should be streamlined to eliminate or minimize need for fresh customs documentation at the SGR terminals once cargo has been documented at the stations/points of origin.
4. To support seamless exchange of data for internationally traded goods transiting along the region. The Member States are urged to expedite the implementation of the Regional Unique Consignment Reference (R-UCR).
5. To further minimize delays at ports and border stations for goods in transit whose taxes are not paid at the port or border stations. The use of the RCTG carnet should be enhanced and used as a simplified customs declaration as well as a bond security for goods declared in transit or for warehousing in destination countries. This should eliminate the necessity for use of the conventional Bills of Entry for transiting goods.
6. To enhance collection of data on informal trade by all Member States. The Member States which are not collecting data on informal trade urged to adopt the use of methodologies used by the other Member States to collect data on informal trade.
7. All Member states should implement the HSWIM and interface weighbridges in the region; as well as eliminate the requirement for weighbridge certificate for trucks compliant at the HSWIM to improve performance and minimize stops along the corridor.
8. Currently Only Uganda, Kenya and Rwanda are using the Regional Electronic Cargo Tracking System. All the Northern Corridor Member States should join this initiative as goods under RECTS take shorter transit and clearance time.
9. DRC and South Sudan should consider joining the Single Customs Territory (SCT) for clearance of goods as the benefits are many including faster clearance and movement of goods. Uganda should consider expanding goods cleared under SCT and work towards full rollout. It will also minimize diversion of goods in transit. Border crossing time has been seen as the second cause of delays
10. The frequency of stoppages by drivers along the corridor was found to be occasioned mainly for rest/meals by drivers and stops for personal reasons which accounted for the 22.1% and 16.9% respectively. Fast tracking implementation of the road side stations with amenities would minimize unnecessary stops. It will also reduce the driver fatigue which is also a major cause of accidents along the corridor. Full implementation of the SCT and the OSBP will ensure reduction in Border crossing time.
11. The region trades more with the outside world than within. The potential in the region can be unlocked if we boost intra-regional trade. Elimination of visas as stipulated the Northern corridor transit and Transport Agreement and mutual recognition of standards. The index for the ease of doing business in the region is high. Countries need to support and ease procedures in doing business across the region.
12. Roll out of driver training program and sensitization to reduce accidents along the corridor.
13. The current meter gauge Rail transport has declined in terms of capacity though there are plans to improve. The Standard gauge railway (SGR), with the first phase from Mombasa to Nairobi complete will present an opportunity for increase in trade and uptake of cargo by the railway. The Standard Gauge railway has no railway sidings and therefore the existing meter gauge railway should be revitalized to provide connections for transportation and delivery of cargo beyond the SGR terminals.



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ANNEXES

ANNEX 1: CORRIDOR PERFORMANCE INDICATORS



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TRANSIT TIMES
AND DELAYS



RATES
AND COSTS



PRODUCTIVITY
AND EFFICIENCY



VOLUME
AND CAPACITY



TRANSIT TIMES AND DELAYS



1 VESSEL WAITING TIME BEFORE BERTH

Description:

The average time taken by the ship before Berthing. It is measured from the time the vessel arrives at the fairway buoy to the time at its first berth.

Formula:

Time at Berthing minus Time of Arrival at Port Area.

2 SHIP TURNAROUND TIME

Description:

The average time spent by the ship in the port area. It is measured from the time the vessel arrives at the fairway buoy to the time it is piloted off when departing the port.

Formula:

Time at Exit minus Time at Entry in the Port Area.

3 TIME FOR CUSTOMS CLEARANCE AT THE DOCUMENT PROCESSING CENTER(DPC)

Description:

This is the time it takes to have an entry lodged by a clearing agent passed by customs.

Formula:

Time of Passing of Entry Minus Time of Registration of Entry.

4 TIME TAKEN AT MOMBASA ONE STOP CENTER

Description:

Average time of document processing at One Stop Center.

Formula:

Time at Entry Release Order generation minus Time at Passing Entry.

5 AVERAGE CARGO DWELL TIME AT THE PORT

Description:

It is the measure of time that elapse from the time cargo is offloaded from the vessel at the port to the time it leaves the port premises after all permits and clearances have been obtained.

Formula:

Exit Time from the port Minus Arrival Time from the port.

6 TRANSIT TIME WITHIN THE INLAND CONTAINER DEPOT(ICD)/ INLAND PORT

Formula:

Departure Time from the ICD minus Arrival Time at the ICD



8 DELAY AFTER CUSTOMS RELEASE AT THE PORT OF MOMBASA

Description:

Refers to the period it takes to evacuate cargo from the port after it is officially released.

Formula:

Time at exit of cargo at the Port gate minus Time of Entry Release Order generation.



7 TRANSIT TIME PER ROUTE PER MODE OF TRANSPORT

Description:

Time taken by transit cargo to move from one node to another e.g. from Mombasa to Malaba

Nodes are points along the corridors like weighbridges, border-posts, ports.

Formula:

Time of arrival (Destination Node) minus time of departure (Node of Origin).

9 WEIGHBRIDGE CROSSING TIME

Formula:

Departure Time from the weighbridge minus Arrival Time at the weighbridge.

10 BORDER POST CROSSING TIME

Description:

Time taken by transit cargo to cross the Border

Formula:

Departure Time from the border minus Arrival Time at the border.

11 TIME FOR CUSTOM PROCEDURE AT DESTINATION

Description:

It's the average time taken to complete custom process at the destination after cargo arrival.

Formula:

End Time of the last process minus start Time of the first process.

12 TRANSIT TIME

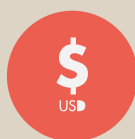
Description:

Time taken by transit cargo to move from origin (Port) to destination country e.g Uganda, Rwanda etc.

Formula:

Time of arrival minus time of departure (Based on Road/GPS based Surveys data)





RATES AND COST

1 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.

2 PORT TRANSIT CHARGES

Description:

Published tariffs by Stakeholders.

3 ROAD FREIGHT CHARGE

Description:

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

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

Description:

Published tariffs by Stakeholders.

5 RAIL FREIGHT CHARGE

Description:

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



VOLUME AND CAPACITY

1 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.

2 VOLUME PER COUNTRY OF DESTINATION

Description:

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

3 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.

4 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.

5 AVERAGE ANNUAL DISTANCE PER TRUCK IN KM PER YEAR

Description:

Average distance travelled per truck per year.

6 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

1 NUMBER OF CHECK POINTS PER COUNTRY PER ROUTE

Description:

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

2 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.

3 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:

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

4 WEIGHT COMPLIANCE

Description:

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

Formula:

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

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