

NORTHERN CORRIDOR TRANSPORT OBSERVATORY REPORT



NORTHERN CORRIDOR TRANSIT & TRANSPORT COORDINATION AUTHORITY

AUTORITE DE COORDINATION DE TRANSIT ET DE TRANSPORT DU CORRIDOR NORD

13TH Edition

Enhanced Transport Efficiency
of the Northern Corridor

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Northern Corridor Transit and Transport Coordination Authority

Partners



Development Partners



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Abbreviations

ACPLRWA	Rwanda Long Distance Truck Drivers Association
AEO	Authorized Economic Operators
ASYCUDA	Automated System for Customs Data
BI	Burundi
CCTTFA	Central Corridor Transit Transport Facilitation Agency
DGDA	Direction Générale des Douanes Et Accises
DRC	Democratic Republic of Congo
DWT	Dead Weight Ton
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
ICBT	Informal Cross Border Trade
ICD	Inland Container Depot
ICT	Information Communication Technology
IRI	International Roughness Index
KE	Kenya
KeNHA	Kenya National Highways Authority
KPA	Kenya Ports Authority
KPC	Kenya Pipeline Company
KRA	Kenya Revenue Authority
KTA	Kenya Transporters Association
LPI	Logistics Performance Index
KWATOS	Kilindini Waterfront Automated Terminal Operations System
MAGERWA	Magasins Généraux du Rwanda
NEPAD	New Partnership for Africa's Development
NC	Northern Corridor
NCTTA	Northern Corridor Transit and Transport Agreement

NCTCA	Northern Corridor Transit and Transport Coordination Authority
NICD	Nairobi Inland Container Terminal
OBR	Office Burundais des Recettes
OCC	Office Congolais de Contrôle
ODR	Office Des Route
OGA	Other Government Agencies
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
SGR	Standard Gauge Railway
SCT	Single Custom Territory
SSFEBFA	South Sudan Federation of Employers and Business Association
TBL	Through Bill of Lading
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 multimodal transport route links the landlocked countries of Burundi, Democratic Republic of Congo, Kenya, Rwanda, South Sudan and Uganda to the seaport of Mombasa in Kenya. Efficiency of the Northern Corridor is vital to enhance regional integration and economic growth for these respective countries. Continuous monitoring therefore enables us to identify salient issues that may be hampering transportation along the Corridor and provide evidence-based policy recommendations towards an efficient transport corridor. Among the tools we use for monitoring performance of the Northern Corridor is the Transport Observatory tool with the transport observatory bi-annual reports being the output.

The Northern Corridor Transit and Transport Coordination Authority (NCTTCA) Secretariat is pleased to present the 13th issue of the transport observatory bi-annual report. The 13th issue describes the cumulative performance on the indicators that are tracked by the observatory from the month of April 2018 to September 2018. It highlights the results and findings from the analysis of data collected on key indicators affecting trade and transport facilitation along the Northern Corridor.

Generally, efficiency of the Port of Mombasa and the Northern Corridor at large has improved. The report appreciates increase in cargo throughput at the Port of Mombasa over the years. For instance, total cargo throughput at the Port of Mombasa for the period January to September 2018 increased by 2.1% when compared to same period in 2017. Cargo haulage by standard gauge rail has equally been improving tremendously since its launch among other positive initiatives. Although there has been improvement in most targets as evident by the report, several points of concern along the corridor logistics chain still hamper the overall performance of the corridor. Therefore, there is need to call upon all stakeholders to implement various action plans and reforms; as well as to propose further improvements required for enhancing the performance of the corridor and boosting the monitoring mechanisms for better transport and logistics value chain.

Finally, I wish to appreciate and commend all stakeholders who provided data and information to enable development of this 13th issue transport observatory report. Just as each stakeholder contributed to the production of this report, they should also focus on implementing the main recommendations from this report so that the region can continue experiencing seamless trade. I further wish to reiterate the NCTTCA Secretariat commitment to provide an enabling environment for smooth trade and transport facilitation and further call upon all partners to support the actualization of the programmes therein the Northern Corridor Transit and Transport Agreement.

“What gets measured gets done”.



Omae Nyarandi
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. Profound appreciation also goes to the Executive Committee, the various Specialized Technical Committees, the Stakeholders Forums and the Experts involved in the drafting and validation of this 13th issue of the bi-annual performance report. These valuable players have positively impacted the implementation of this key initiative of the Corridor right from data collection to dissemination of findings and the formulation of informed decision and policies.

Special thanks go to Trade Mark East Africa (TMEA) for their continued contribution through financial and technical support towards development and improvement of the Transport Observatory.

As the success of developing the report primarily depends on data, the Secretariat would like to extend its sincere appreciation to all stakeholders who have gone out of their way to provide the most essential data. Without the data, this would not have been possible!

The Northern Corridor Secretariat wishes to acknowledge those who have provided reviews for the reports and stakeholders who participated in the validation and adoption of this report.

We wish to specifically acknowledge the Executive Secretary, Mr. Omae Nyarandi for guiding and supporting the entire process. We would also like to thank the entire Transport Observatory technical team comprising of Mr. Aloys Rusagara, Mr. Gideon Chikamai, Ms. Melap Sitati, Mr Noah Kipyegon, Mr. Alex Ruzindana, Mr. Fred Paul Babalanda, Mr. Emile Sinzumusi, Prof. Lievin Chirhalwirwa, Mr. Fred Tumwebaze, Mr. Philip Mwanthi, Mr. Elias Leju Leonardo, Mr. Cezzy Kanionga, Mr. John Deng, Ms. Clarisse Biraronderwa, Mr. Jean Ndayisaba and Mr. Desire Buconyori.

Finally, we thank those who in one way or another are supporting the Northern Corridor infrastructure and trade in the region. With this common goal, the support will go a long way in propelling the region to greater heights.

NCTTCA Secretariat

Executive Summary

The 13th issue of the Biannual Transport Observatory report presents the status of the indicators that gauge performance of the Northern corridor. The Member States of the Northern Corridor are Burundi, Democratic Republic of Congo (DRC), Kenya, Rwanda, South Sudan and Uganda. These Countries have a combined population of approximately 214.2 Million people with an average Gross Domestic Product (GDP) of 3.3%. This presents a huge market for trade. In addition, the region has surface area of 3.8 Million Km² that calls for complex trade and logistic interventions to facilitate smooth trade.

To improve trade logistic in the region, Countries using the Northern trade Corridor will need to place focus on improvements in timeliness, infrastructure, and international shipments and logistics quality. In addition, improving trading across borders entails prudent management of time, costs and documentary compliance across the borders.

The report contains data gathered and information collected from all the six Member States of the Northern Corridor on key performance indicators on trade and transport facilitation. The report presents analysis of the status of performance at the Mombasa Port, the road network, railways and pipelines along the Northern Corridor based on the available data.

The indicators are categorized into: Volume and capacity, Tariff and Rates, Time and delays, Efficiency and productivity, Intra-regional trade and road safety.

Volume and Capacity

Cargo throughput

Total cargo throughput at the port of Mombasa for the period January to September 2018 increased to 23,234,781 DWT having grown by 2.1% from 22,750,634 DWT over the same period in 2017. Growth in volumes shows expansion of trade in all transit Countries except Rwanda which witnessed a decreased of 8 percent in volume. Burundi volume grew fifth fold when compared to 2017. Uganda remains the top transit destination accounting for over 80 percent of all transit traffic through the Port of Mombasa. Another notable trend is the rise in the number of TEUs handled as Transshipment cargo that rose by 40.1%. This trend indicates the increasing importance of the port of Mombasa as a logistics transit hub in the region.

Destination of Container Traffic

For the period January – September 2018, Kenya remains the largest destination for imports (293,740 TEUs) and origin for exports (74,149 TEUS). The total volume of containers for Kenya accounted for 67.5% of containerized cargo handled at the Mombasa Port whereas transit cargo accounted for 32.4 % of containerized cargo amounting to 176,636 TEUs out of which 148,132 TEUS were imports and 28,504 TEUs were exports. Uganda accounted for the largest share of transit containerized cargo accounting for 25.6 percent of all the containerized cargo handled at the Port.

Cargo haulage by railway

Since the launch of cargo haulage on the Standard Gauge Railway from Mombasa to ICD Nairobi at Embakasi, the volume of cargo by rail has been increasing steadily. For the

period April to September 2018, overall total volume tonnage through SGR was approximately 1,662,824 tones. Similarly, the number of trains leaving Mombasa Port for Nairobi also increased to a high of 192 trains in August 2018 carrying a total of 20,254 TEUs (291,941 volume tonnage). In addition, total volume haulage in tonnage by Meter Gauge Railways is still significant and recorded as 213, 129 net tons which accounted for 11% compared to 89% moved by the SGR for the period April – September 2018.

Pipeline Transport Capacity

The Kenya pipeline company is mandated with transporting petroleum products from Mombasa to the hinterland. The main products moved along the pipeline are automotive gas oil (AGO), Motor Spirit Premium (MSP), Illuminating Kerosene (IK), Dual Purpose Kerosene (DPK) and SLOP–Slop refers to oil sludge from refineries, tank terminals, pipelines and petrochemical plants. Over the period April to September 2018, the Kenya pipeline moved a total of 1,517,605M³ of oil products destined for various destinations. Automotive Gas oil (diesel 2) was the highest volume of all the oil products moved over 5 months period with 744,615 cubic meters transported through the pipeline. Motor Spirit Premium commonly known as super petrol was the second highest product by volume with 581,111 cubic meters. Kenya and Uganda are the highest destinations for both Automotive Gas oil and Motor Spirit Premium.

Efficiency and Productivity

The analysis of efficiency and productivity on the Northern Transport Corridor considers various factors that affect maximization of outputs using the least possible cost and time. Some of the indicators include: duration a ship stays at the port; the quality of cargo handling; cargo evacuation process and procedures and quality of infrastructure for different intermodal transport networks. Port productivity and efficiency are important for improved logistics environment that will support trade facilitation and competitiveness initiatives.

Port indicators

Data shows improved Ship Turnaround Time, Vessel Waiting Time before berth and Vessel Productivity (Gross Moves per Hour at the port of Mombasa). This improved performance is attributed to increase in the number container handling terminals at the port of Mombasa. In addition, there has been increased investment in both shore and off shore equipment's which includes acquisition of modern tugboats and pilot boats that have boosted berthing operations. The improved productivity has been occasioned by the improved investment and utilization of ship yard equipment by the KPA. This includes increase in number of Ship to Gantry cranes, Rubber Tyred Gantry (RTG) cranes, Terminal Tractors among others.

Rates and Costs

Transport rates and costs are the expenses incurred by transporters to move cargo from one place to another. Such expenses comprise of fuel expenses, expenses related to non-tariff barriers, fixed costs such as road user charges for freight operators, expenses related to administrative costs among others. The cost could be determined by factors such as: distance, location, infrastructure status, administrative barriers, energy just to mention but a few. Road transport evidently plays a crucial role in the economy, freighting significant cargo volumes along Northern Corridor. Some of factors that have been identified to cause cost escalations include road tolls, multiple border charges and road conditions. A comparison is made with previous years same period. Generally, transport rates from Mombasa to Nairobi, Kampala reduced significantly implying good improvement in the business environment as well as improved road condition which has a positive bearing on costs.

Road conditions

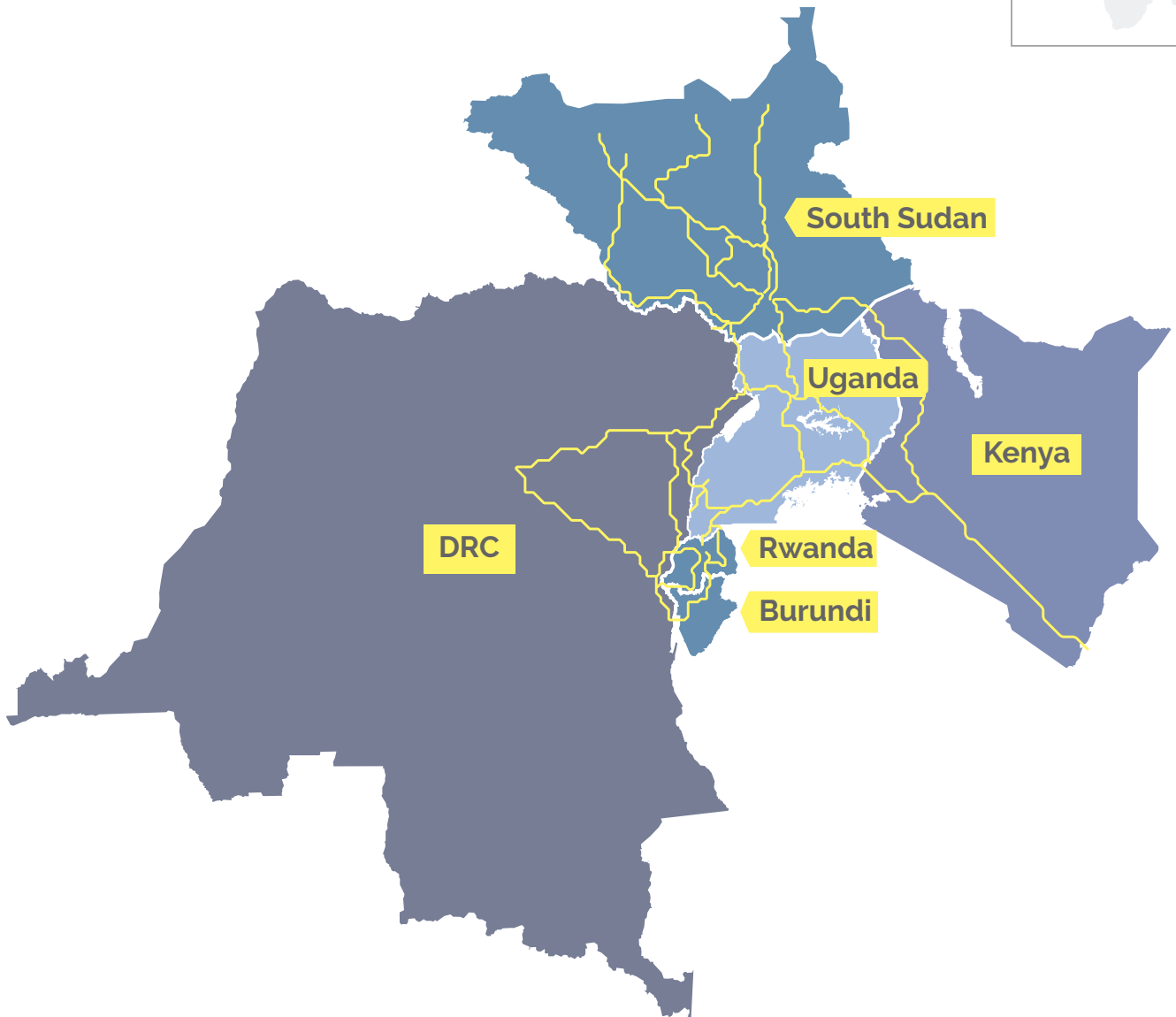
The Northern Corridor route in Kenya is the busiest pathway route linking the landlocked Countries to the Port of Mombasa. Over 75 percent of the road sections in Kenya are in good condition leaving about 14.8 percent in a bad condition. Generally, road condition has greatly improved when compared to previous years. For instance, the total length of bad road condition for the entire corridor road network in 2014 was estimated at 64% whereas as of September 2018, bad road condition reduced to 40%. Most of the roads in Uganda have improved when compared to 2012; the length of poor road network was estimated at 17 % in 2012 which reduced to 11% in 2017. South Sudan contributes to the highest length of 3,351 Km of roads in bad condition.

Intra-regional trade

Trade is a crucial part of the country's growth. The elimination or reduction of Non-Tariff Barriers (NTBs) will go a long way in improvement in trade facilitation among the Northern Corridor Member States. The Countries have embraced initiatives that are geared towards boosting intra-regional trade. For instance, being part of African Continental Free Trade Area (ACFTA) provides an opportunity for Northern Corridor Member States to access a large and dynamic market.

The Northern Corridor Member States' economies are agriculture dominated and dependent on manufactured goods which are currently being met through imports from the rest of the world rather than by local and regional firms; suggesting that all of the Northern Corridor Member States trade deficits are driven by manufactured imports. This may be attributed to limited value addition capacity. The trade indicators demonstrate that Northern Corridor Member States largely import from China, India, United Arab Emirates and Saudi Arabia whereas United States of America and Pakistan provides market for their exports. It was also notable that the Northern Corridor Member States export similar products.

■ NC Road Network



1.1 Introduction

The Northern Corridor Transport Observatory (NCTO) is a web-based performance monitoring tool that assesses and measures performance of various key performance indicators along the Northern Corridor (NC). The NCTO report seeks to evaluate the periodical performance as far as trade and transportation is concerned. The observatory is managed by the Northern Corridor Transit and Transport Coordination Authority (NCTTCA) Secretariat.

The Northern Corridor Transport Observatory tracks 36 performance indicators grouped in 7 categories: Volume and capacity, Tariff and Rates, Time and Delays, Efficiency and Productivity, Intra-regional trade, Road Safety and Green Freight.

1.2 Northern Transport Corridor Member Countries

The Member States of the Northern Corridor are Burundi, DRC, Kenya, Rwanda, South Sudan and Uganda. The Northern Corridor is a vital trade link for landlocked countries in the region.

1.3 Demographic and Socio-Economic Indicators for Northern Corridor Member States

The Member States of the Northern Corridor had a combined estimated population of 214.2 Million people in 2017 with a total surface area of 3.8 Million Km².

The large population which is expanding at an average of 2.9 per cent provides a huge market with complex trade and logistic dynamics considering the large surface that is served by the Northern Corridor Transport Network. In addition, the

Member States had Gross Domestic Product (GDP) of USD 127.7 Billion in 2017 with an average growth rate of 3.3%. All the member countries recorded positive GDP growth except for South Sudan.

The positive GDP growth heralds increased economic activity and rising incomes in the region. Table 1 shows selected indicators in the member countries.



Table 1: Demographic and Economic Indicators

Source: World Bank, World Economic Outlook Database, 2018

Country	Growth in GDP (%)	GDP 2017 USD(Billions)	Population 2017 (Million)	Area Million Km2	Population Growth rate (%)
Burundi	0.1	3.478	10.12	27,834	3.2
DRC	3.8	37.24	89.25	2,345,000	3.2
Kenya	6	74.94	49.7	582,644	2.5
Rwanda	7.2	9.137	12.5	26,338	2.4
South Sudan	-3.2	2.904	13.81	619,745	2.8
Uganda	5.9	25.89	38.82	241,037	3.3
	Average (3.3)	Total (127.7)	Total (214.2)	Total (3,842,598)	2.9

1.4 Logistic Performance Index for Member States

The Logistics Performance Index (LPI) scores countries on how efficiently they move goods across and within borders. LPI ranks countries on six dimensions of trade including customs performance, infrastructure quality, and timeliness of shipments.

In the 2018 LPI, Rwanda had the best score among the Member States and was ranked in position 57 worldwide with score of 2.97.

Table 2 shows the LPI scores and ranking for the member countries. The performance for Rwanda and second placed Kenya is buoyed by improvements in timeliness, infrastructure, and international shipments and logistics quality. These are some of the parameters that countries using the Northern corridor will need to place focus to improve trade logistic in the region.

1.5 Ease Of Doing Business Vis-À-Vis Trading Across Borders

The ease of doing business score captures improvements in parameters that affect business performance. One of the parameters critical to multilateral trade logistics is trading across borders.

Table 3 shows the performance of the Northern Corridor Member States on ease of doing business score and the trading across borders score. The scores range from 0 (worse) to 100 (best).

From Table 3 Rwanda, Kenya and Uganda scored above average in improved trading across borders. Improving trading across borders entails prudent management of time, costs and documentary compliance across the borders.

Table 2: Logistic Performance Index 2018 for Northern Corridor Member States

Source: World Bank, 2018. Note: South Sudan was not included in the 2018 international global survey on LPI by World Bank

2018	Overall LPI score	Overall LPI rank out of 160	LPI dimensions of trade					
			Customs	Infrastructure	International shipments	Logistics quality and competence	Tracking and tracing	Timeliness
Country	Score	Rank	Score	Score	Score	Score	Score	Score
Rwanda	2.97	57	2.67	2.76	3.39	2.85	2.75	3.35
Kenya	2.81	68	2.65	2.55	2.62	2.81	3.07	3.18
Uganda	2.58	102	2.61	2.19	2.76	2.50	2.41	2.90
DRC	2.43	120	2.37	2.12	2.37	2.49	2.51	2.69
Burundi	2.06	158	1.69	1.95	2.21	2.33	2.01	2.17

Table 3: Ease of Doing Business Global Ranking Out of 190 countries

Source: World Bank, 2018

Economy	Ease of Doing Business score		Global Rank out of 190	Trading across borders score	
	DB 2018	DB 2019		DB 2018	DB 2019
Rwanda	73.73	77.88	29	72.44	74.98
Kenya	65.06	70.31	61	67.63	68.06
Uganda	56.41	57.06	127	61.71	66.73
Burundi	46.68	47.41	168	47.34	47.34
DRC	36.18	36.85	184	1.26	3.45
South Sudan	33.30	35.34	185	26.19	26.19
Tanzania	53.29	53.63	144	20.21	20.21

1.6 Transport Observatory Bi-Annual Report, 13th Issue

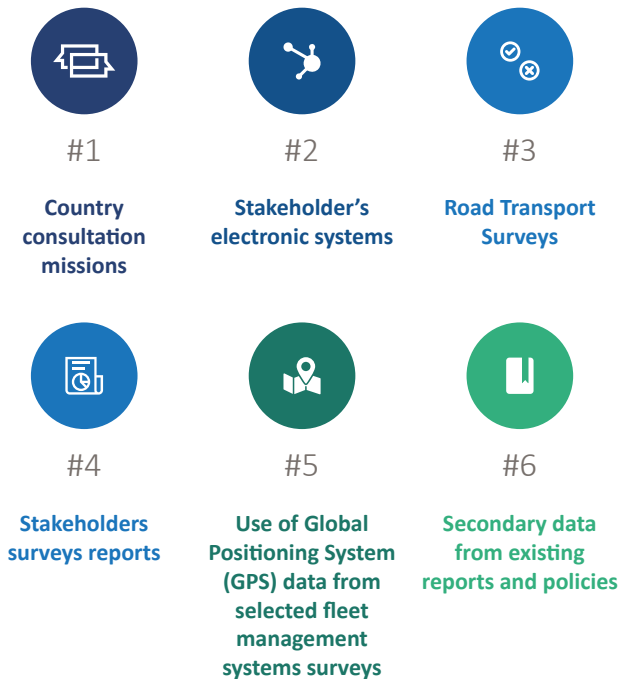
This report presents the status and progress report for the indicators that gauge performance of the Northern corridor. The report contains data gathered from all the six Member States of the Northern Corridor.

The indicators are categorized into: Volume and capacity, Tariff and Rates, Time and delays, Efficiency and productivity, Intra-regional trade and Road safety.

1.7 Methodology Transport Observatory Bi-Annual Report, 13th Issue

The performance of the Corridor is measured through a range of indicators whose data is obtained from multiple sources using different tools.

The main data sources for the transport observatory report include:



Data is then organized and analyzed 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.

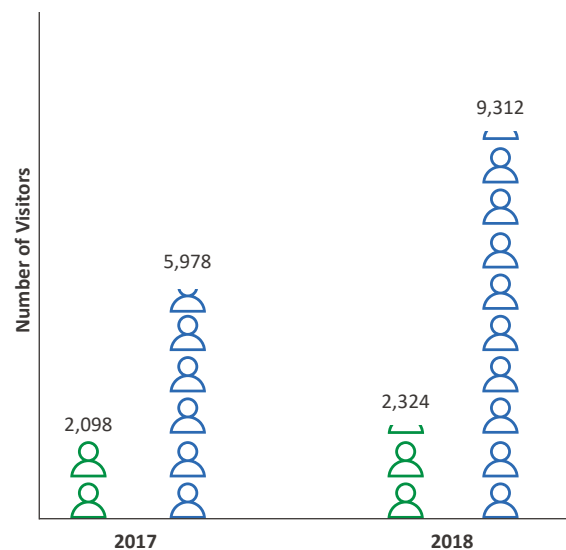
A report on findings and recommendations is validated and uploaded to the Northern Corridor online transport portal. The report is also disseminated among all the Northern Corridor member states.

A follow up on the current status of implementation is done by the Northern Corridor Secretariat through online monitoring using transport observatory portal which enables to understand stakeholder's needs and reasons for visiting the portal.

There is an improvement on the number of people visiting the online transport observatory tools. For instance, the total number of users of the online transport observatory portal for the period running from April to September increased from 8,076 in 2017 to 11,636 in 2018 as shown in figure 2 below. The observatory portal has been enhanced with the GIS component to graphically map the indicators to the map thereby improving user experience and access to information and data.

Figure 2: Number of visitors to the Transport Observatory Portal

Source: Northern- Corridor Transport Observatory October to March 2017 and April to September 2018



2.0 Volume and Capacity

This chapter presents analysis of the volume and capacity of cargo handled at the port of Mombasa and along the Northern Transport Corridor. The section looks at the following indicators:

- i. Cargo throughput through Mombasa port
- ii. Volume through the port of Mombasa per country destination
- iii. Container traffic (TEUS) through Mombasa port
- iv. Cargo throughput by mode of transport: Railways/ Pipeline/ Road/ Inland Waterways

2.1 Cargo Throughput through the Mombasa Port

Table 4 describes volume of cargo in tones through the port of Mombasa. Total cargo throughput at the port of Mombasa for the period January to September 2018 stood at 23,234,781 DWT having grown by 2.1% from 22,750,634 DWT over the same period in 2017.

The throughput comprised of 62.3% non-containerized cargo and 37.7% containerized cargo. The growth was driven by increase in conventional (13.2%) and containerized cargo (8.3%).

The data shows that countries using the Port of Mombasa are net importers with imports accounting for 87% of total port cargo throughput compared to 12.4% for exports. However, exports grew by 7% in 2018 when compared with the export volumes in 2017.



Containerized cargo offloading at Port of Mombasa
Flickr.com/TradeMark East Africa

Significant increase was also recorded in the volume of transshipment cargo. The main destination for transshipment cargo was: Dar-es-salaam, Pemba, Mogadishu and Mauritius.

Transshipment of cargo refers to off-loading of cargo from one ship and loading it onto another ship for transportation to the final destination.



The data shows that countries using the Port of Mombasa are net importers with imports accounting for 87% of total port cargo throughput compared to 12.4% for exports.

Table 4: Cargo throughput in DWT January to September 2017 and 2018

Source: Kenya Ports Authority (KPA), January to September 2017 and 2018

Type of Cargo	2017	2018	Volume Change	Growth %	% Share of Total Throughput 2017	% Share of Total Throughput 2018
Dry Bulk	6,380,332	6,587,157	206,825	3.20%	28%	28.40%
Liquid Bulk	6,168,271	5,952,859	-215,412	-3.50%	27.10%	25.60%
Conventional	1,629,042	1,413,721	-215,321	-13.20%	7.20%	6.10%
Sub-Total (Non - Containerized)	14,177,645	13,953,737	-223,908	-1.60%	62.30%	60.10%
Containerized	8,572,989	9,281,044	708,055	8.30%	37.70%	39.90%
Imports/Exports						
Imports	19,258,992	19,381,333	122,341	0.6	84.7	83.4
Exports	2,816,167	3,013,445	197,278	7	12.4	13
Transshipment	622,883	791,257	168,374	27	2.7	3.4
Restows	52,592	48,746	-3,846	-7.3	0.2	0.2
Total Throughput	22,750,634	23,234,781	484,147	2.10%	100%	100%

2.2 Transit Volume Through The Port Of Mombasa Per Destination Country

Cargo in Transit at Mombasa Port is the movement of cargo that is discharged and destined outside Kenya. Table 5 illustrates the share of transit cargo through the port of Mombasa based on the destination market.

The transit countries include all the six Member States of the NC, Tanzania, Somali and Ethiopia. The year 2018 recorded total transit throughput of 922,766 tones for the period January to September 2018 which translates to volume change of 23 percent compared to 2017 same period.

Growth in volumes shows expansion of trade in all transit countries except Rwanda which registered a decrease of 8 percent in volume. Burundi volume grew fifth fold when compared to 2017.

Uganda remains the top destination accounting for over 80 percent of all transit traffic through the Port of Mombasa.

2.3 Rate of Containerization through the Port of Mombasa

Containerization of cargo enhances standardization for efficient shipping and handling of cargo. Containerized shipment: ensures cargo safety; reduces transit time; and minimizes financial expenses during loading, discharging and trans-shipment. Data on Containerized cargo is provided in Twenty Foot Equivalent's (TEUS).

2.3.1 Container traffic (TEUS) through Mombasa port - In the period January- September 2018, the port of Mombasa registered 8 percent rise in cumulative container traffic to 957,568 TEU's from 886,727 TEU's over the same period in 2017.

Out this, 610,769 were full containers while 346,799 were empty. Imports accounted 449,914 TEUs out of which 440,874 were full containers. Conversely, out of the 424,442 TEUs that were exported 311,999 were empty Containers. This shows that most of trade along export route is still low.

Another notable trend is the rise in the number of TEUs handle as Transshipment cargo that rose by 40.1%. This trend indicates the increasing importance of the port of Mombasa in the region.

Table 5: Volume per country destination through the port of Mombasa (January - September 2018)

Source: Kenya Ports Authority (KPA), January to September 2017 and 2018

Country	Transit Traffic		Change		% Share	
	2017	2018	Volume	%	2017	2018
Uganda	628,695	755,197	126,502	20.1	84.1	81.8
South Sudan	52,103	81,984	29,881	57.3	7.0	8.9
D.R.C.	31,227	45,508	14,281	45.7	4.2	4.9
Rwanda	21,198	19,456	-1,742	-8.2	2.8	2.1
Tanzania	14,257	18,750	4,493	31.5	1.9	2.0
Somalia	237	1,298	1,061	447.7	0.0	0.1
Burundi	87	573	486	558.6	0.0	0.1
Others	20	-	-20	-100.0	0.0	0.0
Total	747,824	922,766	174,942	23.4	100.0	100.0

Table 6: Container Traffic from January to September 2017/2018 in TEUS

Source: KPA January to September 2017/2018

		Container Traffic		Change	
		2017	2018	Volume	%
Imports	Full	415,747	440,874	25,127	6.0
	Empty	4,718	9,040	4,322	91.6
	Total	420,465	449,914	29,449	7.0
Exports	Full	100,843	112,443	11,600	11.5
	Empty	304,195	311,999	7,804	2.6
	Total	405,038	424,442	19,404	4.8
Transshipment	Full	43,730	53,862	10,132	23.2
	Empty	13,010	25,648	12,638	97.1
	Total	56,740	79,510	22,770	40.1
Restows	Full	3,762	3,590	-172	-4.6
	Empty	722	112	-610	-84.5
	Total	4,484	3,702	-782	-17.4
Total	Full	564,082	610,769	46,687	8.3
	Empty	322,645	346,799	24,154	7.5
Total		886,727	957,568	70,841	8.0

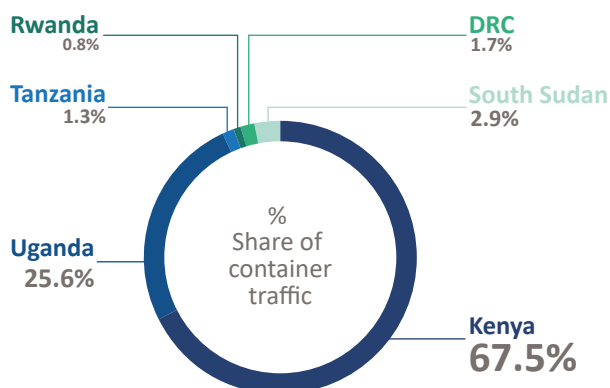
2.3.2 Container Traffic January - September 2017/2018 by destination

Kenya remained the largest destination for imports (293,740) TEUs and origin for Exports (74,149 TEUs). The total volume of containers for Kenya accounted for 67.5% of containerized cargo handled at the Mombasa Port.

Table 7: Container Traffic January – September 2017/2018 by destination

Source: KPA January to September 2018

Country	Exports by Origin	Imports by Destination	Total	% Share
Kenya	74,149	293,740	367,889	67.5
Uganda	19,052	120,814	139,866	25.6
Tanzania	941	6,176	7,117	1.3
Rwanda	446	3,868	4,314	0.8
DRC	2,473	6,653	9,126	1.7
South Sudan	5,532	10,269	15,801	2.9
Burundi	59	24	83	0.0
Somalia	1	222	223	0.0
Other Transit	0	106	106	0.0
Total Transit	28,504	148,132	176,636	32.4
Other Imp/Exp.	122,685	807	0.1	
Grand Total	102,775	442,557	545,332	100



Transit Cargo accounted for 32.4% of containerized cargo amounting to 176,636 TEUs out of which 148,132 TEUs were imports and 28,504 TEUs were exports. Uganda accounted for the largest share of Transit containerized cargo accounting for 25.6 percent of all the containerized cargo handled at the port.

2.4 Cargo Throughput by Railways - SGR and MGR

Among the key transport modes for cargo movement along the corridor is through road, rail, pipeline and inland waterways.

This sectors analyses cargo throughput and haulage by railway.

The metre gauge 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 route for rail transit.

The Mombasa-Nairobi SGR is the first step in the grand plan to build an East Africa railway network that will eventually link Kenya with Uganda, Rwanda, Burundi and South Sudan.

An extension of the SGR line to Naivasha from Nairobi is ongoing.

2.4.1 Equipment/ SGR assets locomotives and wagons

There are 56 locomotives operating on a 485 km-long standard gauge rail from the port of Mombasa to ICD Nairobi at Embakasi out of which 8 are used for shunting, 43 locomotives are used for freight services and 5 are used for passenger services.

Table 8 presents number of wagons available against the volume haulage threshold in TEUs per wagon.

Table 8: SGR assets as at September 2018

Source: KRC 2018

Wagon Asset Type	Quantity	Product	Container (TEUs) Per Wagon
X 70 (Flats – Normal)	820	Containers	2
NX 70 (Flats-long)	150	Containers	2
X2K (D-Stack)	80	Containers	4
C 70 (High Open)	490	Containers / Conventional	--
P 70 (Covered)	80	Conventional	--

2.4.2 Volume of cargo haulage by SGR - Since the launch of cargo haulage on the Standard Gauge Railway from Mombasa to the NICD, the volume of cargo received has been increasing steadily. For the period April to September 2018, overall total volume tonnage by SGR was approximately 1,662,824 tones out of which exports constituted 169,513 tonnes (10 percent) and imports recorded a share of 90 percent (1,493,310 tonnes).

Analysis of Mombasa Port monthly outbound cargo by SGR shows a significant increase of 60% from 184,486 tonnes in April 2018 to 295,788 tonnes in September 2018 as shown in Table 9.



Total import volume over the six month period ending September 2018 was around 1.5 million tones an equivalent of 90 percent of total volume haulage by SGR.

Table 9: Volume of Imports in tonnes from Mombasa port transported by SGR (April to September 2018)

Source: Kenya Railways Corporation (KRC) April to September 2018

Month	Number of trains (Msa –Nrb)	Total Import TEUS (Msa –Nrb)	Total Tonnage Imports
Apr	120	12,356	184,486
May	127	12,848	196,051
Jun	167	17,310	243,741
Jul	185	19,297	281,303
Aug	192	20,254	291,941
Sep	184	20,234	295,788
TOTAL	975	102,299	1,493,310

Similarly the number of trains leaving Mombasa Port for Nairobi also increased to a high of 192 trains in August 2018 carrying a total of 20,254 TEUs (291,941 volume tonnage).

As presented in table 10, volume of exports including empty containers from Nairobi to Mombasa port by SGR increased by 18 percent from 24,090 tonnes to 28,437 tonnes in April and September 2018 respectively.

Table 10: Volume of Exports from Nairobi to Mombasa port by SGR in tonnes

Source: Kenya Railways Corporation (KRC) April to September 2018

Month	Number of trains (Exports Nrb - Msa)	Total Export TEUs (Nrb -Msa)	Total Empty TEUs	Total Tonnage Exports
Apr	37	924	2,444	24,090
May	72	1,172	5,826	32,749
Jun	62	1,164	4,864	23,780
Jul	90	1,086	7,862	29,469
Aug	82	927	7,546	30,988
Sep	76	855	6,107	28,437
TOTAL	419	6,128	34,649	169,513

However, it is noted that volume of exports over this review period were fluctuating. A number of initiatives have been put in place to ensure fast and efficient rail bound cargo evacuation which include; establishment of a one-stop center and 24-hour working schedule at the ICD Nairobi, extension of the SGR line at the port to the conventional and bulk cargo section among others.

The number of export train trips also increased totaling to 419 trains with a high of 90 in July 2018 with 29,469 tonnes for export. The highest volume was recorded in the Month of May 2018 with 32,749 tonnes moved from Nairobi to the port of Mombasa.

2.4.3 Volume of cargo from the port of Mombasa by Meter Gauge Rail (MGR)

Total volume haulage in tonnage (net) by MGR for the period April 2018 to September 2018 was recorded as 213,129 net tones as shown in table 11 out of which 71 percent was destined to Kenya and 29 percent was destined to Uganda.

It can be noted that volume of cargo over the months was inconsistent. July 2018 had the highest volume of about 41,244 net tones and June 2018 registered the lowest volume nearly 28,864 net tones.

Combining both SGR and MGR volume from April 2018 to September 2018 for both imports and exports, railway throughput was recorded as 1,875,953 tonnes with SGR taking the largest share (89 percent) whereas MGR had 11 percent share of the total railway throughput.

A comparison shows that SGR has enhanced features and bigger capacity.

Table 11: Volume of cargo transported by meter gauge rail from April to September 2018

Source: KRC April to September 2018

Month	Wagons (Number)	Net Tonnes
Apr	1,320	36,521.49
May	1,221	31,849.42
Jun	999	28,863.76
Jul	1,556	41,243.87
Aug	1,306	35,639.19
Sep	1,292	39,011.08
Total	7,694	213,128.81

Table 12: Total volume throughput in tones from April 2018 to September 2018

Source: KRC April to September 2018

Month	Net Tonnes MGR	Total Tonnage SGR	Grand Total
April	36,521	208,577	245,098
May	31,849	228,800	260,649
June	28,864	267,521	296,385
July	41,244	310,772	352,016
August	35,639	322,929	358,568
September	39,011	324,225	363,236
Total	213,129	1,662,824	1,875,953

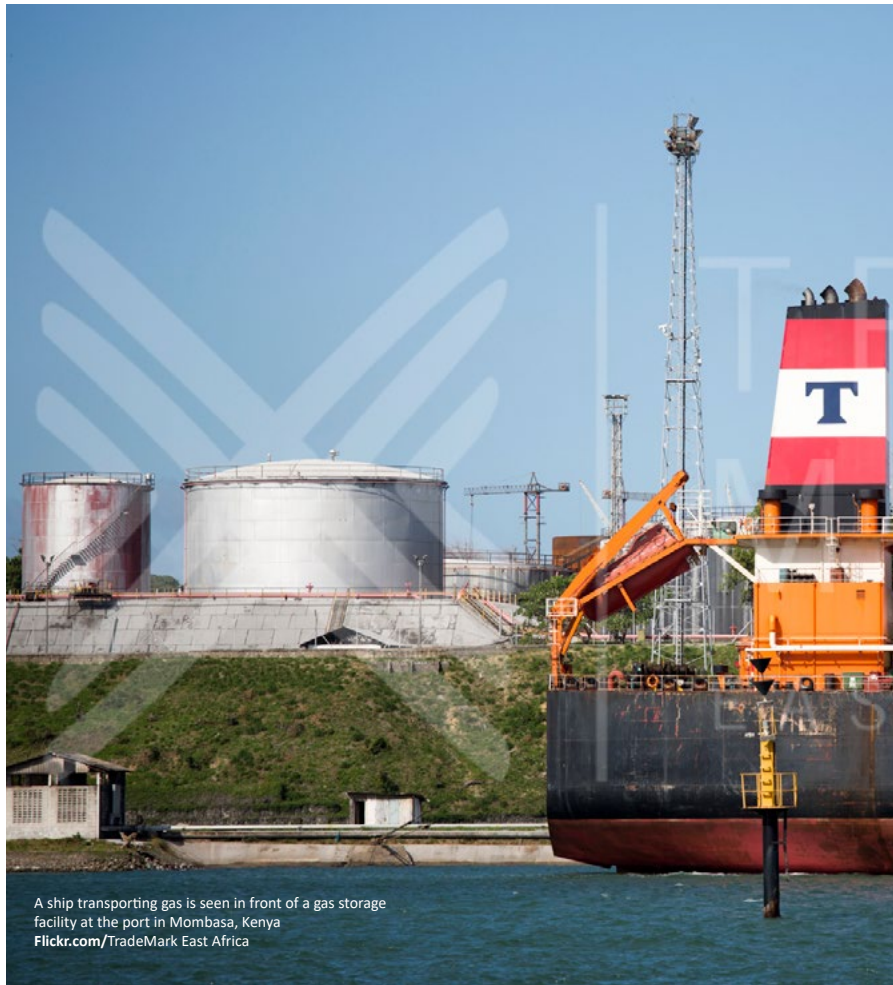
Table 12 also shows a steady increase in volume over the months. The numbers of MGR wagons over the period April 2018 to September 2018 was 12,099 categorized and is as follows as in the table 13 below. There were 98 locomotives reported during the review period.

Table 13: Capacity available for Number of MGR wagons by type in (Numbers) 2018

Source: KRC April to September 2018

Wagon Type	Apr	May	Jun	Jul	Aug	Sep	Average Capacity (Tonnes)
Covered	657	658	661	655	669	674	36
Tanks	115	115	129	125	116	103	36
Flats (Fwc, Lsc Fwh)	1,211	1,187	1,178	1,172	1,164	1,173	38 OLD/ 60 NEW TYPE
Low Sided	31	31	31	31	31	31	36
High Open	19	26	26	26	26	28	38
Total Freight	2,033	2,017	2,025	2,009	2,006	2,009	

2.5 Pipeline Transport Capacity



The Kenya Pipeline Company (KPC) is mandated with transporting petroleum products from Mombasa to the hinterland.

The pipeline infrastructure currently consists of 1,342 kilometers of multiproduct pipeline and associated facilities. The pipeline network in Kenya is shown in table 14.

There are 8 depots on the network and these are:

1. Moi International Airport
1. Nairobi Terminal Station
2. Jomo Kenyatta International Airport
3. Kipevu Oil Storage Terminal
4. Nakuru Terminal Station
5. Eldoret Terminal Station and;
6. Kisumu Terminal Station.

The Sinendet – Kisumu line is the latest addition to this network.

Table 14: Pipeline Network in Kenya

Source: <https://www.kpc.co.ke/pipelinenetwork>

Line Section	Length (Km)	Pipe Diameter (Inches)	Installed Flow Rate (M3/Hr)	Number of Pumping Stations
Mombasa – Nairobi (Line I)	450	14	830	8
Nairobi – Nakuru – Eldoret (Line II)	325	8/6	220	4
Sinendet – Kisumu (Line III)	121	6	100	-
Nairobi – Eldoret (Line IV)	325	14	311	2
Sinendet – Kisumu (Line VI)	121	10	350	-
Spur Line from KOSF to Shimanzi Oil Terminal	2.8	12	450	1
Changamwe – Moi International Airport	3.8	6	120	1

The main products moved along the pipeline are:

- ▶ Automotive gas oil (AGO)
- ▶ Motor Spirit Premium (MSP)
- ▶ Illuminating Kerosene (IK)
- ▶ Dual Purpose Kerosene (DPK)
- ▶ SLOP – *Slop refers to oil sludge from refineries, tank terminals, pipelines and petrochemical plants.*

2.5.1 Total volumes throughput M3 by Destination

Over the period April to September 2018, the Kenya pipeline moved a total of 1,517,605M3 of oil products destined for various destinations. Table 15 shows the volumes of the different oil products to the various countries of destination.

Kenya received the largest consignment of oil products with 622,738.64 cubic meters followed by Uganda with 591,777.75 cubic meters.

The Central African Republic, Burundi and Tanzania received the lowest volumes of oil products over this period.

Table 15: Total volumes in m3 by product by deport by destination (April to September 2018)

Source: KPC April to September 2018

Sum of Volume in M3 to various destination in months

TO	April	May	June	July	August	September	Total
Burundi	-	-	-	37.94	14.95	-	52.89
DRC	23,057.27	24,171.87	17,196.51	21,608.79	21,343.40	21,288.05	128,665.89
Kenya	102,264.78	109,221.80	95,416.66	105,456.65	120,101.39	90,277.36	622,738.64
Rwanda	2,849.44	2,127.23	929.26	1,825.31	422.45	828.97	8,982.66
South Sudan	27,485.54	35,071.25	27,851.66	25,957.00	27,405.73	21,511.01	165,282.19
Uganda	95,379.03	116,470.05	88,605.77	101,890.16	95,510.59	93,922.15	591,777.75
CAR	-	29.95	66.85	29.93	30.22	-	156.95
Tanzania	-	-	-	-	33.91	-	33.91
Total in M3	251,036.06	287,092.14	230,066.71	256,805.78	264,862.63	227,827.53	1,517,690.85

2.5.2 Total volumes in M3 by Product by Deport by Destination

Automotive Gas Oil (diesel 2) had the highest volume of all the oil products moved over 5 months period with 744,615 cubic meters transported through the pipeline.

Automotive Gas Oil has wide usage in road vehicles (trucks, buses, vans and cars) and other machinery that are powered by diesel engines. Motor Spirit Premium commonly known as super petrol was the second highest product by volume with 581,111 cubic meters. Kenya and Uganda are the highest destinations for both Automotive Gas Oil and Motor Spirit Premium.

Table 16 shows the volumes of products destined to the different countries. 2018, the Kenya pipeline moved a total of 1,517,605M3 of oil products destined for various destinations.

Table 15 shows the volumes of the different oil products to the various countries of destination. Kenya received the largest consignment of oil products with 622,738.64 cubic meters followed by Uganda with 591,777.75 cubic meters.

The Central African Republic, Burundi and Tanzania received the lowest volumes of oil products over this period.

Table 16: Volume in M3 to respective destination by product (April to September 2018)

Source: KPC April to September 2018: TZ represents Tanzania and CAR represents central Africa Republic

Product Type	Kenya	Uganda	S Sudan	DRC	Rwanda	Tz	CAR	Total
Automotive Gas Oil	299,613	297,365	88,308	55,465	3,673	34	157	744,615
Illuminating Kerosene	57,666	26,960	41	102	1,254	0	0	86,023
JET	1,934	58,515	43,068	2,375	0	0	0	105,892
Motor Spirit Premium	263,525	208,938	33,865	70,726	4,057	0	0	581,111
Total	622,739	591,778	165,282	128,666	8,983		157	1,517,605

Comparing volume of fuel dispatch from April to September for 2017 and 2018 by deport and by destination.

Table 17 shows that Rwanda fuel volume through Kenya decreased

significantly by 40% from 14,998 M3 in 2017 to 8,984 M3 in 2018. Similarly, Uganda witnessed the same trend recording a decrease of 13%.

On the other hand, there was a positive performance of volume of fuel dispatched to DRC and South Sudan which grew by 36% and 8% respectively during the same review period.

Table 17: Volume in M3 to respective destination (April to September 2017 and 2018)

Source: KPC April to September 2017 and 2018

Product	D.R.C.		Uganda		South Sudan		Rwanda	
	Apr-Sep 2017	Apr-Sep 2018	Apr-Sep 2017	Apr-Sep 2018	Apr-Sep 2017	Apr-Sep 2018	Apr-Sep 2017	Apr-Sep 2018
Automotive Gas Oil	54,128	55,465	329,912	297,365	70,203	88,308	7,950	3,673
Illuminating Kerosene	1,583	102	27,384	26,960	325	41	2,490	1,254
Jet A-1	0	2,375	63,108	58,515	45,598	43,068	37	0
Motor Spirit Premium	39,157	70,726	256,312	208,938	37,296	33,865	4,521	4,057
Total	94,868	128,668	676,716	591,778	153,422	165,282	14,998	8,984
		36%		(-13%)		8%		(-40%)

2.5.2.1 Sum of Volume in M3 to various destination from depots in April to Sept 2018

Table 18 shows the volume of oil products from the 3 main terminal depots to the various destinations in the region.



The Eldoret Terminal Station released a total of 651,573.036 cubic meters with Uganda being the main destination accounting for 246,573 cubic meters.

The other major destinations of oil products from the Eldoret Terminal station are Kenya (196,510.4 M3), South Sudan (126,983.22M3) and DRC (84,475M3).

The Kisumu Terminal Station had Uganda as the main destination with 301,087 M3 with Kenya having the second largest volume of products of 186,816.9 M3.

The Nakuru Terminal released its consignment that mainly served the Kenyan Market.

Table 18: Volume of fuel in M3 to various destinations from depots in April to September 2018

Source: KPC April to September 2018

Country	Sum of Volume in M3		
	Eldoret Terminal Station	Kisumu Terminal Station	Nakuru Terminal Station
Burundi	37.935	-	14.945
CAR	156.945	-	-
DRC	84,475.138	36,001.13	8,189.612
Kenya	192,510.427	186,816.9	243,411.4
Rwanda	486.441	8,463.374	32.841
South Sudan	126,983.22	20085.06	18,213.92
Tanzania	33.908	-	-
Uganda	246,889.022	301,087.3	43,801.42
Total	651,573.036	552,453.7	313,664.1

3.0 Rates and Costs

3.1 Introduction

Transport rates and costs are the expenses incurred by transporters to move cargo from one place to another. Such expenses comprise of fuel expenses, expenses related to non-tariff barriers, fixed costs such as road user charges for freight operators, expenses related to administrative costs among others.

The cost could be determined by factors such as: distance, location, infrastructure status, administrative barriers, energy just to mention but a few. Road transport inarguably plays a crucial role in the economy, freighting significant cargo volumes along Northern Corridor. There are two standard intermodal shipping container sizes in use throughout

the world, the 20 feet and 40 feet. Determination of transport costs is beyond the scope of this report, this report only features the average rates charged by various transporters across the Northern Corridor Member States road routes during the period April to September 2018.

3.2 Road Freight charges in Kenya

Table 19 gives a comparison of road freight charges in Kenya to different destinations along the Corridor in US dollars for the period April to September 2018. A comparison is made with previous years same

period. Generally, transport rates from Mombasa to Nairobi and Kampala reduced significantly between 2015 and 2017 mainly due to improvement in the business environment, reduced fuel prices and also improved road condition which has a positive bearing on costs.

However, the average transport rates in 2018 increased partly due to increased fuel prices.

On the other hand increase in the average transport rates from Mombasa to Bujumbura and Juba between 2015 and 2018 may also be attributed to political and security concerns.

Table 19: Average Transport Rates (USD) to various destinations by Kenyan transporters

Source: KTA **Note in 2018, data was not available from KTA, therefore mirror statistics was applied.

From	To	Distance (KM)	Sept 2015	Sept 2016	Sept 2017	Sept 2018**
			Tariff Per Container/Km	Tariff Per Container/Km	Tariff Per Container/Km	Tariff Per Container/Km
Msa	Nairobi	481	2.24	1.78	1.62	1.79
Msa	Kampala	1,169	2.61	1.86	1.79	2.22
Msa	Kigali	1,682	2.11	2.16	2.23	2.38
Msa	Bujumbura	1,957	1.74	2.55	3.07	
Msa	Goma	1,840	1.98	3.33	3.13	
Msa	Juba	1,662	2.45	2.86	3.01	

3.3 Road Freight charges in Burundi

Table 20 shows the transport tariff on the different routes in Burundi in USD per ton. The tariff for imports from Mombasa to Bujumbura through Kampala and Kigali were the lowest at USD 0.077 per ton per Kilometer.

Imports from Nairobi to Bujumbura through Namanga cost USD 0.09 per kilometer per ton. Imports to Bujumbura from Kigali, Kampala and Goma were much costlier per Kilometer per ton at USD 0.145, 0.127 and 0.186 respectively.

This in spite of the fact that the latter are shorter distances. Some of factors that have been identified to cause cost escalations include road tolls, multiple border crossing charges and road conditions.

Table 20: The current transport tariff in USD for Burundi transporters

Source: Association of Burundi International Transporter (ATIB), September 2018 * (2017 data not available)

Imports		Distance (Km)	Rates Per Ton (USD)	Average cost per / Km per Ton		Number of Round Trips per Month
From	To		Sept 2018	Sept 2017	Sept 2018	
Mombasa	Bujumbura (through Kampala-Kigali)	1,957	150	0.08	0.077	--
Nairobi	Bujumbura (through Namanga)	1,476	135	0.09	0.091	--
Kigali***	Bujumbura	275	40		0.145	
Kampala	Bujumbura	788	100	0.13	0.127	--
Goma	Bujumbura	431	80	0.19	0.186	--

Exports		Distance (Km)	Rates Per Ton (USD)	Average cost per / Km per Ton	Number of Round Trips per Month	Number of Round Trips per Month
From	To		Sept 2018	Sept 2017	Sept 2018	
Bujumbura	Goma	431	80	0.14	0.186	1
Bujumbura	Kampala	788	60	0.10	0.076	2
Bujumbura	Nairobi	1,476	130	0.08	0.088	1
Bujumbura	Mombasa	1,957	160	0.07	0.082	1
Bujumbura	Kigali	275	--	--		2
Bujumbura*	Bukavu	165	40	--	0.242	--
Bujumbura*	Bugarama	34	20	--	0.588	--
Bujumbura*	Nakuru	1,134	64	--	0.056	--
Bujumbura*	Tororo	990	100		0.101	

3.4 Road Freight charges in the Democratic Republic of Congo

Transport rates and cost on the Democratic Republic of Congo is shown in Table 21.

The Tariff in Congo were the highest on the Bunia- Goma and Butembo - Goma routes costing \$5.61 and \$ 5.287 respectively.

The high cost on these routes could be attributed to poor road conditions on these stretches.

The rates to Goma from Mombasa, Nairobi and Juba were cheaper at \$1.733, \$1.584 and \$0.972 respectively.

Comparing the cost of transport within DRC suggest that the rates in the other countries are cheaper.

The data also shows that the cost of exports from Goma were cheaper possibly because most of the containers were empty.

Table 21: The current transport tariff in USD for DRC transporters

Source: FEC, September 2018

From	To	Distance (Km)	Rate (USD) for 20 feet container 2018	Rate (USD) / TEU per Km 2017	Rate (USD)/ TEU per Km 2018
Imports					
Mombasa	Kisangani	2,466	-		1.733-1.419
Mombasa	Goma	1,838	3,000	1.77	1.632
Nairobi	Goma	1,357	2,150	1.24	1.584
Juba	Goma	1,724	1,675		0.972
Kampala	Goma	669	1,500	1.58	2.242
Bunia	Goma	535	3,000		5.607
Butembo	Goma	284	1,500		5.282
Exports					
Goma	Kampala	669	1,180	1.67	1.764
Goma	Nairobi	1,357	1,680	1.24	1.238
Goma	Mombasa	1,838	1,820	0.99	0.990

3.5 Road Freight charges in Rwanda

Table 22 presents the transport tariffs for transporting containers in Rwanda in USD per kilometre.

The highest costs were recorded on the Kigali –Bujumbura, Goma and Juba routes with transporters charging \$6.55, \$6.41 and \$6.43 respectively per kilometre.

The lowest cost was on the Kigali-Mombasa and Mombasa - Kigali routes which had the fairest cost

on both the import and export journeys. Transporters charged \$2.38 per container per kilometre from Mombasa and \$2.54 from Nairobi. The return cost on these routes were \$ 1.68 and \$1.67 respectively.

Generally, like in other Member States the cost of moving a container destined for export are cheaper when compared to imports.

The data from Rwanda also shows the

transport rates charged by fuel tankers per cubic metre per kilometre. The cost of transporting by a tanker from Mombasa and Dar-es-salaam stood at \$130 per cubic meter.

The cost of transporting by fuel tankers from Eldoret and Kisumu was \$60 per cubic metre, \$70 from Nakuru and \$90 from Nairobi.

The major factor in transportation by tankers is the distance covered.

Table 22: The current transport tariff in USD for Rwanda transporters

Source: ACPLRWA, 2018

From	To	Distance (Km)	Rate/TEU(USD)	Rates Per TEU/km (USD)	Number of Round Trips
Mombasa	Kigali	1,682	4,000	2.38	--
Nairobi	Kigali	1,201	3,000	2.50	--
Bujumbura	Kigali	275	1,800	6.55	--
Kampala	Kigali	513	2,000	3.90	--
Goma	Kigali	156	1,000	6.41	--
Kigali	Goma	156	1,000	6.41	6
Kigali	Kampala	513	1,600	3.12	7
Kigali	Bujumbura	275	1,800	6.55	2
Kigali	Juba	1,166	7,500	6.43	1
Kigali	Nairobi	1,201	2,000	1.67	4
Kigali	Mombasa	1,682	3,000	1.78	2.5

3.5.1 Transport rates for fuel tankers - Fuel products destined to Rwanda from Mombasa, Nairobi, Nakuru, Kisumu, Eldoret and Dar-es Salaam are presented in Table 23 below as at September 2018 in US\$ per cubic meter.

A bigger proportion of Rwanda's fuel comes in through the Central Corridor. The Kigali-Dar es Salaam route is about 1,495 kilometers long, compared to the Kigali-Eldoret route which is 860 kilometers.

Table 23: Transport Rates for oil tankers by Rwanda Transporters

Source: ACPLRWA, 2018

From / To	Kigali (\$) :USD/Cubic Meter
Mombasa	130\$/M3
Nairobi	90\$/M3
Nakuru	70\$/M3
Kisumu	60\$/m3
Eldoret	60\$/M3
Dar-es salaam	130\$/M3

3.6 Road Freight charges in South Sudan

South Sudan is expansive and has some of the longest distances covered by transporters.

Table 24 shows that the cost of transport to and from Nairobi and Mombasa were the lowest when compared to other destinations. Exports from Nairobi to Juba attracted a cost of \$2.183 for a TEU per Km while from Mombasa the cost stood at \$2.708.

The Juba – Kigali route recorded the higher cost per kilometre standing at \$5.146 per TEU.

Table 24: current transport tariff in USD for South Sudan transporters

Source: B \$ \$ group of companies, 2018

From	To	Distance (Km)	Rate (\$) for 20 feet container	Rates Per TEU/ Km (USD)
Msa	Juba	1,662	4500	2.708
Nairobi	Juba	1,145	2500	2.183
Kampala	Juba	653	2500	3.828
Juba	Kigali	1,166	6000	5.146
Juba	Kampala	653	2000	3.063
Juba	Nairobi	1,145	3000	2.620
Juba	Msa	1,662	3500	2.106

3.7 Road Freight charges in Uganda

Table 25 presents the transport tariff in Uganda. The highest rates were recorded on the Kampala - Butembo routes with cost of \$7.8 per container per kilometre for exports and \$4.33 for imports.

Conversely Kigali- Kampala has the lowest tariffs on imports followed by Mombasa-Kampala. The data also shows that cost of transporting cargo from Mombasa to Kampala was lower than Mombasa - Nairobi despite being longer distance.

Table 25: The current transport tariff in USD (\$) for Uganda transporters

Source: UNTA, 2018

From	To	Distance (Km)	20 feet container Rate (USD)	Rates Per TEU/Km (USD)	Number of Round Trips per month
Mombasa	Kampala	1,169	2,300	1.97	--
Nairobi	Kampala	688	1,600	2.33	--
Juba	Kampala	653	1,500	2.30	--
Bujumbura	Kampala	788	1,600	2.03	--
Kigali	Kampala	513	1,000	1.95	--
Goma	Kampala	669	1,500	2.24	--
Bunia	Kampala	718	2,200	3.06	--
Butembo	Kampala	577	2,500	4.33	--
Kampala	Bunia	718	300	0.42	3
Kampala	Butembo	577	4,500	7.80	3
Kampala	Goma	669	2,000	2.99	4
Kampala	Kigali	513	1,700	3.31	5-6
Kampala	Bujumbura	788	3,100	3.93	4
Kampala	Juba	653	2,100	3.22	3
Kampala	Nairobi	688	800	1.16	--
Kampala	Mombasa	1,169	1,000	0.86	4

4.0 Efficiency and Productivity

The analysis of efficiency and productivity on the Northern Transport Corridor considers various factors that affect maximization of outputs using the least possible cost and time.

Some of the indicators include: duration a ship stays at the port; the quality of cargo handling; cargo evacuation process and procedures and quality of infrastructure for different intermodal transport networks.

Port productivity and efficiency are important for improved logistics environment that will support trade facilitation and competitiveness initiatives.

4.1 Ship turnaround time at the port of Mombasa

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

Mombasa seaport recorded 3.2 days as ship turnaround time with a standard deviation of 2.4 days during the period under purview (April to September 2018) as shown in figure 3 against the set target of 3 days.

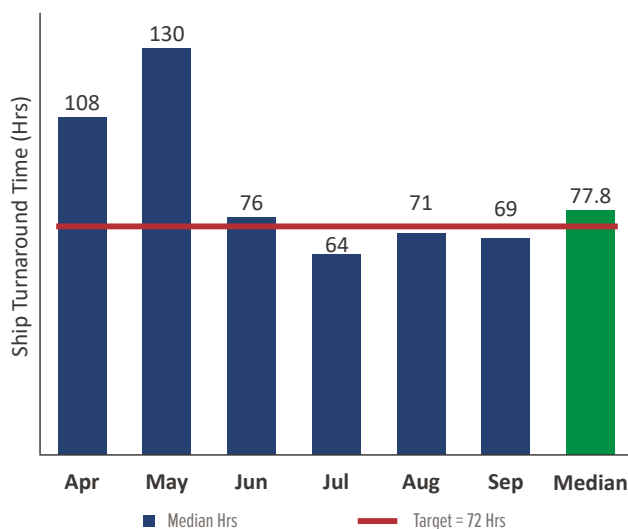
Analysis illustrates a wavering performance for the ship turnaround time ranging from a high of 130 hours in May 2018 and a low of 64 hours in September 2018.

Turnaround time improved from 108 hours to 69 hours in April and September 2018 respectively, suggesting increased productivity and efficiency at the port of Mombasa. This positive performance can be related to a number of capacity improvement projects Kenya Ports Authority (KPA) has been implementing. KPA has continuously been implementing initiatives towards port expansion in line with increased cargo throughput volumes. The ultimate goal is to attain the 24 hours (1 day) ship turnaround global benchmark time.

Efficiency of ship operation in container lines is closely related to the ship’s time at sea and at the port. Ideally the shortest ship turn-around time is the most desirable because the less time spent in port translates to higher efficiency.

Figure 3: Ship turnaround time at the port of Mombasa in hours; April to September 2018

Source: KPA April to September 2018



4.2 Vessel waiting time before berth at the port of Mombasa

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

Vessel waiting time is a subset of the vessel turnaround time and a key determinant of competitiveness of port terminals.

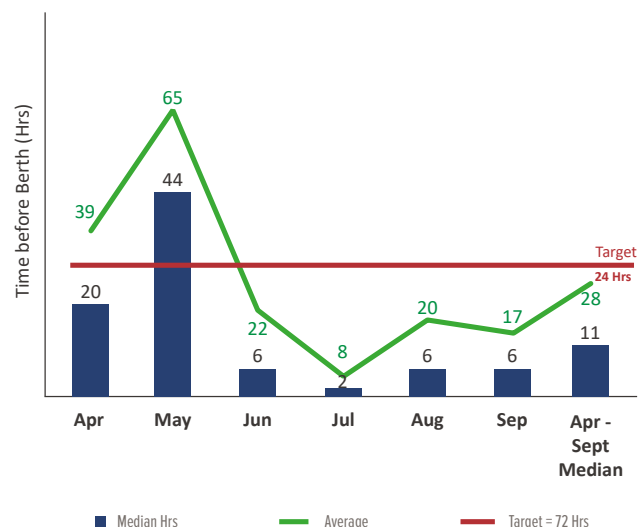
For an efficient port, less waiting time is preferred as opposed to those with longer waiting times. Figure 4 shows the performance in the vessel waiting time at the Port of Mombasa for the period April to September 2018. Vessel waiting time before berth recorded a low of 2 hours in July and high of 44 hours in May 2018.

The median performance for the review period was 11 hours against the 24 hour target suggesting enhanced efficiency. This improved performance is attributed to increase in the number container handling terminals at the port of Mombasa.

In addition, there has been increased investment in both shore and off shore equipment’s which includes acquisition of modern tugboats and pilot boats that have boosted berthing operations.

Figure 4: Average Vessel Waiting Time before Berth at the port of Mombasa (Apr-Sept 2018) in Hours

Source: KPA April to September 2018



4.3 Vessel Productivity (Gross Moves per Hour)

Other ways of determining efficiency and productivity include; Gross moves per hour which focuses on a crane’s ability to move containers over the quay wall each hour, berth moves per hour focuses on the total number of containers that all cranes moved on or off a particular vessel each hour, and man hours per move which refers to the efficient use of the total labor force required for the operation to move the containers across the quay wall.

Gross moves per hour, defines the total container movement (on loading, offloading and repositioning) divided by the number of hours for which the vessel is at berth.

From Table 26, the average Gross Moves at the Port of Mombasa for container vessels handled increased steadily from 24.79 in April 2018 to 36.37 in July 2018 and decreased to 30.99 in September 2018.

Table 26: Vessel Productivity at the port of Mombasa from April to September 2018

Source: KPA April to September 2018

Month	No of ships	Moves	TEUs	Gross Moves per hour	Average TEUs Per ship
Apr	45	66,227	92,381	24.79	2,053
May	41	64,757	91,627	22.25	2,235
Jun	41	71,882	101,052	33.11	2,465
Jul	47	75,674	108,468	36.37	2,308
Aug	47	77,603	112,178	33.75	2,387
Sept	48	75,026	107,611	30.99	2,242
Total / Average	269	431,169	613,317	30.21	2,280

July saw the best productivity records registering an average of 36.37 gross moves per hour compared to 22.25 recorded in May 2018. Over the period, 269 ships were recorded and the monthly call varied from a low of 41 ships in May and June to a high of 48 ships in September 2018 delivering a total of 613,317 TEUs. Productivity in Gross Moves Per hour has improved two fold compared to the port charter baseline of 16.7 Gross Moves per hour in 2013.

The improved productivity has been occasioned by the improved investment and utilization of ship yard equipment by the KPA. This includes increase in number of Ship to Gantry cranes, Rubber Tyred Gantry (RTG) cranes, Terminal Tractors among others.

4.4 Containerized Cargo Dwell Time at the Port of Mombasa

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.

Mombasa seaport handles about 60 per cent of the regional transit traffic on the ports annually compared to Dar es Salaam port which handles the remaining 40 per cent.

Kenya Ports Authority has been implementing programmes geared toward enhancing efficiency and further reducing overall logistics costs.

These programmes include expansion and construction of additional terminals, acquisition of modern equipment’s, improvements in documentation and clearance processes and automation of container handling processes.

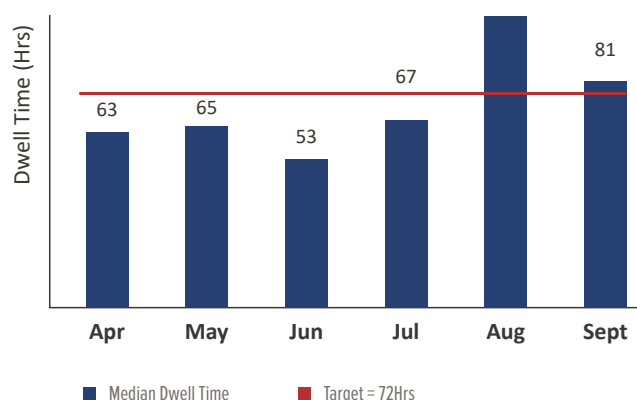
From figure 5, it took 63 hours to evacuate containers from the port premise in April 2018 but this time rose to and 81 hours in September 2018, an increase of 29 percent. It can be noted there is variability in cargo dwell time over the period under review with the month of June 2018 recording the best cargo dwell time of 53 hours whereas August 2018 recorded the poorest dwell time of 114 hours.

This performance is still way below the port charter target of 72 hours dwell time and 48 hours international benchmarking standards.

The high cargo dwell time in August and September 2018 was mainly attributed to delayed offtake of cargo from the Port by SGR as a result of the destination point; ICDN being congested.

Figure 5: Average containerized cargo dwell time in hours April to September 2018

Source: KPA April to September 2018



The congestion of ICDN was attributed to a number of factors which included; the SGR train on average per day delivering more cargo to ICDN than what was being taken out of the ICD by the owners. Poor import cargo offtake from ICDN was attributed to a number of challenges which included; inadequate access roads to the ICD used by trucks to collect cargo, slow clearance of cargo, delays in collection of cargo from the ICD by the owners after it has been cleared and the capacity of the ICD was over stretched.

The stakeholders also were still getting acclimatized to the processes of handling and clearance of cargo transported by SGR on one hand and return of empty containers on the other hand which also contributed to the container congestion both at ICDN and Port Reitz – Mombasa.

The average cargo dwell time is a culmination of time taken to unload vessels and store containers in yards, transaction time between the importers, port services and customs procedures and the storage time. Mombasa port has a free period of 9 days.

Delays in ports add to the cost of goods. If the problem of congestion of ICDN is resolved, implementation of the current initiative at Mombasa Port to load containers onto the SGR wagons ex-hook from vessels, will greatly reduce the average container dwell time at the Port. Furthermore, this initiative will enhance productivity and efficient use of cargo handling equipment at the Port.

4.5 Time Taken at the Document Processing Centre (DPC) at Mombasa port

This is the time taken by customs to pass an entry lodged by a clearing agent. The document processing center involves clearance by Customs.

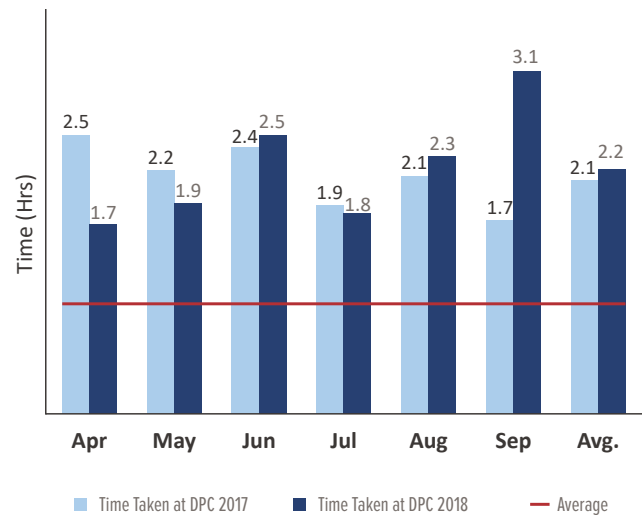
This is also a key indicator in determining port efficiency through service delivery. DPC time has been fluctuating month by month in the year 2017 and 2018 as shown in the figure 6.

The results indicate that customs authorities have not achieved the target of one hour since 2017 and September 2018 recorded the highest DPC time of 3.1 hours. The performance calls for need to fully implement all the interventions to help reduce the DPC time in the future.

Promotion of pre-clearance of cargo by enabling and encouraging the shippers to declare their cargo 48 hours before arrival of vessels at the Port; Furthermore, Customs should facilitate partial release of cargo.

Figure 6: Time Taken at the Document Processing Centre in hours April to September 2017/18

Source: KPA 2018



4.6 One Stop Centre Clearance Time

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

As illustrated in figure 7, average time spent at One Stop Centre for the period (April to September) reduced gradually from 54 hours in 2015 to 49 hours in 2016 and 2017. However this time increased significantly to 56 hours in 2018. The performance is two and a third times higher against the set target of 24 hours pointing to prevailing inefficiencies.

The underperformance is partly attributed to late submission and amendment of customs entries by clearance agents and shortcomings in coordination of joint verification of cargo. Furthermore, it requires a couple of days before results can be obtained for some of the tests carried out on imported goods by standards agencies.

Figure 7: Average Time taken at one stop centre clearance in hours

Source: KPA 2018

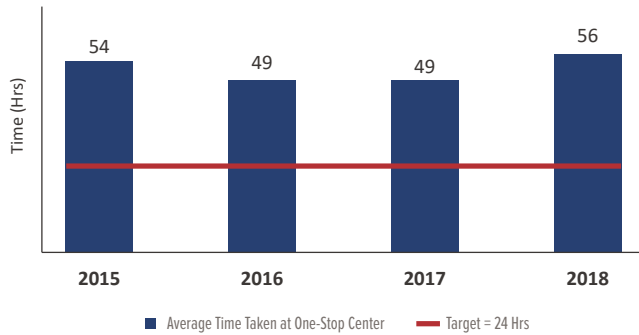
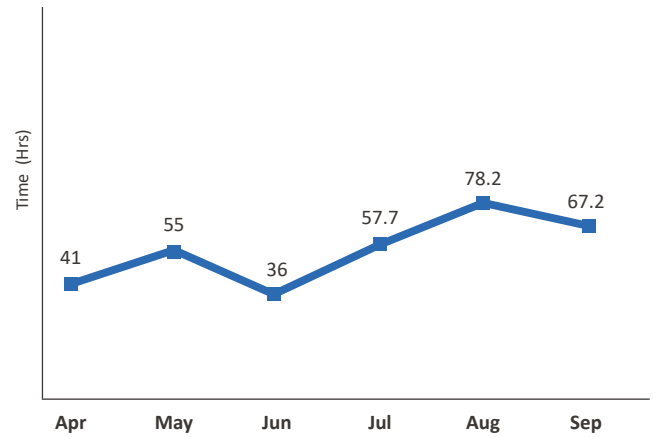


Figure 8 shows that performance in time taken at the one stop center clearance transit time fluctuated in 2018 and is far beyond the set target of 24 hours. Conducting joint verification and conducting verification of transit cargo at the countries of destination will go a long way in attaining this indicator.

However, it should be noted that currently the proportion of goods cleared in Mombasa whose tests take long before results are released has increased thereby increasing the average time of clearance at the One Stop Center.

Figure 8: Average time taken at one stop centre April – September 2018

Source: KRA April to September 2018



4.7 Time taken after customs release at the port of Mombasa

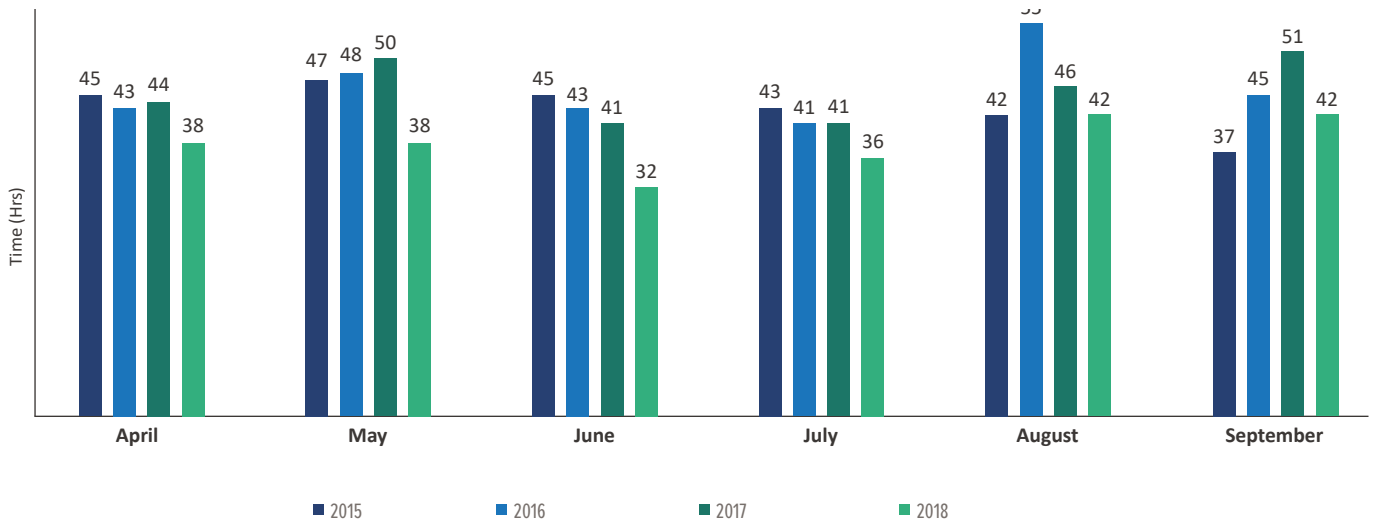
Time taken after customs release refers to the period it takes to evacuate the cargo from the port after it is released by Customs.

The time after customs release has a significant bearing on the port dwell time. Data from figure 9 shows time taken after customs release improved in 2018 when compared to other years.

Some of the commitments aimed at improving performance for this target include: automating gate clearance procedures and ensuring 24 hour operations.

Figure 9: Time taken after customs release

Source: KRA April to September 2018



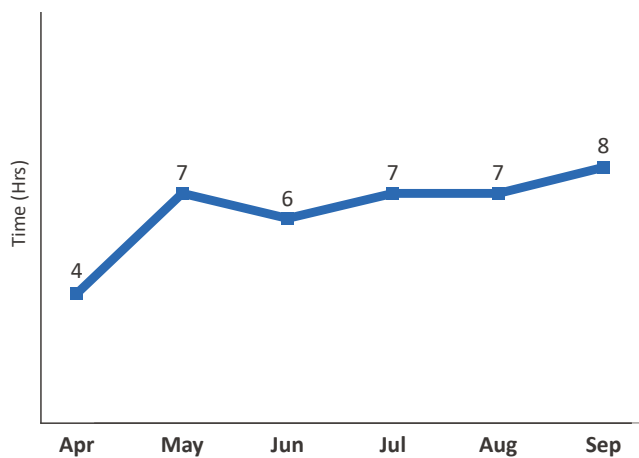
4.8 Truck turnaround time at the Port of Mombasa

Turnaround time is the average time a truck takes from entry to exit from the port of Mombasa.

As indicated in figure 10 truck turnaround time has been increasing from 4 hours in April 2018 to 8 hours in September 2018.

Figure 10: Average Truck Turnaround Time April – September 2018 at Mombasa Port in Hrs

Source: KPA 2018



High truck turnaround time at the Mombasa Port is partly attributed to the congestion of traffic along the roads leading to the port and time it takes before a truck is loaded or offloaded. Currently there are road works ongoing on roads around the port area.

However, with time the Dongo Kundu road is expected to ease the congestion of traffic for trucks leaving the Port to destinations along Mombasa – Nairobi road and beyond.

The scanning of cargo at the exit gates also contributes to the high truck turnaround time at the Mombasa Port. The area of improvement that would greatly enhance faster truck turnaround times is speeding up process of obtaining gate passes for trucks, putting in place a mechanism to expedite offloading of exports as well as loading of imports on trucks for delivery out of the port.

Put in place a mechanism to speed up clearance at the gates delays at the gates contribute to the build-up of queues at the exit/entry gates among others.

4.9 Quality of the Transport Infrastructure along the Northern Corridor

As part of the effort to improve the competitiveness of Mombasa port, the member states have focused on expanding of infrastructure for different surface modes of transport along the Northern Corridor.

In the month of June 2018, Kenya hosted the 14th Heads of States Summit of the Northern Corridor Integration Projects (NCIP). The Summit reaffirmed the Leaders' commitment to advancing regional integration while underscoring the importance of accelerating socio-economic transformation, industrialization and employment creation.

Among the key projects that featured prominently during the meeting is the road network of the formation of Trans-Africa transit traffic and trans-shipment infrastructure to reach out beyond the EAC region with the main aim to promote trade.

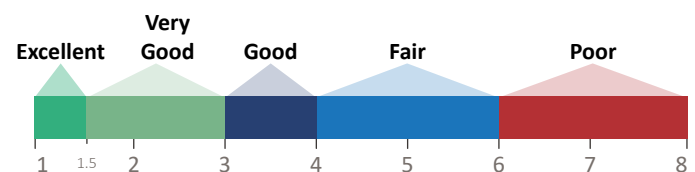
The total length of the nine highways in the network is approximately 56,683 km. Assessing road condition status is crucial not only for seamless movement of goods, services and people, but also for safety, road service life, fuel consumption and maintenance costs among others.

There are various parameters that are widely used to assess road surface conditions among them International Roughness Index (IRI). IRI is a standardized and widely used parameter to quantify road roughness. A low IRI value indicates a smooth road (excellent condition) and a high value indicates that the road has distresses, such as potholes or deep depressions (poor condition).

This section of the report is interested in the quality of roads within the Northern Corridor Member States as defined by the International Roughness Index (IRI).

The IRI description is presented in below.

International Roughness Index



4.9.1 Road Condition in Kenya along the Northern Corridor

Kenya serves as inevitable link because it is the main pathway route linking the landlocked countries to the port of Mombasa. Over 75 percent of the road section is in good condition and 14.8 percent is in poor condition.

There are ongoing improvements on sections of the road at Mombasa-Mariakani which are under rehabilitation and Bachuma Gate –Voi work is 100% substantially complete; maintenance works of Eldoret-

Webuye and Webuye-Malaba road sections are underway.

The construction of Interchanges and Approach road Interchanges at Nyahururu, Njoro and Mau Summit turnoffs have been completed and are in use. However, work is still ongoing on the Interchanges at Kaburengu, Webuye, Kericho and Ahero Junctions. There is ongoing work on the expansion of Nairobi- Mombasa road as some sections are narrow and prone to accidents.

All these improvements are expected to enhance seamless and efficient flow of cargo and further reduce the cost of trade.

The table 28 provides the status of road conditions in Kenya measured by International Roughness Index. The Corridor also connects to Tanzania via Athi River to Namanga and Voi to Taita - Taveta road and to South Sudan via Lokichar - Nadapal route.

The information on vital links for the Northern Corridor to the Tanzanian border and South Sudan borders are shown in Table 29 below.

Table 28: Road condition in Kenya along the Northern Corridor from the port of Mombasa

Source: Kenya National Highways Authority (KeNHA) Sep 2017/2018

Name of Section/ Route	Section Length in (Km)	IRI	Road Condition
Mombasa-Nairobi- Nakuru- Malaba			
Mombasa - Kwa Jomvu- Mariakani	41.3	8	Bad
Magongo Road (Old Mombasa Road)	4	6	Fair
Mariakani - Maji ya Chumvi	13	4	Good
Maji ya Chumvi - Bachuma Gate	53	2	Good
Bachuma Gate - Voi	54.1	8	Poor
Voi - Mtito Andei	95.1	6	Fair
Mtito Andei - Sultan Hamud	132.7	3	Good
Sultan Hamud - Machakos Turnoff	80	2.5	Good
Machakos Turnoff - Athi River	25	3	Good
Athi River - JKIA- Likoni Road	20.7	2.5	Good
Nairobi Southern Bypass	29	1.5	Good
Likoni Road - James Gichuru	15	2.5	Good
James Gichuru junction – Rironi	26	6	Fair
Rironi - Mai Mahiu	20	3	Good
Mai Mahiu - Naivasha	38	3	Good
Rironi - Gilgil	89	3	Good
Gilgil - Mau Summit	90	3	Good
Mau Summit - Timboroa	38.8	3	Good
Timboroa - Eldoret	80	2	Good
Eldoret - Webuye	75	2	Good
Total Length (Km)	1,328.6		

Name of Section/ Route	Section Length in (Km)	IRI	Road Condition
Webuye - Malaba	57.8	2	Good
Nakuru- Kisumu-Busia			
Mau Summit - Kisian	150.1	2	Good
Kisian – Busia	101	8	Bad
Total Length (Km)	1,328.6		

For the route linking South Sudan from Webuye (673.9 Km), 72 percent is in poor condition; 10 percent is fair and 18 percent in good condition.

However some sections under the route are under construction/ rehabilitation.

On the other border of Tanzania, the road condition is 100 percent in good status.

Table 29: Other road sections not in the Agreement but are part of the Northern corridor linking Tanzania and South Sudan borders

Source: Kenya National Highways Authority (KeNHA) Sep 2017/2018

Isebania - Ahero – Kakamega-Kitale			
Road Section	Length (Km)	IRI	Road Condition
Isebania – Kisii	80	6	Fair
Kisii – Ahero	85	5	Fair
Ahero – Kisumu	17	2	Good
Kisumu - Mamboleo Junction	4	8	Bad
Mamboleo Junction - Kakamega	47	6	Fair
Kakamega - Webuye	40	8	Bad
Webuye – Laseru	58.4	3	Good
Laseru – Kitale	60	3	Good
Kitale- Lokichar - Nadapal			
Road Section	Length (Km)	IRI	Road Condition
Kitale – Morpus	68.5	4	Fair
Morpus – Lokichar	147	8	Bad
Lokichar - Loichangamatak	50	8	Bad
Loichangamatak - Lodwar	50	8	Bad
Lodwar – Nadwat	80	8	Bad
Nadwat - Kalobeiyeyi	80	8	Bad
Kalobeiyeyi - Nadapal	80	8	Bad
Voi - Taveta			
Road Section	Length (Km)	IRI	Road Condition
Voi- Mwatate	45	2	Good
Mwatate – Taveta	99	2	Good
Athi River - Namanga	137	3	Good

4.9.2 Road Condition in Uganda along the Northern Corridor

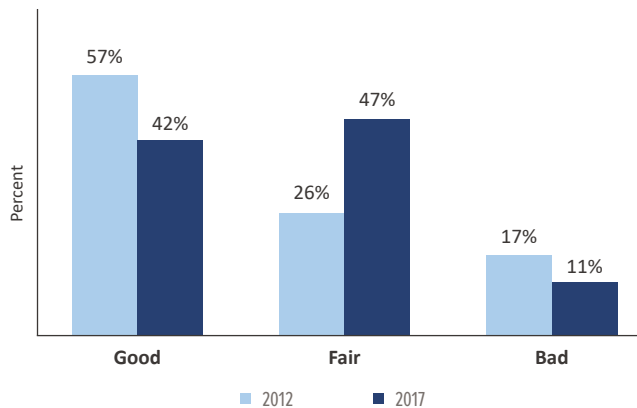
The Designated Northern Corridor Route in Uganda are:

- ▶ Malaba -Katuna
- ▶ Malaba – Ishasha
- ▶ Malaba – Mpondwe
- ▶ Malaba – Goli
- ▶ Malaba – Arua
- ▶ Busia -Katuna
- ▶ Busia -Ishasha
- ▶ Kasese – Kagitumba
- ▶ Busia – Arua
- ▶ Busia – Goli
- ▶ Kasese – Mpondwe
- ▶ Kasese – Ishasha.

In March 2017, it was reported that 36.6% of the Northern Corridor routes were in good condition, 58.4% in fair condition while 5% were in poor condition (TOP 10th issue May 2017).

Figure 11: Condition of Road Sections in Uganda in 2012 and 2017

Source: UNRA, data 2012 and 2017



In March 2018, 31% were reported to be in good condition, 61% in fair condition and 8% poor condition. During stakeholder engagement in October 2018, Uganda National Roads Authority (UNRA) reported a lot of traffic congestion is experienced along the –Jinja - Kampala Road and plans are underway to build the Jinja – Kampala express way to ease congestion.

The project is projected to be completed by 2020. Generally, most of the roads in Uganda have improved when compared to their status in 2012. For instance the length of bad road was estimated at 17% in 2012 which reduced to 11% in 2017.

4.9.2 Road Condition in Rwanda along the Northern Corridor

Rwanda has designated a number of routes and their associated borders as part of the Northern Corridor Route. The main designated Northern Corridor roads in Rwanda as per the NCTTCA Agreement are as below:

- ▶ Kagitumba - Akanyaru haut
- ▶ Kagitumba – Cyangugu
- ▶ Gatuna- Cyangugu
- ▶ Gatuna – Rubavu
- ▶ Cyangugu – Bugarama
- ▶ Cyanika- Rubavu

From, table 30 most of the Northern Corridor road network in Rwanda is paved and in good condition at approximately 86 percent whereas only 14 percent is still in fair condition with Huye (Karubanda-junction to Kitabi sections under rehabilitation being financed by BADEA, OFID & SFD.

Table 30: Road condition in Rwanda

Source: RTDA, September, 2018

From	To	Length (Km)	IRI m/Km October 2018	Current Condition
Kagitumba (border)	Kayonza (junction of NR4)	116.3	6	Fair
Kayonza (junction of NR24)	Kigali (city centre-main roundabout)	77.9	1.8	Good
Kigali (city centre main roundabout)	Muhanga - Huye - Akanyaru	157.8	2.16	Good
Huye (Karubanda-junction of NR1)	Kitabi	52.7	6	Fair
Kitabi	Buhinga	62.6	2.17	Good
Kigali (Nyabugogo)	Gatuna (border)	78	1.33	Good
Kigali (Gitikinyoni) by way of Musanze	Rubavu (grande barriere-border)	150	1.99	Good
Ruhwa	Kamembe(gihundwe)	50.5	2.12	Good
Kamembe	Rubengera (roundabout-junction of NR15)	131.1	2.12	Good
Rubengera	Rubavu (Pfunda-junction of NR2)	75.4	2.12	Good
Musanze (junction of NR2)	Cyanika (border)	25.1	3.19	Good
Kicukiro (sonatubes-roundabout)	Nemba (border)	62	1.59	Good
Other Sections Along The Northern Corridor Not In The Agreement				
Muhanga (junction of NR1)	Rubengera (roundabout-junction of NR15)	61.5	3.05	Good
junction of NR15)	Mukamira (junction of NR2)	99	2.07	Good

4.9.4 Road Condition in Burundi along the Northern Corridor

The designated Northern Corridor Routes in Burundi are:

- ▶ Kanyaru haut (through -Kayanza-Bujumbura) to Gatumba
- ▶ Gasenyi (through-Kirundo-Ngozi) to Bujumbura
- ▶ Ruhwa- (through - Rugombo-Nyamitanga) to Bujumbura
- ▶ Kanyaru bas-(through Ngozi-Nyangungu) to Gitega

Majority of the Road condition in Burundi is paved and is in a good or fair status except some sections of about 28 percent which are still in bad status as shown in table 31. However, plans are underway to improve/ upgrade poor roads.

As of September 2018, black spots identified in Burundi along the Northern Corridor route are on Bujumbura – Akanyaru road occasioned by a lot of landslides during the rainy season; Bugarama- Gitega route whereby the road is too old and Kanyaru bas- Ngozi the road has steep bends which makes it difficult to circumvent.

As presented in table 32 below, Burundi has 19 bridges along the Northern Corridor. Their respective locations and routes are as follows;

Table 31: Status of road sections in Burundi

Source: Office des Routes, September 2018

From	To	Length (Km)	Condition
Gasenyi	Kirundo	35	Good
Kirundo	Ngozi	32	Fair
Gashoho	Ngozi	40	Fair
Ngozi	Kayanza	32	Fair
Kanyaru haut	Kayanza	23	Fair
Kayanza	Bugarama	59	Fair
Bugarama	Bujumbura	35	Good
Bujumbura	Gatumba	13	Good
Gatumba	Frontière RDC (Rusizi II)	3	Good
Ruhwa	Nyamitanga	50	Good
Nyamitanga	Bujumbura	30	Bad
Kanyaru bas	Ngozi	25	Bad
Ngozi	Gitega	80	Good
Gitega	Bugarama	110	Bad

Table 32: Bridges along the Northern Corridor section

Source: Office des Routes, September 2018

From	To	Number of Bridges	Location
Kayanza	Bugarama	4	Ruvubu, Nyawisera, Gihorwe and Nyabihondo
Bujumbura	Gatumba	4	Mutimbuzi, Mpanda, Rusizi I and Rusizi II
Ruhwa	Nyamitanga	6	Kagunuzi, Kaburantwa, Muhira, Nyamagana, Nyakagunda and Ruhwa
Nyamitanga	Gihanga	1	Kajeke
Gihanga	Bujumbura	2	Mutimbuzi and Mpanda
Kanyaru bas	Ngozi	1	Kanyaru
Ngozi	Gitega	3	Ruvyironza, Mubarazi and Ruvubu
Gitega	Bujumbura	2	Mubarazi and Ruvyironza

4.9.5 Road Condition in DRC along the Northern Corridor

Table 33 shows designated Northern Corridor routes in DRC as per the Agreement

Table 34 gives the current status of various subsections in DRC. 48 percent of the Northern Corridor road in DRC is in a good state, 26 percent in fair condition and the rest 26 percent in bad condition.

Table 33: Transit Road Sections in DRC

Source: NCTTA, Agreement

From	By Way of	To
Aru	Bunia	Kisangani or Isiro
Mahagi	Bunia	Kisangani or Isiro
Kasindi	Beni	Kisangani or Bunia
Ishasha	Rutshuru	Goma Town
Bunagana	Goma	Goma Town
Bukavu	Kindu	Kisangani
Kiliba	Uvira	Kalundu
Kavimvira	Uvira	Kalundu
Kamanyora	Bukavu	Kalundu

Table 34: Status of the road in DRC

Source: Office Des Routes, DR Congo, September, 2018

Route	Length (Km)	Road Condition Status (Km)		
		GOOD	FAIR	BAD
Bukavu-Kindu-Kisangani				
Bukavu -Burhale	55	24	0	31
Burhale - Shabunda - Lubile	363	0	108	255
Lubile - Kalima - Mali	117	7	67	43
Mali - Kindu	36	5	30	1
Mali - Lubutu	318	18	88	212
Lubutu - Kisangani	297	105	94	98
Lubutu - Osokari - Walikale	219	192	27	0
Walikale - Hombo	107	0	0	107
Hombo - Miti	93	0	4	89
Bukavu-Uvira				
Bukavu - Kamanyola	55	5	45	5
Kamanyola - Uvira	86	61	15	10
Uvira - Kamvivira - Front Burundi	17	7	10	0
Kisangani - Beni -Kasindi				
Kisangani - Niania - Komanda	650	637	0	13
Komanda - Luna	65	12	53	0
Luna - Beni	60	60	0	0
Beni - Kasindi	80	45	35	0
Komanda - Bunia - Mahagi				
Komanda - Bunia	71	13	58	0
TOTAL (KM)	4162	1990	1086	1086

Route	Length (Km)	Road Condition Status (Km)		
		GOOD	FAIR	BAD
Bunia - Mahagi - Goli - Fr Ouganda	190	21	131	38
Kisangani - Isiro - Aru				
Kisangani - Niania				
Niania - Isiro	232	41	108	83
Isiro - Watsa - Aru	422	288	81	53
Beni - Butembo - Goma - Bukavu				
Beni - Ndoluma	132	76	44	12
Ndoluma - Rutshuru - Goma	199	167	32	0
Goma - Sake - Minova	58	23	25	10
Minova - Kavumu - Bukavu	150	131	0	19
Rutshuru - Bunagana	27	16	11	0
Rutshuru - Ishasha	63	36	20	7
TOTAL (KM)	4162	1990	1086	1086

4.9.6 Road Condition in South Sudan along the Northern Corridor

South Sudan is facing grave infrastructure challenges related to repairing aging roads with limited resource allocation.

Table 35 show that, around 95% of the corridor road in South Sudan is in bad condition and 5% is in fair condition.

The country is yet to get enough support from international partners to help improve its roads as is seen in other member countries.

Table 35: Condition of Road Sections in South Sudan

Source: South Sudan Roads Authority, September, 2018

Route / Road	Pavement Type	Works Status	Planned	Length (km)	Road Condition
Nimule - Nesitu - Juba	Paved	Constructed	Maintenance	192	Fair
Nadapal - Kapoeta - Torit - Nesitu	Gravel	Designed	Awaiting construction	335	Bad
Juba - Lainya - Yei - Kaya	Gravel	N/A	N/A	225	Bad
Yei – Maridi	Gravel	N/A	N/A	180	Bad
Juba - Mundri - Maridi - Yambio– Nabiapai	Gravel	N/A	N/A	427	Bad
Yambio - Tambura - Wau - Aweil	Gravel	N/A	N/A	591	Bad
Wau - Kwacjok - Agok - Mayom -Bentiu	Gravel	N/A	N/A	520	Bad
Juba - Bor - Ayod - Malakal	Gravel	N/A	N/A	614	Bad
Mundri - Rumbek - Wau	Gravel	N/A	N/A	459	Bad
Total Length (Km)				3,543	

4.10 Summary discussion on quality of road infrastructure along the Northern Corridor

As provided in the Northern Corridor Transit and Transport Agreement (NCTTA), 2007 protocol Number 2, section 1, there are key routes designated by Member States for use in inter-state trade along the Corridor on their respective territories. Data provided by respective Northern Corridor Member States on their road conditions indicate that the entire Northern Corridor road networks cover approximately 12,707 Km in length distributed as follows: 567 Km in Burundi

4,162 Km in DRC, 1,328.6 Km in Kenya, 1,039.4 Km in Rwanda 3,543 Km in South Sudan and 2,072 Km in Uganda. Table 36 described proportion of road status along the Northern Corridor road network.

The total length of bad road condition for the entire Corridor road network in 2018 was estimated at 40% as of September 2018, 39% represented a share of good road condition from the overall length (12,707 km) of the northern corridor road network. South Sudan contributed to the highest percentage of road network on the bad status.

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 during maintenance.

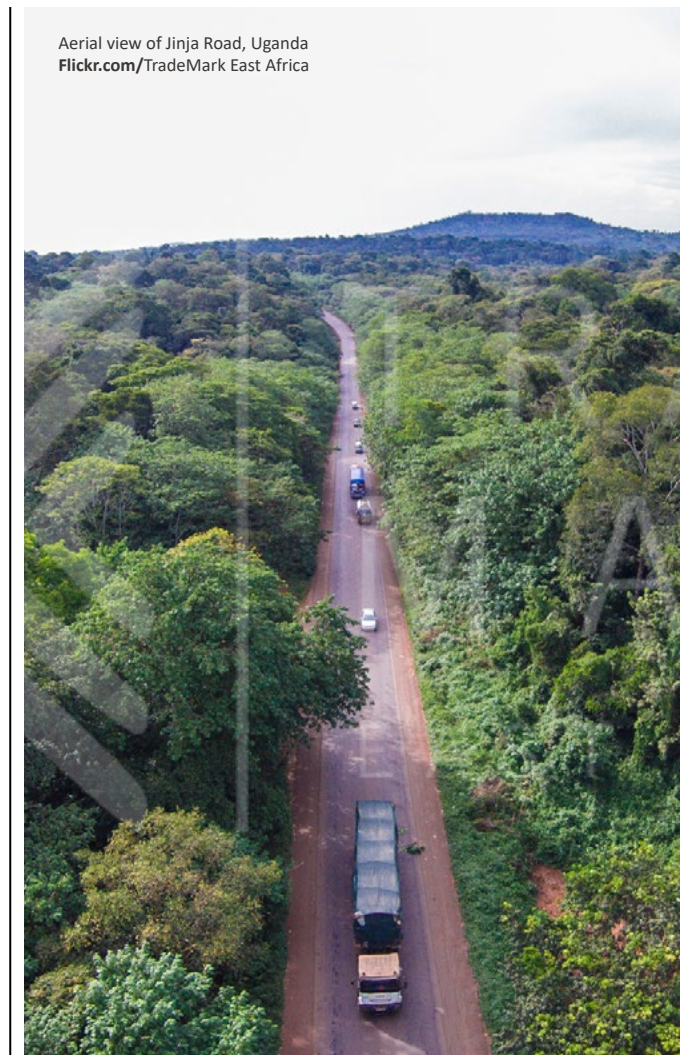
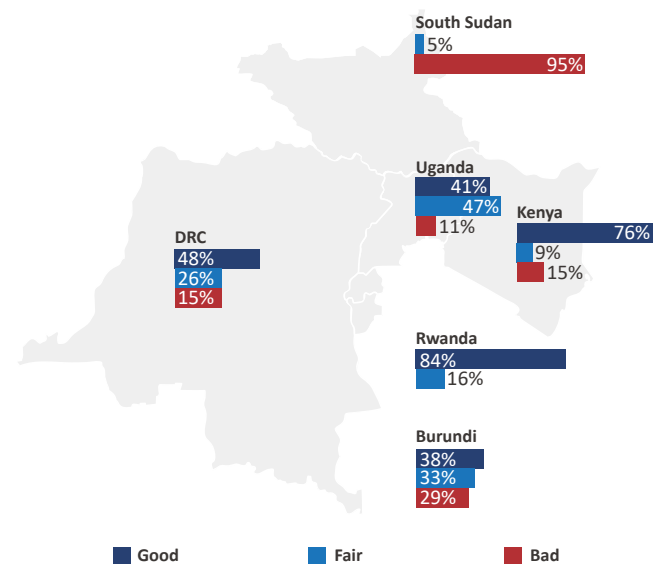


Table 36: Northern corridor road networks status length in Km (September 2018)

Source: Road Authorities in each Member state September 2018

Country	GOOD	FAIR	BAD	TOTAL
Burundi	216	186	165	567
DRC	1,990	1,086	1,086	4,162
Kenya	1,007.1	125.1	196.4	1,328.6
Rwanda	870.4	169	-	1,039.4
South Sudan	-	192	3351.00	3,543
Uganda	870.24	973.84	227.92	2,072
Total Length (KM)	4,953.74	2,731.94	5026.32	12,707
Share of road status (%) in 2018	39%	21%	40%	100%

Road Conditions per country in percentage



4.11 Weighbridge traffic in Northern corridor Member States



A weigh station signpost along the Northern corridor in Uganda. [Flickr.com/TradeMark East Africa](https://www.flickr.com/photos/trademark-east-africa/)

The indicator measures the average number of trucks weighed per day at the various weighbridges in respective countries of the Northern Corridor.

Northern Corridor routes have the largest percentage of truck traffic since road transport serves as the most convenient mode of moving over 90 % of cargo to Member States.

There has been an increase in number of trucks using the roads. All these trucks have to go through the weighbridges to ensure they comply with the authorized vehicle load limits.

Weighbridges serve as check points that are used to check whether trucks comply with the transport vehicle load limits. Overloading by trucks on axle can lead to rapid deterioration of the road network.

This section discusses operations at the weighbridge traffic along the Northern Corridor in particular countries.

Efficiency of the weighbridge station is measured through time taken for trucks to cross.

Long queues and high service time leads to congestion which is a pointer to inefficiency. Weighbridges that are not High-Speed-Weigh in motion lead to unnecessary delays or affect the time taken by these trucks to arrive at their final destinations

Kenya currently uses High-Speed-Weigh in motion and static scale weighbridges to help rid roads of overloaded vehicles.

There are nine static weigh-bridges located at Athi-River, Mariakani, Webuye, Gilgil, Busia, Mtwapa, Rongo Isinya and Bondo out of which the former five are along the Northern corridor.

To reduce congestion at the weighbridges, Kenya National Highway Authority (KenHA) has installed high speed weigh in motion (HSWIM) and multi deck scales at: Mariakani, Athi River, Gilgil, Webuye - which are fully automated.

Figure 12: Average daily weighed traffic for Kenya Weighbridges (Number)

Source; Road Authorities in each Member state September 2018

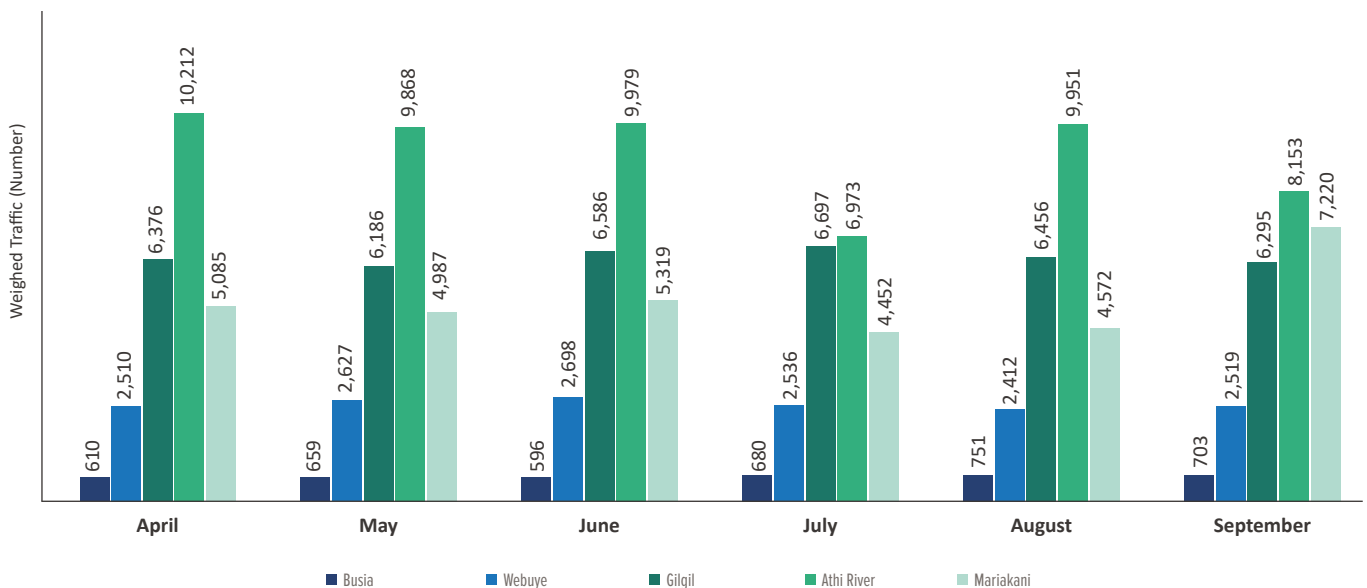


Figure 12 illustrates average daily traffic at weighbridges on both inbound and outbound trucks.



Athi- River weighbridge recorded the highest traffic that include traffic originating form the Port of Mombasa both local and transit cargo and traffic originating from Namanga Border Point.

This is traffic reduces at Gilgil weighbridge since some of it was destined for Nairobi and its environs. Webuye and Busia Weighbridges recorded lower traffic which comprises of transit cargo heading to the border points of Malaba and Busia respectively.

Plans are underway for (KeNHA) to install virtual weighbridges on Kenyan roads in order to boost speed and transparency on clearance of cargo on the major arteries linking the landlocked countries.

Burundi is yet to enforce vehicle load limits. Burundi has no weighbridges at the moment along the Northern Corridor.

Similarly Rwanda is also yet to enforce vehicle load limits.

No weighbridge at the moment. However, 8 Sites for Weigh in Motion Weighbridges were identified and so far, 2 are under Construction/ installation between Kagitumba-Kayonza and Rusumo South Sudan has no weighbridges at the moment and also is yet to enforce vehicle load limits.

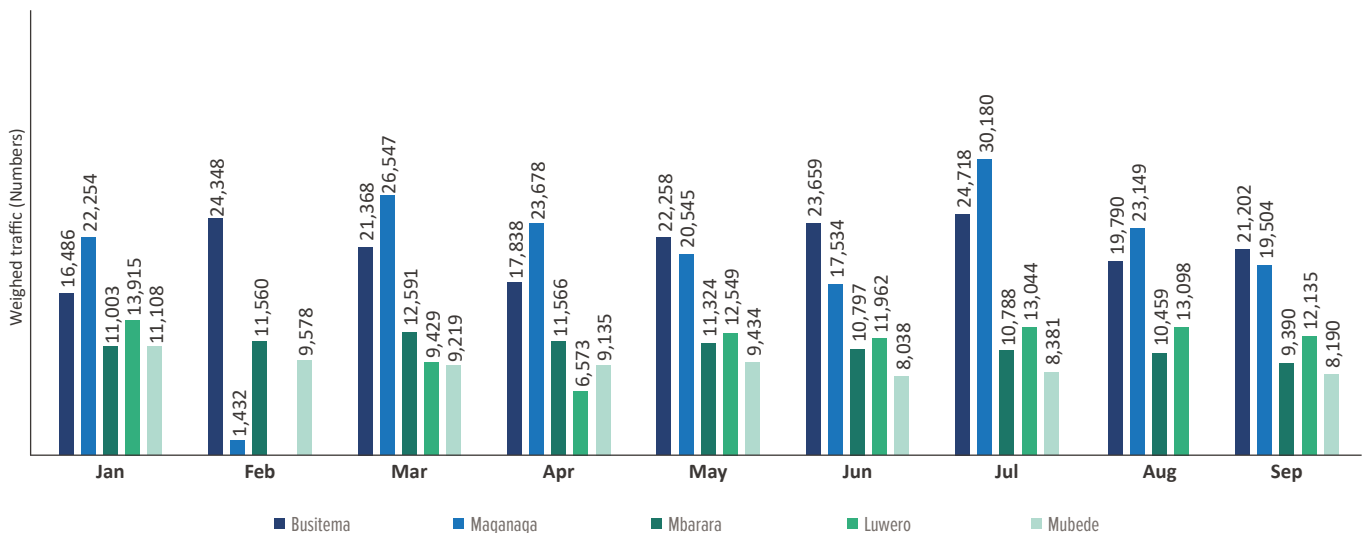
However, South Sudan is to adjust the regulations to the regional vehicle load limits set through the Common Market for Eastern and Southern Africa (COMESA) and East African Community (EAC) requirements, and which is currently set at a maximum of 56 tons with a 5% weighbridge allowance and whose enforcement is based on both Gross Vehicle and Axle load limits.

As at October 2018, weighbridges in Uganda were slow speed weigh in motion and on one side of the road. This has caused a lot of congestion and delays along the sections of the Corridor where they are located. However, currently UNRA are in the process of upgrading Magamaga and Mbarara weighbridges to HSWIM and to install weighing scales on both sides of the road. The upgrading is expected to be completed in the year 2019.

Figure 13 below illustrates average monthly weighed traffic for Uganda weighbridges along the Northern Corridor for the period covering January to September 2018. Busitema weighbridge recorded the highest traffic over the period and Mubende weighbridge recorded the least traffic.

Figure 13: Average monthly weighed traffic for Uganda Weighbridges

Source: UNRA, January to September 2018



4.12 Weighbridge compliance in Northern Corridor



Weighbridge compliance 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 at particular weighbridges along the Northern Corridor.

- ▶ Rwanda, South Sudan and Burundi have no weighbridges therefore compliance is not applicable. Kenya follows the EAC vehicle load control Act 2017, some of the conditions that apply for compliance at weighbridge include:
 - ▶ Any vehicle established to be overloaded on the Axle or Axle Group but is within the prescribed Gross Vehicle Weight as per the Axle configuration shall be allowed to redistribute its cargo to within tolerance before being re-weighed and allowed to proceed with its journey. Such vehicles will not be charged.
 - ▶ Any vehicle which is overloaded on the Axle and Axle Group and cannot redistribute its cargo to within allowable tolerance shall be charged.
 - ▶ An allowance of 5% has been granted on the Legal Axle and Axle Group Weights Limits to take care of possible movement of cargo while on transit;
 - ▶ All Custom Sealed Containerized Transit Cargo shall only be weighed at the first weighbridge encountered after leaving the Port/ Point of Loading and at the Last Weighbridge at point of exit from the border.

Figure 14: Weight Compliance Level at weighbridges in Kenya

Source: KeNHA, Kenya April to September 2018

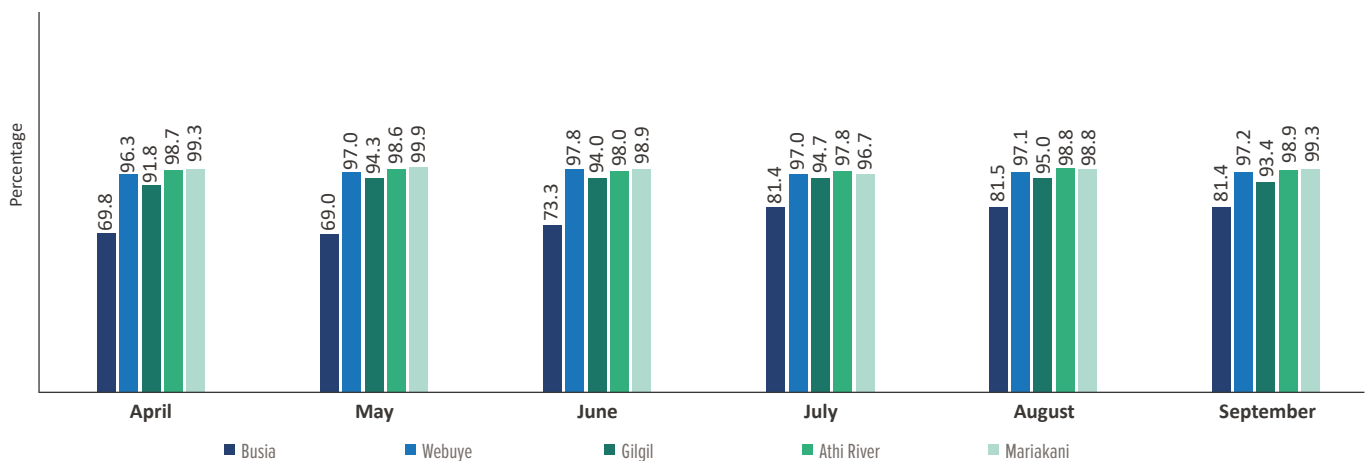


Figure 14 depicts the level of compliance by owners of trucks and drivers at the Kenya weighbridge on the Northern Corridor. Clearly, all weighbridges recorded a steady performance in terms of compliance levels of over 90 percent performance except for Busia weighbridge.

Low compliance at the Busia weighbridge could be attributed to the fact that most of the cargo through Busia are exports originating from Kenya and the Busia weighbridge offers the first opportunity for the loaded trucks to be weighed especially for exports as well as fuel products from Kisumu.

It is noted that Mariakani and Athi-River weighbridges registered high level of compliance suggesting the high level of awareness by transport associations in Kenya and transport Saccos in Nairobi.

Furthermore, a good proportion of trucks carry containers which are weighed prior to shipment at the port of loading. Uganda has its Gross Vehicle Weight limit at 56 tons. Enforcement is based on both Gross and Axle load limit. Figure 15 illustrates the level of compliance by owners of trucks and drivers at the weighbridges in Uganda along the Northern Corridor.

All the weighbridges reported recorded very low performance in terms of compliance levels of below 30 percent performance. Low compliance could be attributed to the weighbridges not implementing the high speed weigh – in- motion. The target of 100% compliance has not yet been attained.

On the other hand, Mbarara weighbridge has no axle load. However, compliance level on gross load limit was above 90 percent as shown in figure 16.

Figure 15: Weight Compliance Level at weighbridges in Uganda

Source: UNRA, January to September 2018

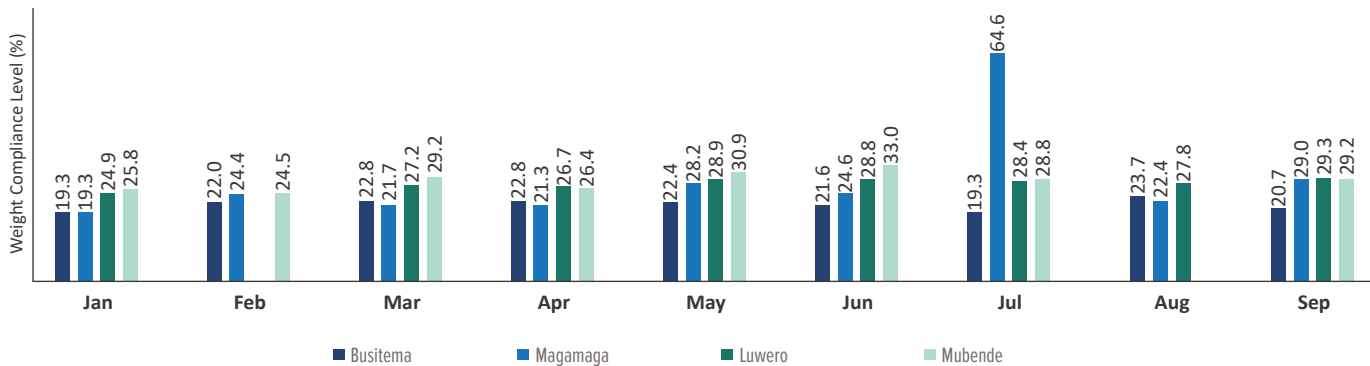
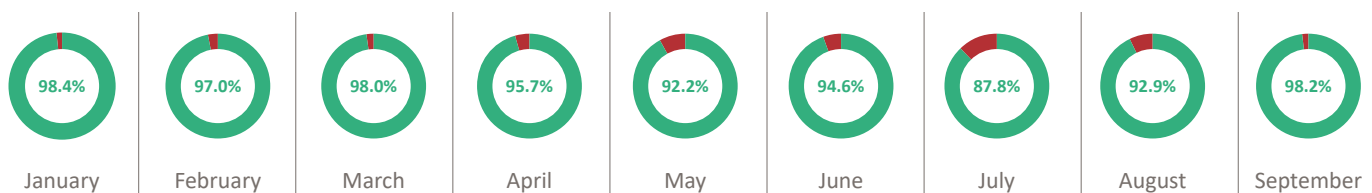


Figure 16: Compliance level at Mbarara Weighbridge in Uganda

Source: UNRA, January to September 2018



5.0 Transit Time and Delays

The section analyses the time it takes for a truck to deliver cargo to various destinations in the respective Northern Corridor Member States.

5.1 Transit Time in Burundi



The discussions focus on transit time for a truck travelling between key borders in Burundi along the designated Northern Corridor road transit routes.

The main northern corridor route runs from Kanyaru - Haut to Bujumbura through Kayanza and connects with DRC through Gatumba border station.

In addition, the route through Nemba/ Gasenyi connects with the main route at Kayanza. Transit time in Burundi was measured from Kanyaru Haut and Gasenyi to the major nodes and customs border points of Bujumbura Port and Kayanza.

Figure 17: Transit Time from Bujumbura and Kayanza to Kanyaru-Haut and Gasenyi (Hrs)

Source: OBR, October 2015 to September, 2018

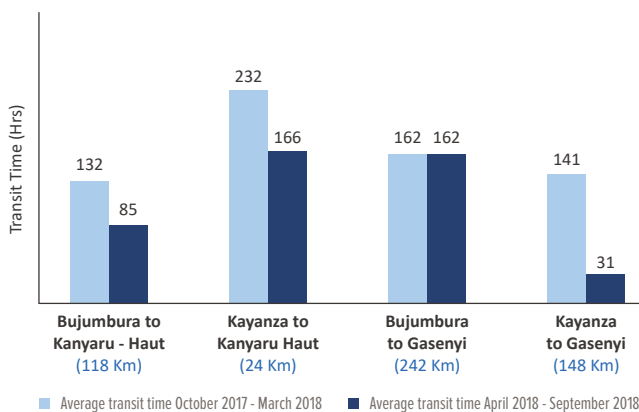


Figure 17 shows that from April to September 2018, transit time from Bujumbura port to Kanyaru-Haut (118km) was 85 hours which is approximately 3.5 days. On the same note 50 percent of trucks monitored used roughly 3 days to deliver cargo from Bujumbura port to Kanyaru-Haut bordering Rwanda during the same period.

Five percent of the trucks surveyed (less than 10 trucks) recorded 185.6 hours (7.8) days on the same route whereas 5% of the trucked travelled within 17.8 hours. This time taken is still high considering the distance of 118 kilometers. It is evident that there are transit delays on the Kanyaru-Haut to Bujumbura route which may be due to steep terrain and road conditions resulting from damage by rain and overloaded vehicles.

The average transit time for Kayanza to Kanyaru-Haut route was significantly high at 166 hours between April and September 2018 despite the fact it is a shorter distance compared with Bujumbura port to Kanyaru-Haut pointing to prevailing inefficiencies.



The best performance transit time for the same route was recorded at 19 hours and the poorest performance of 240 hours was also noted.

The average transit time for Bujumbura to Gasenyi was 162 hours during the period April to September 2018. It took an average of 31 hours for trucks to transport cargo from Kayanza to Gasenyi. When compared to previous period (October 2017 to March 2018), analysis illustrates a significant transit time improvement in Burundi on all routes as follows;

Kayanza to Gasenyi an improvement of 78 percent,

Bujumbura to Kanyaru-Haut 36 percent

Bujumbura to Gasenyi 29 percent

Kayanza to Gasenyi transit time remained steady over the period October 2017 to September 2018.

Although barriers to cargo movement still exist along the routes, the positive performance over the period can be related to the improvement in road infrastructure on some sections along the transport routes.

5.2 Transit Time in Kenya

The transit time is measured from the time cargo is released by Customs in Mombasa to the time it arrives to the various borders along the Northern Corridor. This transit time includes delays after customs release and stoppages along the Corridor. The data used in the analysis of this indicator is from the Regional Electronic Cargo Tracking System (RECTS) for the period April to September 2018.

The target transit time for cargo from Mombasa to Malaba and Busia border point is 72 hours. Busia and Malaba are 947 Km and 933 Km from Mombasa respectively. Both borders are first exit points from Kenya to Uganda.

During the review period, average transit time from Mombasa to Busia stood at 71 hours (3 days). The best recorded transit time for the six months was in August 2018 at 60 hours and July recorded the poorest performance of 87 hours attributed to the heavy rain conditions that disrupted traffic for long hours on various sections of the Corridor.

For instance, sections of the road at Salama, Mai Mahiu and Narok reported traffic disruptions due to floods occasioned by heavy rains. From April to September 2018, 5% of the trucks travelled within 41 hours, 25% managed transit time of 50 hours, 50% recorded 63 hours and 75% transit time ranged at 83 hours.

This performance is remarkable and is within the set target of 72 hours especially when compared with previous similar period in 2017, where average transit time was 4 days. Similarly, average transit time from Mombasa to Malaba for the six month period ending September 2018 stood at 72 hours attaining the 3 day target was attained.

Table 37: Transit Time from Mombasa to Busia in hours

Source Kenya RECTS April to September 2018

Msa to Busia	Apr - Sept	Apr	May	Jun	Jul	Aug	Sept
Mean	71	67	64	78	87	60	64
Median	63	63	57	67	70	60	64
Standard Deviation	36	22	23	47	52	19	17
Minimum	27	44	27	37	44	31	39
Maximum	305	115	127	305	234	114	95



The best recorded monthly average transit time for the same period was 67 hours recorded in June 2018 which rose to a high of 75 hours in July 2018.

The performance on both the Mombasa – Malaba and Mombasa – Busia route indicates that the non-tariff barriers have greatly reduced along the Corridor routes.

The report notes that ongoing improvements along the Mombasa – Busia and Mombasa – Malaba stretches are ongoing and herald smooth cargo movement in the coming months. For instance, the interchanges at Nakuru, Njoro and Mau Summit have been completed and are in use. Work is still ongoing on the Interchanges at Kaburengu and Webuye.

These interchanges are expected to minimize traffic disruptions. In addition, the completion of the Dongo Kundu, Nairobi Southern, Nairobi Eastern and Kisumu by-passes has succeeded in diverting traffic from congestion in the major urban areas along the Corridor.

Figure 18: Transit time from Mombasa to Malaba and Busia borders

Source Kenya RECTS 2018

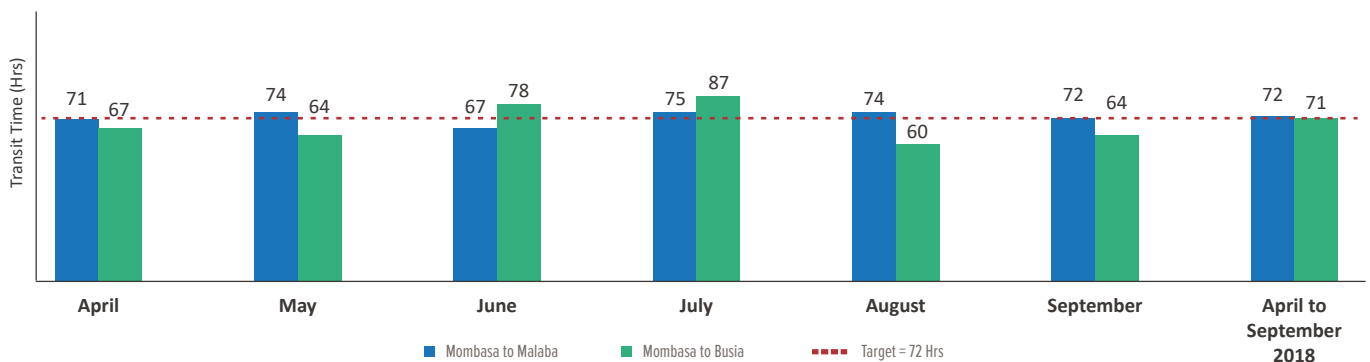
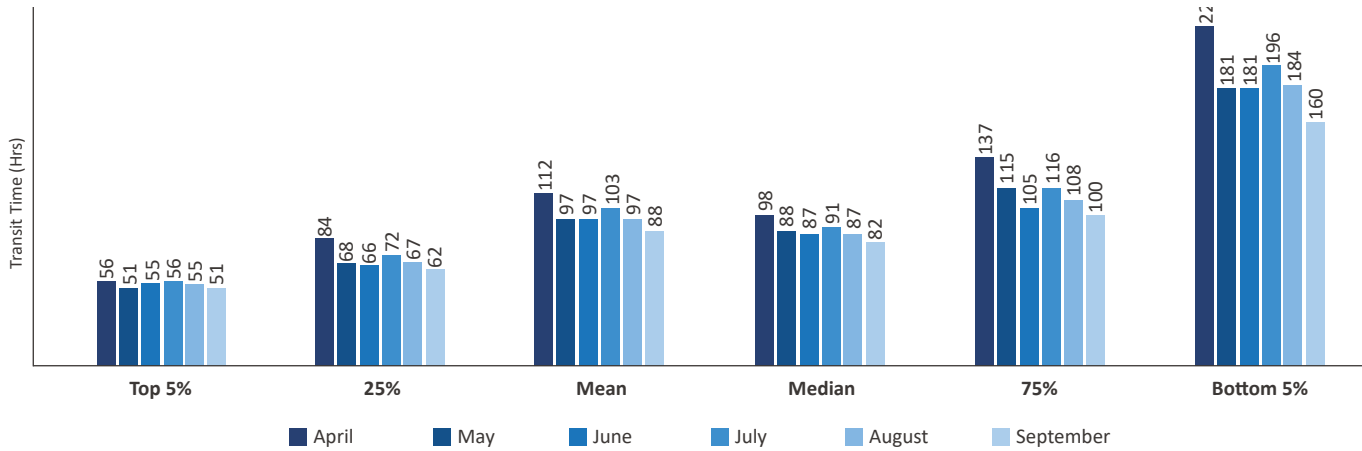


Figure 19: Transit time from Mombasa port to Elegu border in hours April to September 2018

Source Kenya RECTS April to September 2018



5.2.1 Transit time from Mombasa port to Elegu/ Nimule Uganda/ South Sudan border

The data shows that transit time from Mombasa to Elegu/Nimule a distance of 1,430 km improved from an average of 112 hours in April 2018 to 88 hours in September 2018.

The highest monthly average transit time was witnessed in June 2018 at 196 hours (8 days) and the fastest transit time was 51 hours (2 days) in May and September 2018 as displayed in figure 19.

50 percent of trucks covered used 98 hours, 91 hours and 82 hours in April, July and September 2018 respectively to travel from Mombasa to Elegu. The trend shows improved transit time over the period.

5.2.2 Transit time from Mombasa port to Kampala in Uganda

Figure 20 shows transit time taken by trucks from Mombasa to Kampala (1,169 km) during April to September 2018.

Average transit time was steady at nearly rounded off to 5 days. The fastest transit time (top 5%) as shown in figure 20 varied from 57 hours to 61 hours. In September 2018, 25% of trucks used transit time of 75 hours from Mombasa to Kampala.

5.2.3 Transit time from Mombasa port to Katuna border

Average transit time from Mombasa port to Katuna worsened in the month of August 2018 settling at 5.5 days. Figure 21 illustrates transit time from Mombasa to Katuna border in Uganda.

Figure 20: Transit time from Mombasa port to Kampala in hours April to September 2018

Source Kenya RECTS April to September 2018

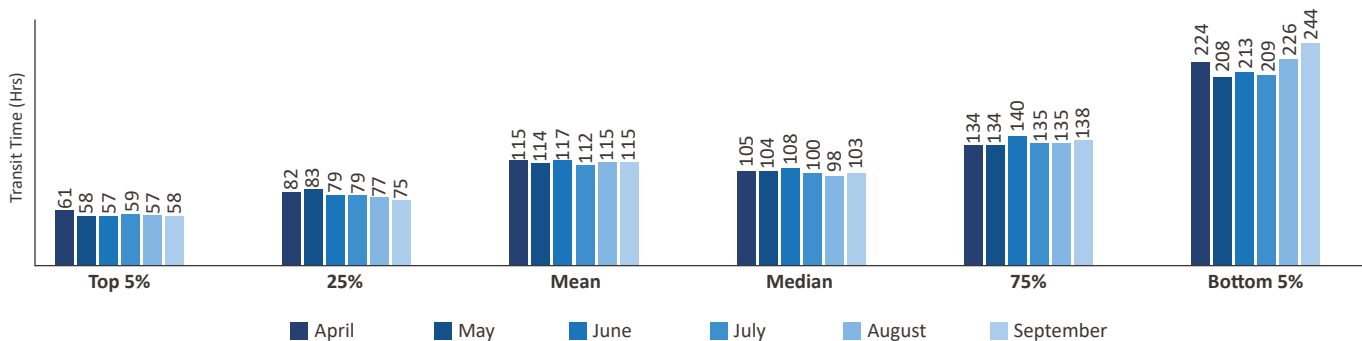
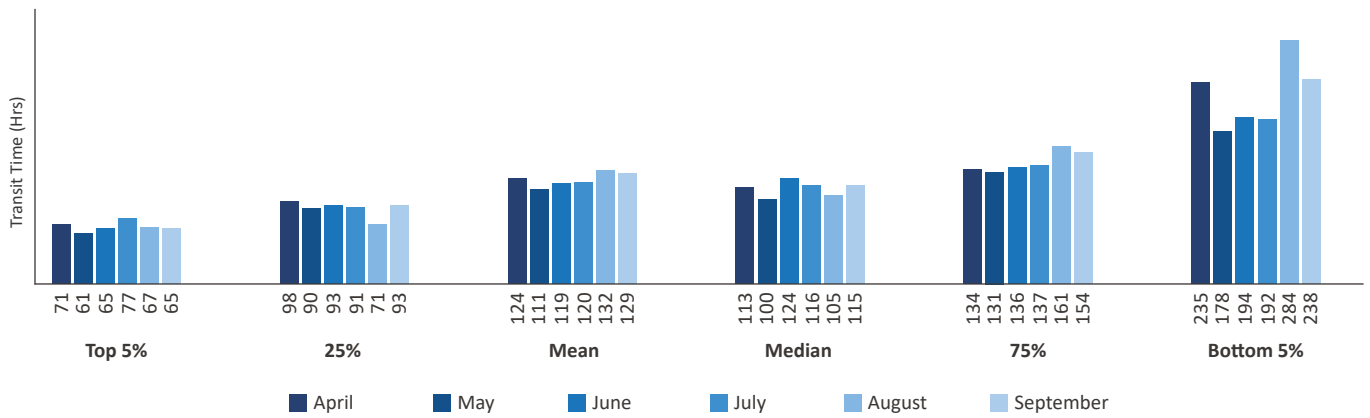


Figure 21: Transit time from Mombasa port to Katuna border in hours April to September 2018

Source Kenya RECTS April to September 2018



5.3 Transit Time in Rwanda



A truck negotiates a steep climb in Rwanda
Flickr.com/TradeMark East Africa

5.3.1 Transit time under the electronic cargo tracking system

Table 38 shows average transit time from Gikondo in Kigali/Rwanda to the Port city of Mombasa (Export bound route). This is a distance of about 1,680 kilometers. Rwanda ASYCUDA data for the period of April 2018 to September 2018 shows that for exports it takes approximately 153 hours (6.4 days) from Gikondo to reach the port of Mombasa and that for imports from Mombasa port to Gikondo, takes just about 187 hours (7.8 days).

From 308 trucks that were monitored over the period, cumulatively five percent of trucks travelled within 4.5 days, 25 percent trucks 5.5 days, 50 percent of trucks 5.8 days and 75 percent travelled within 6.9 days from Gikondo to Mombasa.

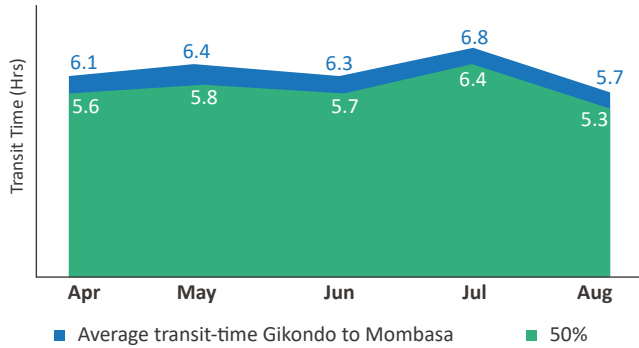
Table 38: Transit time from Gikondo to Mombasa in April to August 2018 (hours)

Source: RRA RECTS, April to August 2018

Mean	153	5 %	107
Median	140	25%	132
Std. Deviation	40	50%	140
Minimum	80	75%	166
Maximum	351	100%	351

Figure 22: Monthly Transit Time from Gikondo to Mombasa

Source: RRA RECTS, April to August 2018



From figure 22, the analysis shows that average transit time over the period April to August 2018 was consistent at around six days with the month of July 2018 recording the highest transit time of 7 days.

Further analysis show that 50 percent of trucks took between 5 to 6 days on the transit route. The performance is partly attributed to; the road condition which is mostly good or fair except for a few sections which are either under development or rehabilitation; implementation one-stop border points and implementation of the Single Customs Territory (SCT).

Rwanda borders DRC through various borders among them Rubavu Corniche, Rubavu Poids Lourd/ Small Barrier, Bugarama, and Rusizi I&II. Data from National Bank of Rwanda showed that DRC is Rwanda’s largest trading partner and provides largest market share around 79 percent for Rwanda’s formal exports and 69 percent of total informal imports.

Descriptive statistics on transit time from Gikondo to Rubavu which is the border between Rwanda and Democratic Republic of Congo is presented in table 39 below. The distance from Gikondo to Rubavu is 160 kilometers. It can be noted that time taken by trucks from Gikondo to Corniche is higher by around 4 hours compared to transit time from Gikondo to Poids Lourds.

Table 39: Transit Time from Gikondo to Rubavu from April to September 2018 in hours

Source: RRA RECTS, April to August 2018

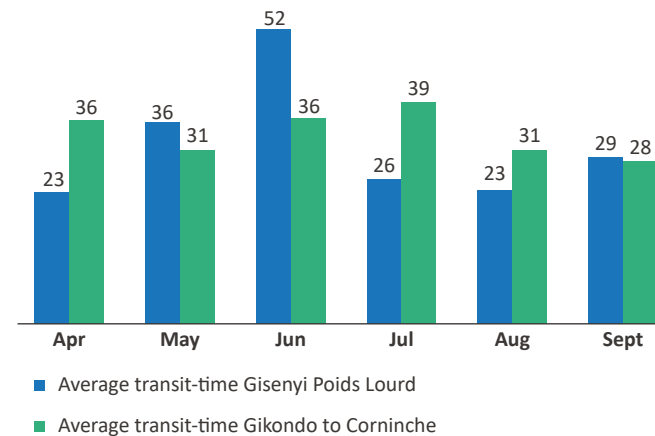
Descriptive statistics	Transit time from Gikondo to Rubavu - Corniche in Hours	Transit time from Gikondo to Rubavu - Poids Lourds
Mean (hours)	34	30
Median (hours)	25	20
Minimum (hours)	8	7
Maximum (hours)	111	292
5%	10	12
25%	17	16
50%	25	20
75%	45	37

This can be attributed to the weight and type of cargo being transported by vehicles. Half of the trucks use 25 hours and 20 hours from Gikondo to Corniche and to Poids Lourds respectively.

Figure 23 presents monthly average transit time over the period April 2018 to September 2018.

Figure 23: Transit Time from Gikondo to Rubavu for the period April to September 2018

Source: RRA RECTS, April to August 2018



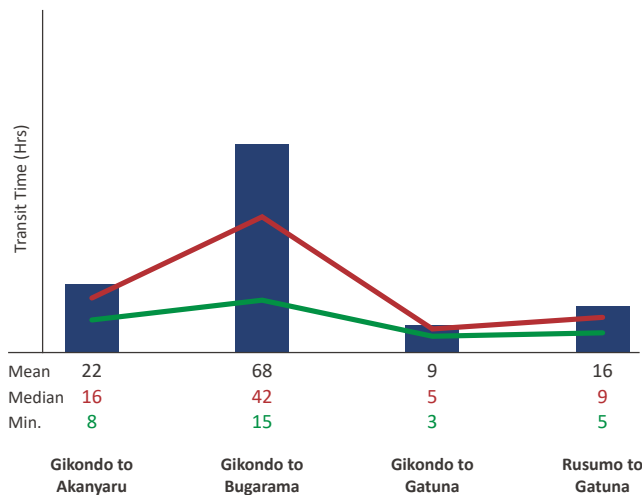
Average transit times for Rwanda transit routes are shown in figure 24.

In general improved road conditions, implementation of SCT framework for clearance of goods, compliance with traffic rules and regulations and reduction in non-tariff barriers has occasioned to faster and smooth flow of cargo along many of these routes.

Average transit time between Gikondo and Bugarama was 68 hours whereas Gikondo to Gatuna (81km) route recorded transit time of 9 hours. Gikondo –Akanyaru (157 km) transit time averaged 22 hours over the review period (April to September 2018).

Figure 24: Transit time to key borders in Rwanda

Source: RRA RECTS, April to August 2018



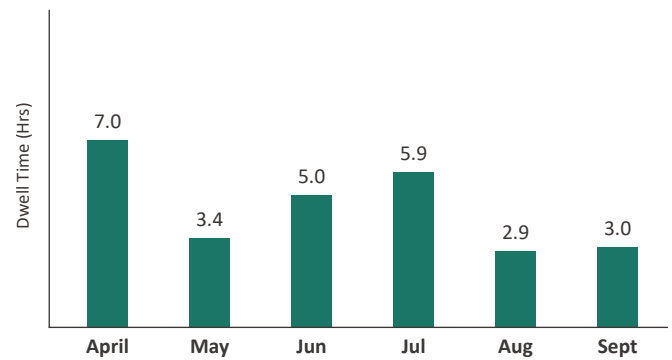
5.3.2 Truck Dwell Time within MAGERWA in Rwanda

This indicator 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.

Average dwell time at MAGERWA ICD varied from a high of 7 hours in April 2018 to a low of 3 hours in August 2018 as shown in the figure 25.

Figure 25: Truck Dwell Time within MAGERWA in Rwanda

Source: RRA RECTS, April to August 2018



RRA SCT processes at the Port of Mombasa

Using the Single Customs Territory (SCT) clearance process, the clearing agent lodges an entry into ASYCUDA which is interfaced with other agencies under a single window system (Rwanda Electronic Single Window) that allows all the border agencies to interface with ASYCUDA when a consignment is dealt with at Mombasa.

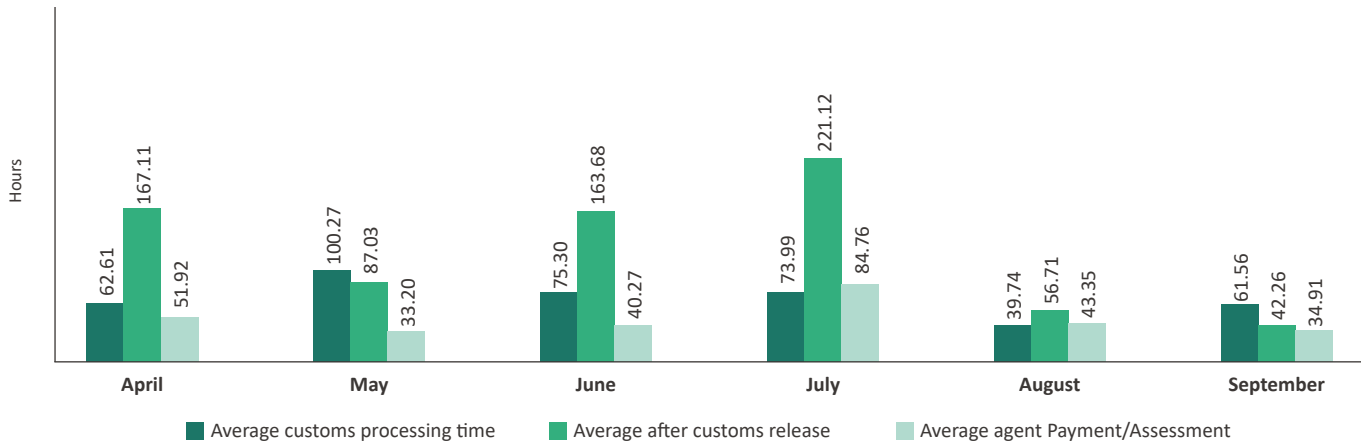
Seals are applied at Mombasa and the other agencies conduct their procedures when the truck/goods arrive at the traders premise in Rwanda. Figure 26 presents time taken for Single Custom Territory procedures from April to September 2018. On average, time taken by an agent to lodge an entry to assessment and payment of taxes varied from 33 hours to 84 hours.

Overall average time taken before physical release of goods from Mombasa Port to a Rwanda trader after Customs ASYCUDA document release in Rwanda, has been reducing significantly from 167 hours in April 2018 to 42 hours in September 2018. However, there is still a challenge of automated exchange of data among the Member States participating in the SCT framework of clearing goods, the said interface/platform for exchange of data on goods being cleared is not efficient.

There is need to adopt a single transit system for the Northern Corridor for clearance of internationally traded goods as recommended by earlier studies in order to address this problem.

Figure 26: RRA SCT release at the Port of Mombasa

Source: RRA RECTS, April to August 2018



5.4 Transit Time in Uganda

Transits time in Uganda tracks the time taken to move cargo from Kampala to various borders between Uganda and Member States of Rwanda, South Sudan, Kenya and DRC.

The key Uganda border stations are:

- ▶ Elegu/Nimule
- ▶ Uganda/ South Sudan
- ▶ Katuna/Gatuna
- ▶ Uganda/Rwanda
- ▶ Malaba and Busia-Uganda/Kenya
- ▶ Mpondwe/Kasindi
- ▶ Uganda/DRC and Mutukula
- ▶ Uganda/Tanzania.

Figure 27 presents summary on transit time in median hours in Uganda from Kampala using electronic cargo tracking system (ECTS). From the analysis time taken varies depending on the distance.

Kampala to Malaba witnessed inconsistent transit time varying from a high of 42 hours in June 2018 to a low of 17 hours in July 2018.

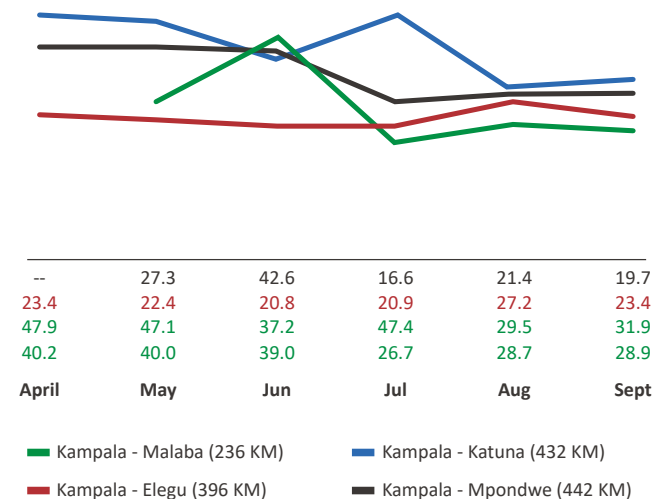
On the same breadth, transit time from Kampala to Katuna showed higher transit time for the period April and September 2018 despite the shorter distance when compared to Kampala –Mpondwe suggesting that factors constraining cargo movement on this route were prevalent over the review period.

The distance from Kampala to Katuna is about 432 km; the best transit time was recorded in August 2018 as 29.5 hours while the highest transit time was recorded in April 2018 as 48 hours. 25% (first quartile) of the trucks used between 24 hrs and 40 hrs transit time and about 75% (third quartile) transit time ranged from 45 hours to 69 hrs.

Kampala-Mpodwe has the transit time per kilometer ranging between 4 to 5 minutes per kilometer. However, there is more traffic on the route Kampala – Katuna than Kampala – Mpondwe.

Figure 27: Transit time from Kampala to various borders of Uganda (Median Time hours)

Source: URA RECTS, April 2018



A sizeable section of the route between Mbarara – Mpondwe is a national park.

To the South Sudan border, transit time from Kampala to Elegu saw a steady performance except in the month of August 2018 as shown in the table 40.



The best average transit time recorded between April and September 2018 was 12 hours while the longer transit time ranged between 64 hours and 81 hours during the same period.

Table 40: Transit time from Kampala to Elegu in Hours

Source: URA RECTS, April 2018

Transit time: Kampala to Elegu in Hrs	Apr	May	Jun	Jul	Aug	Sept
TOP 5%	12	13	12	12	12	12
25%	17	16	15	16	16	16
Mean	34	32	30	30	35	31
50%	23	22	21	21	27	23
75%	42	39	39	38	40	39
SD	28	26	27	22	35	25
Botom 5%	81	68	64	64	72	67
Number of trucks monitored	645	724	672	678	754	579



5.5 Summary Discussion on transit time

Transit time defines efficiency of the transport of freight along the transport corridors. It takes into account the impact of policies and their application in facilitating transit within the region.

Some of the factors affecting transit times include: road conditions, time it takes to clear goods, truck turnaround at the port of Mombasa, border

delay, stoppages along the Corridor due to drivers' personal reasons, weighbridges, checkpoints, company checks, police checks, custom checks among other reasons.

From the discussions on previous chapters, various reforms have been implemented, these include expansion and construction of roads, improvements in documentation and clearance processes, automation of container handling processes, implementing HSWIM at weighbridges

and one-stop border points among others towards improving not only to reduce transit time but to enhance efficiency along the entire Northern corridor.

Removing unnecessary barriers to timely delivery of cargo is of utmost importance for seamless trade and transport facilitation.



6.0 Intra-Regional Trade

African countries have created many regional trade agreements with the economic objectives of reducing trade barriers and encouraging economic growth. One of the key ways in achieving higher economic growth and regional integration is through intra-regional trade. Below is an analysis on trade flows among the Northern Corridor Member States.

The data was obtained mainly from institutions in charge of national statistics in each Member State. Some provided data on both informal and formal trade while others provided only for formal trade. Where sufficient data would not be gathered for purposes of analysis then mirror statistics were used.

This analysis will shed some light on which policy recommendations will be provided to capitalize on the full potential of Northern Corridor trade routes in the area of intraregional trade.

6.1 Formal trade between Burundi and other Northern Corridor Member States

Table 41 shows a share of the imports and exports between Burundi and other Members States of the Northern Corridor for the period January to September 2018.

Trade volumes for both exports and imports over the review period was worth approximately US\$ 92.4 million. Total value for imports was US\$ 66.2 million (72%) against a total of US\$ 26.1 million (28%) for exports. The largest source for Burundi's imports is Uganda (46 percent) followed closely by Kenya with 44 percent, Rwanda and DRC take a share of 5 percent each. Burundi's main exports are coffee and tea followed by cotton and skins.

From January to September 2018 DRC provided market for Burundi exports worth US\$ 14.9 million which translates to 57% a share of over half of Burundi's total exports to other NC Member States.



Burundi in general is a net importer with imports accounting for 72 percent of total NC trade.

Burundi has in general registered an increase in the value of total exports to all the trading partners within the Northern Corridor bloc except Rwanda and South Sudan as demonstrated in figure 28.

However, other trading countries like the United Arab Emirates still play a significant role with regards to Burundi's exports and account for 43 percent of total export trade.

Figure 28: Top market for Burundi Exports to the world from January to September 2018

Source: Burundi Bureau of Statistics Jan-Jun 2018

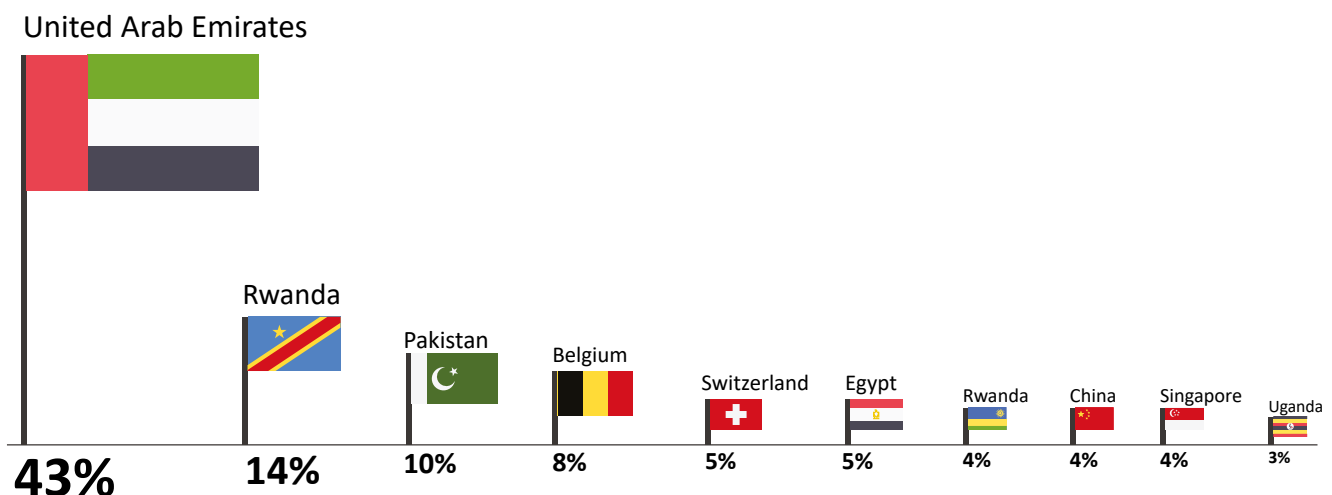


Table 41: Share of Burundi Exports and Imports January to September 2018

Source: Burundi Bureau of Statistics Jan-Jun 2018

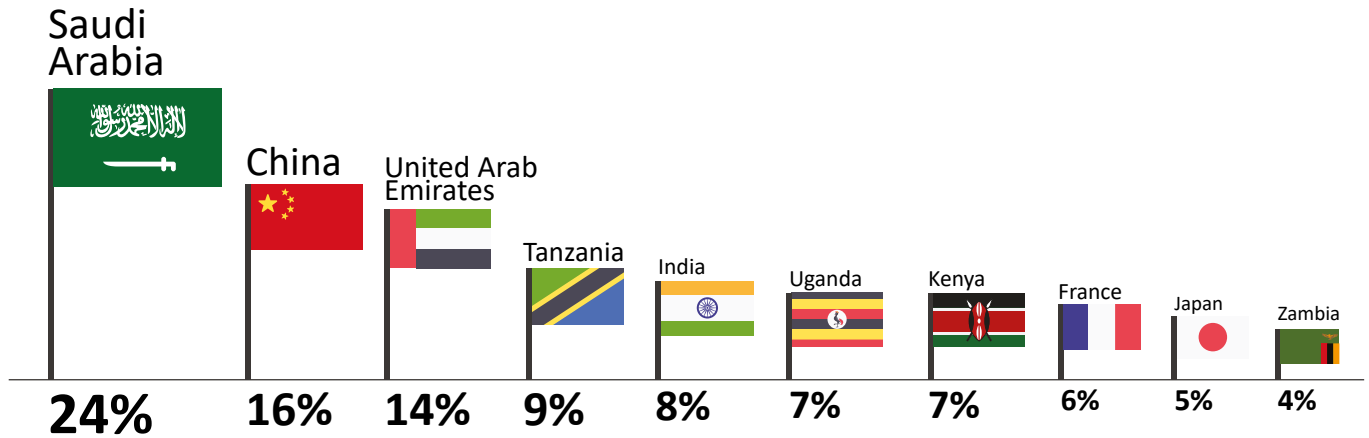
Burundi (2018) Imports Value in USD from:				
Month	DRC	Kenya	Rwanda	Uganda
Jan	99,104	2,206,662	387,340	2,888,481
Feb	33,605	2,848,969	353,946	2,613,739
Mar	176,348	2,818,950	648,080	3,195,288
Apr	138,679	3,248,540	241,912	3,067,864
May	352,089	3,356,213	464,872	3,064,643
Jun	696,047	2,870,416	306,963	3,284,593
Jul	892,318	4,725,571	257,941	3,065,411
Aug	543,023	3,821,349	417,544	4,772,837
Sep	421,391	3,422,624	398,384	4,134,666
Burundi Exports Value in USD to:				
Month	DRC	Kenya	Rwanda	Uganda
Jan	1,915,395	505,022	77,832	621,657
Feb	1,227,191	552,136	98,360	633,698
Mar	1,713,979	536,012	50,793	300,508
Apr	1,413,446	370,842	122,045	602,659
May	1,619,598	266,534	276,330	145,316
Jun	1,571,581	290,008	1,736,179	467,145
Jul	1,333,935	30,877	1,833,628	230,066
Aug	1,836,530	193,029	423,005	309,718
Sep	2,273,454	272,333	129,880	138,264

Other export partners are Pakistan (10 percent), Belgium (8 percent), Switzerland, Egypt (all 5 percent), Singapore and China (4 percent each). During the period January to September 2018, Burundi’s main imports were: construction materials, food and fuel.

Main import partners are Saudi Arabia (24 percent of total imports), china (16 percent of total imports) and United Arab Emirates (14 percent). Others include: Tanzania, India, Uganda, Kenya, France, Japan and Zambia as shown in figure 29.

Figure 29: Top market for Burundi Imports in the world from January to September 2018

Source: Burundi Bureau of Statistics Jan-Sept 2018



6.2 Formal trade between DRC and other Northern Corridor Member States

Table 42 below provides trade statistics between DRC and other Northern Corridor Member States for the period running from April to September 2018.

Uganda provided the largest market for both DRC exports and imports among the NC trading bloc.



DRC formal imports to Northern Corridor Member States, was valued at approximately US\$ 225.7 million whereas formal exports were valued at US\$ 20 million during the same period.

Table 42: Summary of formal imports and exports between DRC and other NC Member States in US\$

Source: Transport Observatory Analysis/NCTCA

Imports 2018					
Month	Burundi	Kenya	Rwanda	Uganda	Total
April	1,413,446	12,063,090	8,663,711	18,178,525	40,318,772
May	1,619,598	16,454,979	11,006,407	19,282,611	48,363,595
June	1,571,581	10,577,605	8,159,577	17,073,036	37,381,799
July	1,333,935	9,826,693	9,690,806	17,253,936	38,105,370
August	1,836,530	10,878,039	9,320,350	17,262,504	39,297,423
September	2,273,454	11,139,493	8,773,578		22,186,525
Grand Total Imports	10,048,544	70,939,899	55,614,429	89,050,612	225,653,484
Exports 2018					
Month	Burundi	Kenya	Rwanda	Uganda	Total
April	138,679	1,042,304	305,844	704,704	2,191,531
May	352,089	2,317,942	339,474	344,859	3,354,364
June	696,047	936,911	180,738	7,277,801	9,091,497
July	892,318	754,814	159,612	604,922	2,411,666
August	543,023	604,825	223,834	575,908	1,947,590
September	421,391	512,160	122,601		1,056,152
Grand Total Exports	3,043,547	6,168,956	1,332,103	9,508,194	20,052,800

6.3 Formal trade between Kenya and other Northern Corridor Member States

Total trade volume in Kenya for the period April to September 2018 was worth approximately US\$ 12 Billion; with US\$ 8.9 billion representing 74% of total trade volume as imports, US\$ 3.1 billion representing 26% of total trade volume) as exports as shown in table 43.

Out of the total volume trade, Northern Corridor Member States had insignificant proportion of import share at around 3% and 18% exports as a share of total trade.

Table 43: Total Trade volume worth in USD in Kenya from April to September 2018

Source: KNBS April to September 2018: ***Note the currency has been converted from Kenya Shillings to USD using 100 as the exchange rate

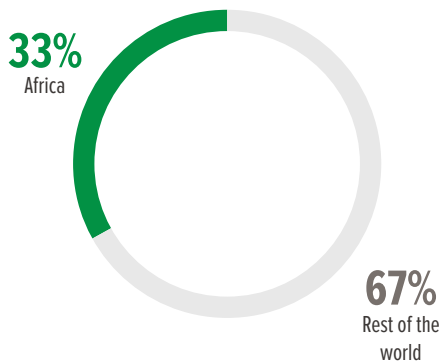
Month	Total Imports In USD	Total Exports In USD	Total Re-Exports In USD
April	1,500,955,473	431,383,263	68,592,464
May	1,680,201,034	477,288,720	75,850,015
Jun	1,425,243,554	487,243,436	41,949,029
Jul	1,527,066,222	463,911,618	64,937,100
Aug	1,498,221,745	432,975,597	76,893,372
Sep	1,299,945,223	426,429,746	41,160,071

Whereas exports are being integrated more in the East Africa Community regions and Africa (11%), imports are more integrated in the Asian and European Union trading blocs translating to 89% suggesting existence of strong links with trading blocs outside Africa with regards to imports.

Equally figure 30 demonstrates that exports to Africa were worth 33% of total trade value and 67% was destined to the rest of the world.

Figure 30: Proportion of Exports value April to September 2018

Source: Burundi Bureau of Statistics Jan-Jun 2018



This implies that it is imperative for Kenya to target fully implementation of regional trade agreements to expand the country’s export markets.

Table 44 provides trade statistics between Kenya and other Northern Corridor Member States for the period April to September 2018.



Kenya formal imports to the region were worth US\$ 256 million (Ksh 25.6 billion) whereas exports were worth US\$ 475.9 million (Kshs. 47.6 billion) making Kenya the single largest exporter in the region.

Uganda emerges the top destination for Kenya’s products both imports worth approximately US\$ 243.6 million and Exports worth US\$ 250 million compared to other Northern Corridor Member States.

In light of the foregoing, Kenya was a net exporter during the period under review. The main exports are horticultural products, tea, coffee, fish and cement. Its main imports are machinery, transport equipment, petroleum, iron, steel, resins and plastics.

Kenya is the largest importer of used motor vehicles in Africa.

Kenya’s main top ten trading partners in Africa include South Africa (31 percent of Africa total import value), followed by Uganda (24% of Africa total import value), Egypt (18.3 percent), Tanzania (8 percent), Swaziland, Mauritius, Zambia, Mozambique, Somalia and Guinea below five percent for Kenya imports.

On the other hand, Kenya top leading market in Africa for exports was; Uganda (28 percent of Africa total exports), then Tanzania (14 percent), Egypt (10 percent), Rwanda, Somalia, DRC, South Sudan, Burundi, Sudan and Ethiopia below 10 percent.

It is equally observed that Pakistan provides the export market for Kenya’s coffee, tea, industrial supplies, fuel, transport equipment and flowers worth US\$ 276 million from April to September 2018 followed closely by USA for exports worth US\$ 266 Million.

Table 44: Share of Kenya Imports and Exports from and to Northern Corridor Member States in USD in April to September 2018

Source KNBS April to September 2018: ***Note the currency has been converted from Kenya Shillings to USD using 100 as the exchange rate

Imports (USD)	Burundi	DRC	Rwanda	South Sudan	Uganda	Grand Total
April	35,201.63	1,042,304.42	1,118,577.30	629.95	37,135,602.69	39,332,315.99
May	80,705.89	2,317,941.97	1,470,893.00	45,646.87	49,589,289.37	53,504,477.10
June	19,815.31	936,910.59	692,869.99	6,900.59	45,439,721.09	47,096,217.57
July	11,425.68	754,813.60	1,255,654.55	8,936.26	40,584,106.14	42,614,936.22
August	72,225.40	604,825.22	714,355.20	525.06	34,214,761.59	35,606,692.46
Sept	110,823.43	512,159.96	812,026.70	53,579.95	36,664,111.35	38,152,701.39
Total	330,197.33	6,168,955.77	6,064,376.73	116,218.68	243,627,592.22	256,307,340.73

Month	Burundi	DRC	Rwanda	South Sudan	Uganda	Total Exports Value in USD
April	3,883,898.69	12,063,089.87	11,340,501.95	7,554,962.30	34,416,553.59	69,259,006.40
May	4,105,436.82	16,454,978.64	13,976,527.17	9,397,430.73	49,427,421.41	93,361,794.76
June	3,646,881.57	10,577,605.46	11,896,711.09	15,805,862.64	43,574,859.93	85,501,920.68
July	6,187,282.42	9,826,692.92	14,025,117.14	6,384,787.60	37,038,887.99	73,462,768.07
August	5,408,436.72	10,878,039.29	14,856,302.98	5,217,061.21	44,496,631.24	80,856,471.45
Sept	4,732,050.44	11,139,493.02	11,992,177.14	4,569,599.30	40,996,531.72	73,429,851.62
Total	27,963,986.66	70,939,899.2	78,087,337.47	48,929,703.78	249,950,885.88	475,871,812.98

Figure 31 displays leading market for Kenya exports in the world between April and September 2018.

Figure 31: Share of Kenya Exports market in the rest of the world in USD (Billions) from April to September 2018

Source KNBS April to September 2018: ***Note the currency has been converted from Kenya Shillings to USD using 100 as the exchange rate

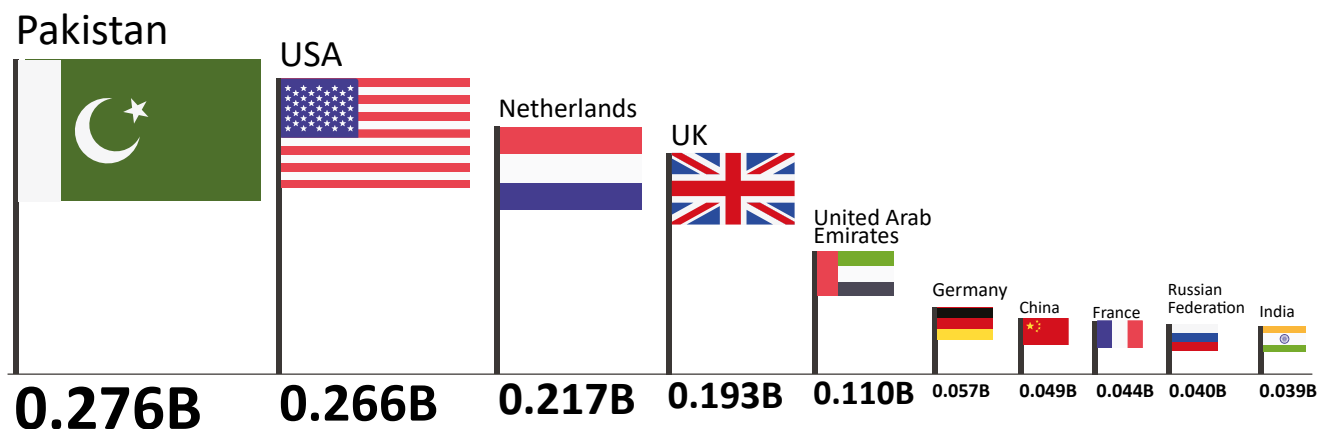


Figure 32 identifies top ten world leading source for Kenya's imports.

Kenya imports mostly machinery and transportation equipment, petroleum products, motor vehicles, iron and steel, resins and plastics.

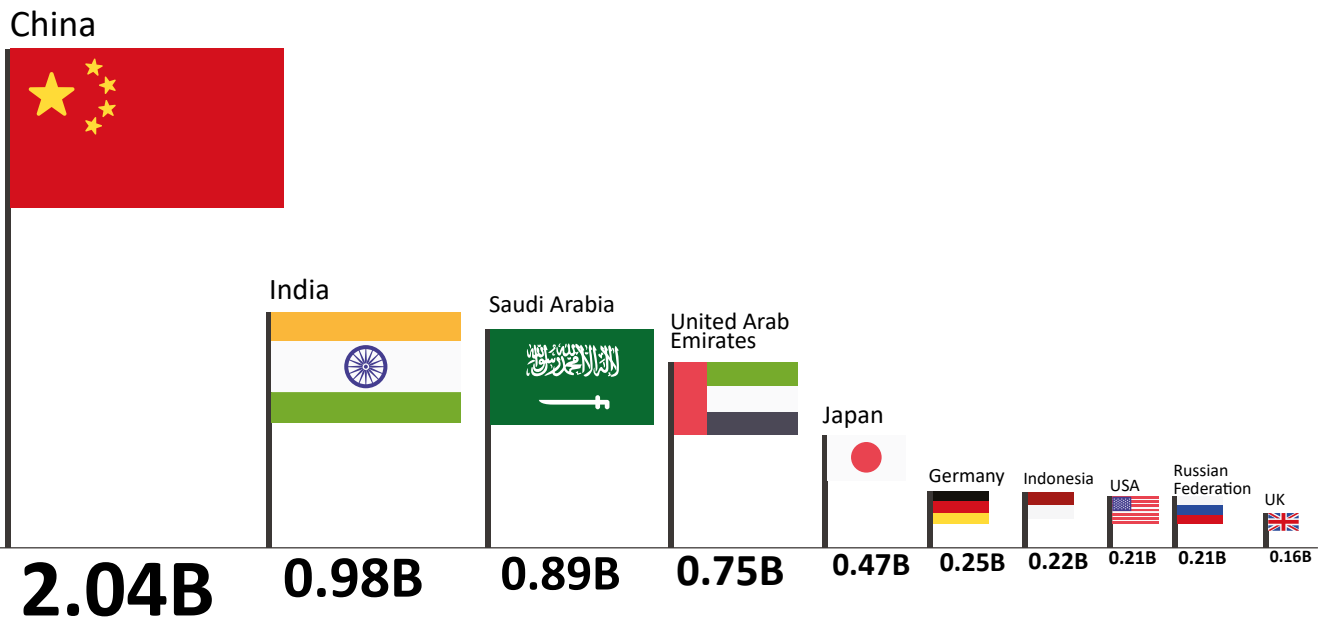
It is notable that during the period April to September 2018, China provided the largest import market to Kenya translating to 26 % of value of total imports from rest of the world.

Other than China, Kenya's main import partners are India (12%), Saudi Arabia (12%) United Arab Emirates (11%), Japan (10%).

The rest considerable market for Kenya's imports are; Germany, Indonesia, United States, Russia and United Kingdom.

Figure 32: Share of Kenya Imports market in the world in USD (Billions) from April to September 2018

Source KNBS April to September 2018: ***Note the currency has been converted from Kenya Shillings to USD using 100 as the exchange rate



Re-Exports

The KNBS data also shows that Kenya's re-exports to the other NC Member States saw a significant decline from US\$ 24 million in April 2018 to US\$ 9.8 million June 2018. However, the months of July to September 2018 witnessed a marginal increase.

Total value of re-exports from Kenya to NC Member States between April 2018 and September 2018 was worth approximately US\$ 101 million which translates to 27 percent of total value of all re-exports for Kenya.

Table 45 provides formal re-exports statistics between Kenya and other Northern Corridor Member States for the period April to September 2018.

Uganda provided the largest market share for Kenya's re-exports accounting for almost half (49 percent) of the total re-exports between April to September 2018 to the Northern Corridor region at a value of US\$ 43 million (Ksh 4.9 billion).

Agricultural products are indispensable to Kenya's export industry with horticultural and tea being the most important.

Kenya main re-exports partners are United Arab Emirates (23%), Uganda (17%), Qatar (10%) and Tanzania (9%). The country value of goods re-exported is illustrated in figure 33.

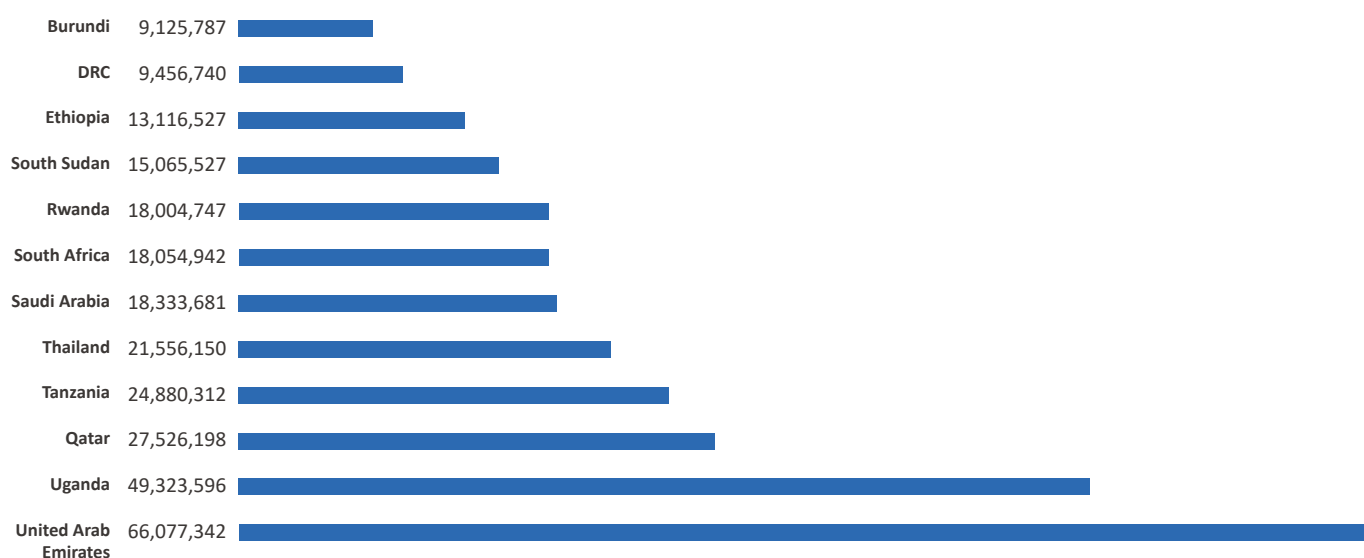
Table 45: Share of Kenya Re-export from to Northern Corridor Member States in USD from April to September 2018

Source KNBS April to September 2018: ***Note the currency has been converted from Kenya Shillings to USD using 100 as the exchange rate

Re-Exports Value In USD	Burundi	DRC	Rwanda	South Sudan	Uganda	Grand Total
April	713,673	1,183,718	8,108,887	6,616,757	8,000,859	24,623,895
May	1,160,349	1,560,967	3,776,192	4,804,741	7,287,587	18,589,836
June	811,620	755,910	1,710,242	908,363	5,645,459	9,831,594
July	2,437,279	1,956,921	593,022	1,545,403	8,482,642	15,015,268
August	2,005,241	1,667,337	3,439,187	439,487	8,615,732	16,166,983
September	1,997,626	2,331,886	377,217	750,776	11,291,317	16,748,822
Total	9,125,787	9,456,740	18,004,747	15,065,527	49,323,596	100,976,397

Figure 33: Share of Kenya Re-exports market in the world in USD (Billions) from April to September 2018

Source KNBS April to September 2018: ***Note the currency has been converted from Kenya Shillings to USD using 100 as the exchange rate



6.4 Formal trade between Rwanda and other Northern Corridor Member States

During April to September 2018, Rwanda’s total trade with other Northern Corridor Member States amounted to around US\$ 158. Exports totaled to US\$ 69.9 million and imports were valued at US\$ 88 million.

On the same note, the share of export to total trade was an equivalent of 44 percent and imports accounted for the remaining 56% making Rwanda a net importer among the NC Member States.

This section presents external trade statistics relating to imports, exports and informal trade of goods in Rwanda. Note formal trade does not include South Sudan.

6.4.1 Formal Imports - Over the months under review, total imports values have not been steady for instance Rwanda witness a decrease of about 18 percent in September 2018 compared to August 2018.

Table 46 shows imported goods in value US\$ of imports from NC Member States by Rwanda.

Table 46: Value of goods imported by Rwanda from Northern Corridor Member States countries (in USD) for the period April to September 2018

Source: National Bank of Rwanda

Month	Burundi	DRC	Kenya	Uganda	Total Imports Value
Apr	382,939	305,844	11,340,502	1,123,394	13,152,680
May	390,701	339,474	13,976,527	1,000,535	15,707,236
Jun	394,883	180,738	11,896,711	1,724,563	14,196,896
Jul	310,555	159,612	14,025,117	1,061,857	15,557,142
Aug	308,508	223,834	14,856,303	892,380	16,281,025
Sept	319,098	122,601	11,992,177	805,556	13,239,432
Grand Total	2,106,685	1,332,103	78,087,337	6,608,285	88,134,411

Rwanda’s largest trading import volume was with Kenya with a total of US\$ 78 million (89%) over the six month period ending September 2018; the next largest trading partner is Uganda with 7% imports followed by Burundi and DRC with 2%.

Rwanda imported more capital good, energy, consumer goods and lubricants.

6.4.2 Formal Exports - Table 47 displays Rwanda’s exports to NC Member States in US\$ according to the National Bank of Rwanda. The main exports constituted Food products and live animals, beverages and tobacco, crude materials.

From the results, there is wide variability in formal exports between Rwanda and the other NC Member States for the period April 2018 to September 2018.

Table 47: Value of goods exported by Rwanda to Northern Corridor Member States (in USD) for the period April to September 2018

Source: National Bank of Rwanda

Month	Burundi	DRC	Kenya	Uganda	Total Exports value
Apr	280,771	8,663,711	1,118,577	1,238,627	11,301,686
May	301,708	11,006,407	1,470,893	1,076,106	13,855,114
Jun	197,895	8,159,577	692,870	873,139	9,923,481
Jul	155,541	9,690,806	1,255,655	1,341,094	12,443,096
Aug	142,744	9,320,350	714,355	1,337,007	11,514,456
Sept	185,448	8,773,578	812,027	1,062,735	10,833,788
Grand Total	1,264,107	55,614,430	6,064,377	6,928,708	69,871,622

Much of the formal export is between Rwanda and DRC (79 percent) of the total export value followed by Uganda (10 percent) then Kenya (9 percent). Burundi takes the least share of about 2 percent.

6.4.3 Informal trade Rwanda Imports - Table 48 summarizes informal trade for Rwanda between April 2018 and September 2018. Total informal trade in Rwanda in the period was US\$ 424 million with exports accounting for a larger share of 58 percent.



Uganda is by far Rwanda’s largest import market in the Northern Corridor with total merchandise imports amounting to US\$ 104 million while Burundi is the least with US\$ 1.3 million as total import value.

Total merchandise imports from DRC accounted for US\$ 4.7 million whereas Kenya accounted for US\$ 69 million. The largest import sectors are; agro-processing sector, horticulture and manufacturing.

DRC on the other hand was the leading export country for Rwanda commodities during the same period with total amount of US\$ 169 million (69% of total export value) followed by Kenya with total merchandise trade amount of US\$ 52 million (22%).

Export to Uganda in this period amounted of US\$ 15 million (6%), Burundi received merchandise worth US\$ 6.9 million from Rwanda and Merchandise Exports with South Sudan totaled to US\$ 0.7 million.

Table 48: Value of goods imported and exported by Rwanda with Northern Corridor Member States (in USD)) for the period April to September 2018

Source: National Bank of Rwanda

Total Informal Imports In USD					
Month	Burundi	DRC	Kenya	Uganda	South Sudan
Apr	156,316	916,055	9,663,910	15,678,678	--
May	195,726	918,641	11,061,081	16,979,765	--
Jun	216,117	686,954	9,180,617	17,769,185	--
Jul	250,847	800,131	18,346,827	17,492,627	--
Aug	345,538	648,379	11,202,096	19,348,566	--
Sept	179,124	770,264	9,812,562	17,229,099	--
TOTAL	1,343,669	4,740,424	69,267,093	104,497,921	--
Total Informal Exports In USD					
Month	Burundi	DRC	Kenya	Uganda	South Sudan
Apr	953,859	25,316,721	11,136,399	5,484,913	59,363
May	1,250,191	30,705,806	11,486,868	5,939,950	85,036
Jun	1,220,541	27,637,829	9,898,732	902,835	40,941
Jul	1,589,057	28,313,783	8,610,630	1,091,160	40,897
Aug	860,657	28,197,977	5,401,094	1,038,512	260,976
Sept	1,000,679	28,879,017	5,850,191	882,946	250,536
TOTAL	6,874,985	169,051,133	52,383,915	15,340,316	737,749

6.5 Formal trade between South Sudan and other Northern Corridor Member States

South Sudan data on intra-regional trade was not available; therefore mirror statistics was used from Kenya and Uganda to show intra-regional trade among the countries as shown in table 49 below.

Table 49: Summary of formal exports and imports, South Sudan in USD

Type of Trade	Country	Apr	May	Jun	Jul	Aug	Sep	Total
Exports	Kenya	630	45,647	6,901	8,936	525	53,580	116,219
	Uganda	324,245	277,633	258,721	272,830	67,924		1,201,353
Total Exports		324,875	323,280	265,622	281,766	68,449	53,580	1,317,572
Imports	Kenya	7,554,962	9,397,431	15,805,863	6,384,788	5,217,061	4,569,599	48,929,704
	Uganda	27,278,173	32,393,422	30,720,478	27,309,441	23,559,782		141,261,296
Total Imports		34,833,135	41,790,853	46,526,341	33,694,229	28,776,843	4,569,599	190,191,000

6.6 Formal trade between Uganda and other Northern Corridor Member States

Table 50 provides a summary of formal intraregional trade volumes between Uganda and the other Northern Corridor Member States between the months of April to August 2018.



Total trade over the period between Uganda and Member States along the NC amounted to value of US\$ 797,199,287 from which 74 percent represents exports and 26 percent represents imports making Uganda a net exporter.

During the six month period ending September 2018, Uganda imported petroleum oils partly refined (including topped crudes), rolled iron/steel, salt (including table salt and denatured salt) and pure sodium chloride from the other Northern corridor Member States.

Main exports from Uganda to NC Member States included; agricultural products comprising coffee, tea, maize, sorghum grain, fish, broken rice and milk. Other exports included oil re-exports, metals, electricity, plastic products, cement, iron/steel bars and rods.

On average, the total amount in value for imports increased steadily over the months under review except for the month of June 2018.

Kenya remains by far Uganda's largest market for imports and exports in the Northern Corridor with total merchandise imports amounting to 89 percent and 42 % exports.

Main trading partner countries with Uganda around the world are presented in table 51. Uganda's main import partners are: China, India, United Arab Emirates and Saudi Arabia

Table 50: Uganda Formal Intra-Regional Trade (in US\$)

Source: UBOS, April to August 2018

Imports Value (USD)	Burundi	DRC	Kenya	Rwanda	South Sudan	Total Import Value in US\$
Apr-18	83,341	704,704	34,018,208	1,808,139	324,245	36,938,637
May-18	37,898	344,859	38,691,306	1,300,892	277,633	40,652,588
Jun-18	63,255	7,277,801	34,190,997	1,338,010	258,721	43,128,784
Jul-18	4,170,459	604,922	35,410,337	1,015,831	272,830	41,474,378
Aug-18	185,586	575,908	41,517,482	1,066,600	67,924	43,413,501
Grand Total	4,540,539	9,508,194	183,828,330	6,529,472	1,201,353	205,607,889
Exports Value (USD)	Burundi	DRC	Kenya	Rwanda	South Sudan	Total Export Value in US\$
Apr-18	2,814,592	18,178,525	25,655,176	15,203,710	27,278,173	89,130,176
May-18	3,082,240	19,282,611	66,723,149	19,490,963	32,393,422	140,972,385
Jun-18	2,932,015	17,073,036	59,987,996	17,708,410	30,720,478	128,421,935
Jul-18	2,791,084	17,253,936	48,409,901	19,566,233	27,309,441	115,330,595
Aug-18	4,547,923	17,262,504	51,530,674	20,835,425	23,559,782	117,736,308
Grand Total	16,167,854	89,050,612	252,306,896	92,804,741	141,261,295	591,591,398

Table 51: Uganda Formal Imports from none Northern Corridor Countries, April to August 2018 (in US\$)

Source: UBOS, April to August 2018

Country Of Origin	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Grand Total
China	73,214,897	76,743,197	91,399,865	96,948,584	142,256,518	480,563,061
India	70,730,487	72,909,044	58,154,164	63,161,436	64,749,300	329,704,431
United Arab Emirates	69,458,032	78,907,053	71,977,326	45,516,230	49,525,681	315,384,322
Saudi Arabia	41,680,899	42,697,067	68,519,284	57,894,965	72,627,258	283,419,473
Japan	23,720,473	28,679,451	20,297,175	27,794,622	32,018,747	132,510,468
South Africa	20,699,489	22,301,982	29,933,265	25,517,554	24,636,593	123,088,883
Indonesia	19,061,925	8,311,171	18,881,402	16,425,585	14,153,305	76,833,387
Tanzania	6,466,098	11,092,497	20,989,215	24,542,627	29,703,363	92,793,800
United States	13,184,076	15,013,144	8,336,991	11,213,809	7,845,277	55,593,298
Germany, Federal RE	8,684,287	12,203,831	9,009,627	9,324,726	9,531,483	48,753,953

6.7 Discussion summary of intraregional trade

Trade is a crucial part of the country's growth. The elimination or reduction of Non-Tariff Barriers (NTBs) will go a long way in improvement in trade facilitation among the NC Member States.

The Member countries have put an effort in initiatives that are geared towards boosting intra-regional trade. For instance being part of African Continental Free Trade Area which provides an opportunity for Northern Corridor Member States to a large and dynamic market.

From the aforementioned, NC Member States economies are agricultural dominated yet their demand for manufactured goods is currently being met by imports from the rest of the world rather than by local and regional firms suggesting

that all of the Northern Corridor Member States trade deficits are driven by manufactured imports.

This may be attributed to limited value addition capacity. The trade indicators demonstrate that NC Member States largely import from China, India, United Arab Emirates and Saudi Arabia whereas United States of America and Pakistan provides market for their exports. It is also notable that NC Member States export also similar products.

Most of these countries qualified as net importers among themselves except for Kenya and Uganda. It is recommended that NC Member States to boost regional exports by harnessing the full potential of domestic and region markets since high trade costs are a culmination of

time related costs and costs related to market access. Furthermore, promoting export schemes will enhance trade facilitation and balance of payment.

Table 52 gives the summary of the proportions of import and exports in the region for the formal trade for the period April to September 2018 excluding South Sudan.

Total trade along the corridor summed to around US\$ 2 billion from which 59 percent represents exports and 41 percent represents imports. Uganda and Kenya were the leading for both net imports and exports.

Burundi trade volumes were notably low which could be attributable to population size of the country.

Table 52: Proportion of Formal trade among Northern Corridor Members (in US\$) April to September 2018

Source: Transport Observatory Analysis/NCTCA

	Burundi	DRC	Kenya	Rwanda	Uganda	Grand Total
Total Imports	47,965,891	225,653,484	256,307,340.73	88,134,411	205,607,889	823,669,016
Total Exports	17,886,401	20,052,800	475,871,812.98	69,871,622	591,591,398	1,175,274,034
Total Trade	65,852,292	245,706,284	732,179,154	158,006,033	797,199,287	1,998,943,050
Share of total trade	3%	12%	37%	8%	40%	100%



7.0 Road Safety

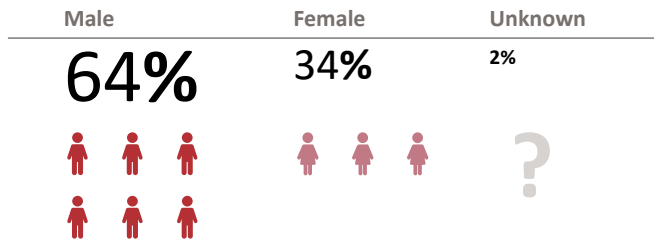
7.1 Road Safety in Kenya

The Government of Kenya through National Transport and Safety Authority (NTSA) has been implementing traffic laws that will see minimal loss of lives through road crashes. However, there are still cases of road accidents in Kenya along the Northern Corridor routes.

Figure 34 below gives a breakdown for the categories of victims involved in road accidents using data from NTSA.

Figure 34: Categories of fatalities distributed by gender (Jan to Sept 2018)

Source: NTSA January to September 2018



Over period January to September 2018, total numbers of the fatalities reported were 2,281; male constituting 64 percent (1,458), 34 percent female and 2 percent (43) unknown.

Table 53 shows the distribution of fatalities based on type of vehicle on the northern corridor for the period January 2018 to September 2018.

Most of the fatalities were attributed to accidents caused by privately owned vehicles 30% followed by commercial 27% public service vehicles 22% and motorcycle 19%.

Table 53: Distribution of Fatalities based on Type of Vehicle

Source: NTSA January to September 2018

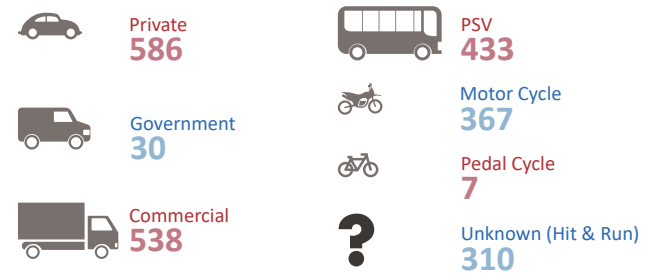
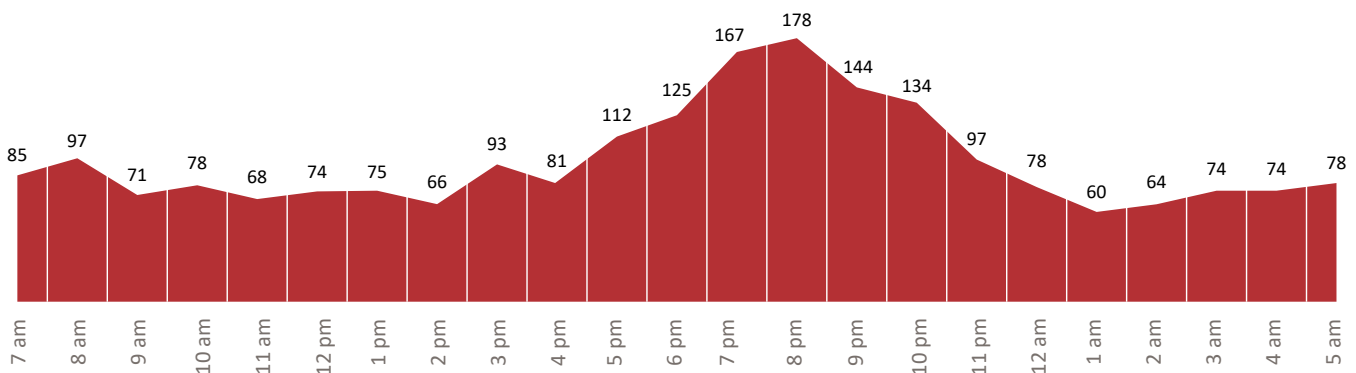


Figure 35 shows most of the accidents occur at time of the day with the lowest visibility accounting for 69% of all accidents that were reported. The poor visibility time of the day runs from 1700 hours to 0700 hrs.

This suggests that road infrastructure and signage needs to be enhanced to ensure improved road safety for those who drive after dusk. Most of the accidents were reported from on Friday (15%), Saturday (19%) and Sunday (18%).

Figure 35: Distribution of Fatalities based on Time

Source: NTSA January to September 2018





The main resulting causes of accidents in particular fatalities were highly attributable to losing control, failing to keep to near side or to proper traffic lane, overtaking improperly, Excessive speed, misjudging clearance and error of judgment were some of the causes. However 19 % of the crashes the cause was not established as shown in table 54.

Table 54: Causes of Accidents in Kenya along the Northern Corridor

Source: NTSA January to September 2018

Causes of crashes	Percentage
Cause no traced	19%
Losing control	18%
Failing to keep to near side or to proper traffic lane	10%
Overtaking Improperly	9%
Excessive speed	6%
Misjudging clearance	5%
Error of judgement	5%
Stepping, walking or running off footpath	3%
Brake failure	3%
Swerving	3%

7.2 Road Safety in Rwanda

Figure 36 shows the distribution of fatalities based on road section on the northern corridor for the period April to September 2018.

Major causes of accidents were attributed to over speeding, wrong manoeuvres and reckless driving. Most fatalities were on Kigali-Musanze-Rubavu section 20% followed closely

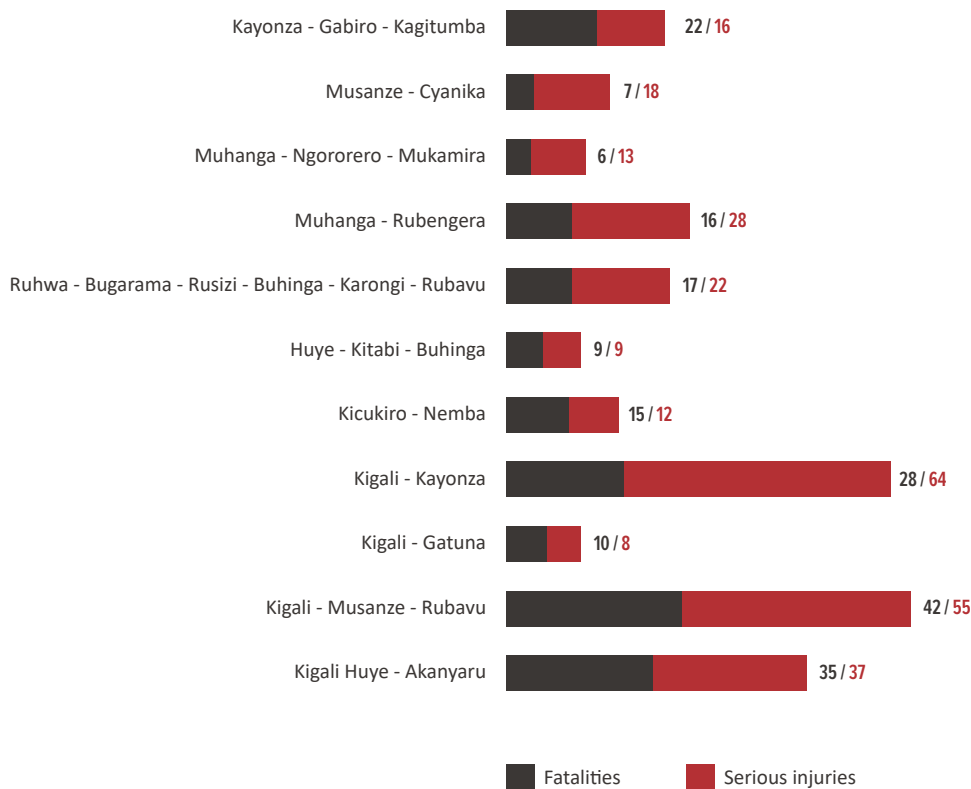
by Kigali –Huye -Akanyaru section 17% and Kigali – Kayonza section 14%.

During the period under review it was reported that Huye (Karubanda-junction to Kitabi) section was under rehabilitation.

The report proposes strict law enforcement against over speeding, drunk driving and non-compliance with traffic rules to enhance road safety in Rwanda.

Figure 36: Number of accidents distributed by road section (April to September 2018)

Source: Ministry of infrastructure/Rwanda National Police



Road safety data was not available for the Burundi, DRC, South Sudan and Uganda. During the stakeholder consultations, DRC reported that most accidents were caused by poor visibility.

Uganda transport annual performance report showed that, the road crash fatalities were 2,954 in 2010 which was expected to be halved by 2020 under the United Nation decade of action for road safety.

All northern Corridor Member States should work towards reducing road carnage.

8.0 Observations and Recommendations

1. The Single Customs Territory

Challenge of automated exchange of data among the Member States participating in the SCT framework of clearing goods, the interface/platform for exchange of data on goods being cleared is not efficient.

Often traders pay taxes under SCT but the goods cannot be released for onward transit due to lack of information by the other Revenue Authorities about the status of clearance of the goods.

Recommendation

There is need to adopt a single transit system for the Northern Corridor for clearance of internationally traded goods as recommended by earlier studies in order to address this problem.

The transit system should encompass a simplified customs declaration as well as customs bonding of goods. The system should also provide facility for use of a Carnet.

2. Intra-regional Trade

Informal trade comprises a sizeable volume of cross border trade among the Northern Corridor Member States. However, often there is a challenge of collecting data on informal trade to support the Member States plan better for its population participating in this kind of trade. Furthermore, informal cross border trade is mainly carried out by women and youth; a group currently being targeted to be supported but with scarce information available relating to the way they trade and the challenges they face. The National Bank of Rwanda has automated capture of informal cross border trade data where their field staff use tablets to collect data.

Recommendation

- Member States are urged to automate collection of informal cross border trade statistics they are encouraged to benchmark with Rwanda which has started implementation.
- There is need to boost intra Africa trade and encourage regional and global value-chains to accelerate transformation & industrialization.
- AfCFTA advocacy awareness for intra-Africa trade and free movement of people, goods & services. Exploitation of Blue Economy in the region
- OGEFREM being the advice of the Congolese shippers besides advising the government on the transport, has developed a database which member states can refer to import the products from DRC for advancing an intra trade regional.

3. Regional Electronic Cargo Tracking System

Some of the delays for goods in transit are caused by lack of R-ECTS to seal the trucks before being released to transit to their destinations. Furthermore, it was reported that at times the R-ECTS are removed at border crossing points before the goods reach their final destination even when such goods are still subject to customs controls. The transporters incur a lot of costs as they await availability of R-ECTS to have their trucks sealed before commencing their transit journeys. Furthermore, in case of exports the transporters face bigger challenges in getting the Revenue Authorities obtain seals from their offices to have the trucks sealed before commencing their journey. On several cases drivers carrying exports have been impounded along the transit routes for lack of R-ECTS.

Furthermore, use of R-ECTS data has a limitation of not having the transit nodes along the Corridor geo zoned, as such it is difficult to use the seals to get the time spent at each transit node along the Corridor such as weighbridge crossing time, border crossing time and time at transit parking yards.

Recommendation

- The transporters should be allowed to acquire the R-ECTS devices and the Customs Authorities retain the function of operating them i.e. arming/disarming the seals and tracking movement of the sealed cargo.
- Geo zone/fence the R-ECTS with the key transit nodes along the Northern Corridor

4. Delay after customs release is a major contributor to the high port dwell time and transit time along the Northern Corridor in general.

The target for this indicator has not yet been met. One of the challenges is that traders have to have someone to follow up and coordinate the release and transportation of goods out of the port. Even when goods are cleared under the SCT framework still it requires a trader to have an agent to coordinate release and transportation of his goods from the Port. Despite agreements on mutual recognition, trade facilitation agents such as clearing agents and freight forwarders registered in other Member States are getting challenges in obtaining work permits to coordinate their business at the port for goods they have been assigned by their clients to clear and forward to destination countries.

Recommendation

- The Northern Corridor Member States are urged to ease the process of granting work permits to trade facilitation agents to work in their countries as per the Northern Corridor Transit and Transport Agreement in order to enable them work efficiently and minimize delays of

evacuation of cargo from the port.

- There is a need to follow up and ensure time at DPC is reduced from the current reported time. DPC time affects the overall logistics performance and time it takes to move cargo from one point to another.

5. Regional Custom Transit Guarantee eliminates the need for multiple guarantees that are executed at national level, reduces documentation and time spent at borders and cost of securing movement of goods across Corridors. Currently, RCTG Carnet is fully operational in Burundi, Kenya, Rwanda, and Uganda. Efforts should be made to have it in South Sudan.

Replicating the single customs territory scheme in all the Member states. With the full roll out of the Single Customs Territory of EAC, operations have improved and goods being cleared faster.

Recommendation

A special arrangement with DRC to have goods cleared at the port of Mombasa.

6. Communications and Electronic Information Transfer is erratic hampering communication between revenue authorities causing delays in cargo release.

Recommendation

Need for single window systems to be integrated across the region.

7. Infrastructure

Infrastructure deficit is a barrier to intra-regional trade.

Recommendation

- Weighbridges to embrace modern technology and systematic records across the region should be interlinked.
- Expansion of the Railways and Inland water ways network should be prioritized.
- Prioritize improvement of poor sections along the corridor. Donor support for improvement of infrastructure in South Sudan is required.
- Education and sensitization of shippers on existing regulations to enhance compliance at weighbridges in Uganda is required. Also promoting the use of high-speed weigh-in motion weighbridges for selectivity and incentive to compliant operators as well as reducing downtime and cases of truck delays due to discrepancy between the readings of weighbridges manned by different operators are recommended.
- Delegates recommend that NCTTCA should advocate for reopening of the Kisumu-Jinja-Port Bell water way to boost trade between Kisumu and Jinja.

Transport Coss

Establish a mechanism for compiling and updating fees and charges on transit goods that are contravening good practices with a view to eliminate the illegal ones and reduce the impact for the legitimate ones.

Recommendation

There is a need to address the cost of corridor inefficiencies, cumbersome cross border & clearance procedures; need for rationalization of Corridor Charges (Permits, Levies, Taxes, Fees) which are Un-standard between countries including some countries levy Crossing Fee (entry & exit), Carbon tax per entry, Card entry, Insurance per trip, Container Charge Fumigation, parking, port charges, Road user charges.

The 100 percent verification scan is an element that prolongs the stay of transit merchandise at the port leading to increased cost due to delays. Cargo in transit may not be opened at the transit port except in the case of military goods.

9. Reporting on Indicators

- There is a need to ensure consistency and harmonized way of reporting on the weighbridge indicators
- There is a need to ensure consistency on reporting of the transport tariff. Currently some reported per container while others are reported per tonne. This will ensure ease of comparison

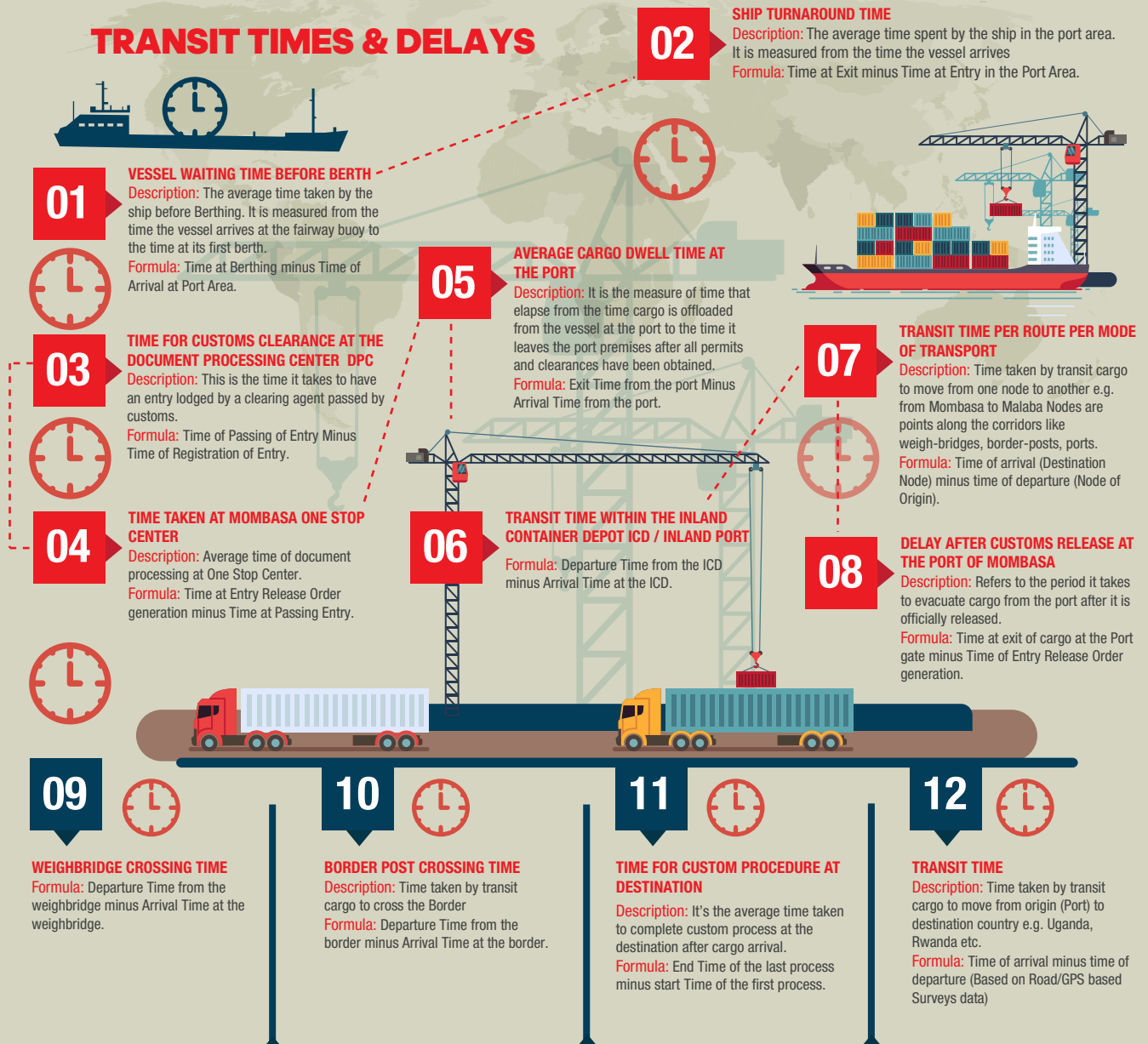
10. Establishing monitoring committee:

- Suggestions to NCTTCA to look into ideas of establishing monitoring Committee to help in monitoring the implementation of highlighted recommendations from the Transport observatory reports.

Annexes

Annex 1 Northern Corridor Performance Indicators

TRANSIT TIMES & DELAYS



EMISSIONS INDICATORS

01

CORRIDOR EMISSIONS

Description: Considers only road transport emissions along the corridor such as Particulate Matter (PM), black carbon emissions and Oxides of nitrogen (NOX) and CO2 emission in grams per ton-km.

Provides emissions levels for CO, VOC, NOX, PM, black carbon and CO2 along the northern corridor with the objective to undertake measures geared towards cutting down emissions levels

02

PORT EMISSIONS

Description: Total emissions at the port as summation of: -
 a) Emissions from the ship on maneuvering
 b) Emission by the ship at the port and on anchorage
 c) Emissions by equipment at the port of Mombasa
 d) Vehicles and trucks accessing the port of Mombasa
 e) Rail locomotives accessing the port of Mombasa
 f) Electricity usage at the port of Mombasa

01

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.

03

ROAD FREIGHT CHARGE

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

04

RETURN OF EMPTY CONTAINERS GRACE PERIOD, PENALTIES, AND DEPOSIT

Description: Published tariffs by Stakeholders.

02

PORT TRANSIT CHARGES

Description: Published tariffs by Stakeholders.

05

RAIL FREIGHT CHARGE

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

RATES & COSTS



VOLUME & CAPACITY



01

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 and exports from other countries. (It includes imports to and exports from other countries). Transit Traffic is part of the total Cargo throughput of the Mombasa port

02

VOLUME PER COUNTRY OF DESTINATION

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



03

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.

04

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.



05

AVERAGE ANNUAL DISTANCE PER TRUCK IN KM PER YEAR

Description: Average distance traveled per truck per year.

06

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

01

NUMBER OF CHECK POINTS PER COUNTRY PER ROUTE

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



02

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.

03

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:

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



04

WEIGHT COMPLIANCE

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

Formula:

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

05

NUMBER OF ACCIDENTS PER ROUTE

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

06

WEIGHBRIDGE TRAFFIC

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

07

GROSS MOVES PER SHIP PER HOUR AT THE PORT OF MOMBASA



INTRAREGIONAL TRADE

01

VALUE AND VOLUME OF TRADE BETWEEN THE NORTHERN CORRIDOR MEMBER STATES

Description:
 - Formal trade between the northern corridor member states
 - Informal trade between the northern corridor member states



Annex 2: Dashboard Indicators as per the new Port and Stakeholders Port Community Charter.

Performance Area	Key Performance Indicator	Units	Base Line 2018	Dec 2020	Dec 2022	Dec 2024
Efficient berth operations	Vessel turnaround time This will be measured as the time it takes between the arrival of a vessel and its departure from port.	Hours	50	40	30	25
Efficient ship operations	Berth productivity This will be measured as the average of the gross moves (on-load, off-load and repositioning) per hour for each vessel call recorded.	Moves per-ship, per hour (moves/ berth time)	36	38	40	42
	Crane productivity This will be measured as the average of the gross moves (on-load, off-load and repositioning) per hour per crane.	Moves per crane , per- hour (moves/ crane hours)	18	20	22	24
Efficient yard operations	Average cargo dwell time This will be measured as the time elapsed between cargoes being unloaded from a ship until it leaves the port gates.	Hours	96	78	60	48
Efficient SGR operations	Average turnaround time This is the average time from the train's arrival to departure	Hours	18	14	12	12
Efficient gate operations	Average truck port dwell time This will be measured as the average time from the truck's gate-in to gate-out.	Hours	5	4	3	2

Performance Area	Key Performance Indicator	Units	Base Line 2018	Dec 2020	Dec 2022	Dec 2024
Fast port to border road haulage	Average truck trip time This will be measured as the time out of the port gates to the time truck lodges customs clearance documents at the Malaba border post.	Hours	84	60	41	36
	Average truck trip time This will be measured as the time out of the port gates to the time the truck lodges customs clearance documents at the Busia border post.	Hours	84	65	45	36
Efficient train servicing operations	Average Nairobi freight train trip time This will be measured as the time loading is completed at the Port of Mombasa to the time the train arrives at ICDN.	Hours	18	17	16	10
	Average Mombasa freight train trip time This will be measured as the time loading is completed at ICDN to the time the train arrives at Mombasa Port.	Hours	18	17	16	10
Enhanced port cargo handling and processing capacity	Indicated by the total annual cargo throughput, that includes dry bulk, liquid bulk cargo, breakbulk cargo, roll-on/roll-off (Ro/Ro) vehicles and industrial equipment, and the contents of shipping containers.	M'DWT	31.48	35.90	41.37	47.60
Increased liquid bulk holding capacity	Indicated by the cubic metres or metric tonnes of petroleum products	Cubic Metres (M ³) or Metric Tonnes (MT)	TBD	TBD	TBD	TBD

Performance Area	Key Performance Indicator	Units	Base Line 2018	Dec 2020	Dec 2022	Dec 2024
Greater conveyance of fuels by pipeline	Indicated by the % of petroleum products moved along the corridor.	% Fuels conveyed by pipeline	90	100	100	100
Increased private sector operators' uptake of the AEO	Indicated by the increased number of entries passed without stoppage by customs	%	70.2%	74%	78%	82%
Increased compliance by operators on customs and OGA requirements	Customs DPC time This is measured as the average time between customs entry registration and payment to passing of customs entry (under ICMS)	Hours	2.3	Instant	Instant	Instant
Expatriated customs clearance	Customs one-stop centre time: measured as the average time between registration, passing and issuance of release order on a customs entry	Hours	80	64	48	24
	Increased number of entries passed without stoppage by customs	%	70.2%	74%	78%	82%
Optimised border clearance processes implemented at Malaba	Indicated by the average Malaba border crossing time Kenya, Uganda.	Hours	12.5	8	4	3
Optimised border clearance processes implemented at Busia	Indicated by the average Busia border crossing time Kenya, Uganda	Hours	12.5	8	4	3
Develop and promote Kenyan exports	Indicated by the ratio of exports value in USD versus imports value on the corridor	-	TBD	TBD	TBD	TBD

Performance Area	Key Performance Indicator	Units	Base Line 2018	Dec 2020	Dec 2022	Dec 2024
Provide a forum for constant dialogue between relevant public and private sector organisations for the purpose of consensus building on issues affecting exports	Indicated by the number of forums organised.	Number	0	2	4	4



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