Republic of Kenya

ASSESSMENT REPORT ON SOCIO-ECONOMIC IMPACT OF OPERATIONALIZATION OF THE STANDARD GAUGE RAILWAY ON THE PORT CITY OF MOMBASA

SUBMITTED TO

COUNTY GOVERNMENT OF MOMBASA

OCTOBER, 2019

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Social Economic Surveys

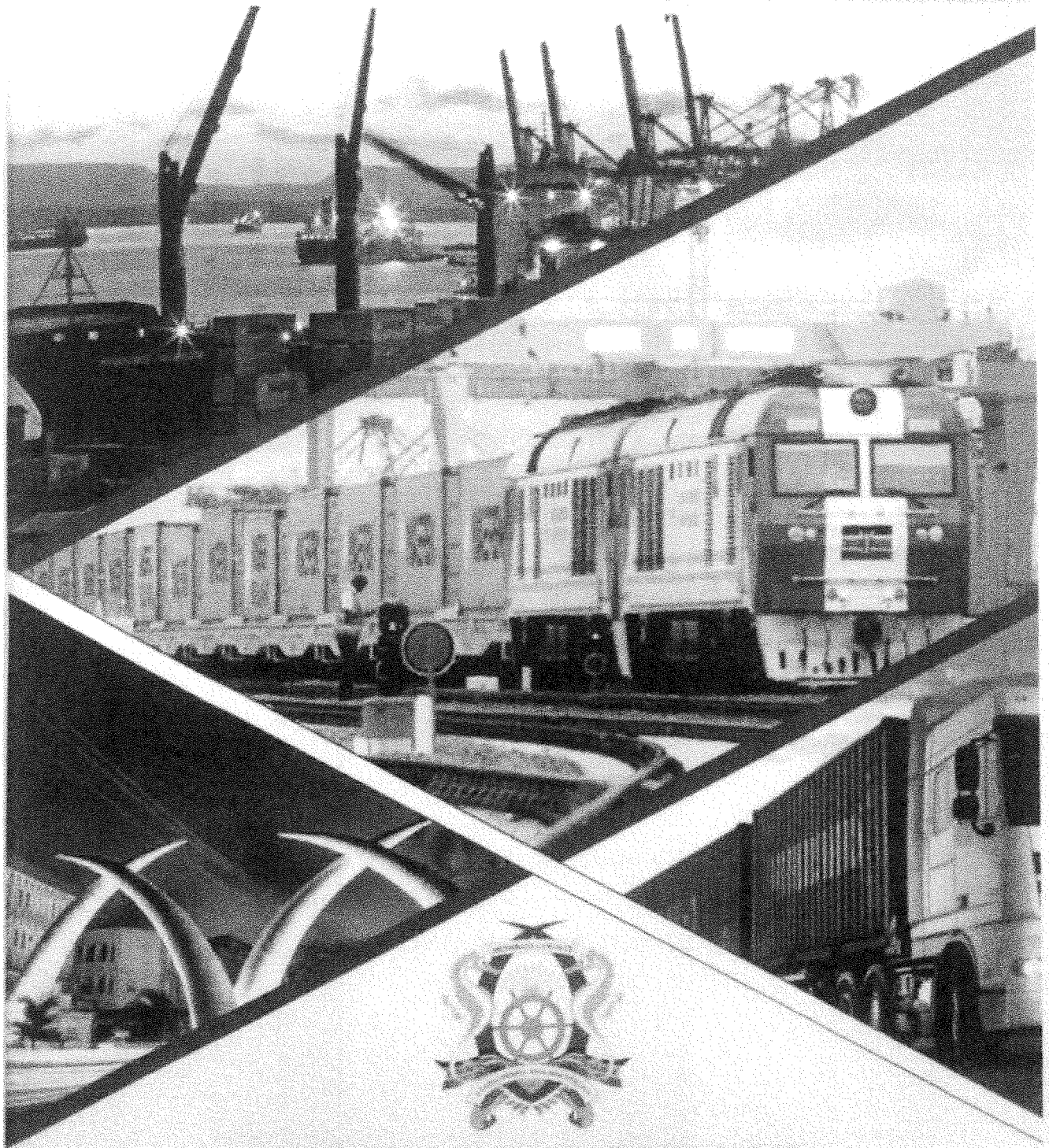
The socio-economic sample survey was undertaken from 27th August 2018 to 14th September, 2018 at Mombasa County

Sectors involved in study


TRUCKING


ROADSIDE


DRIVERS



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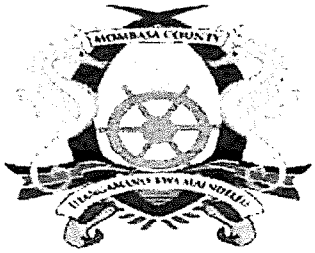
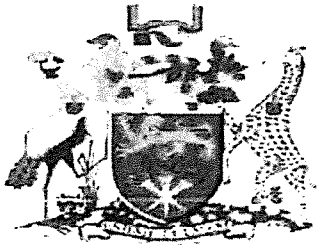


County Government
of Mombasa



University of Nairobi

This study was commissioned by the County Government of Mombasa to the School of Business, University of Nairobi.

The study was undertaken and the report prepared by:

Project Technical Team

Dr. Kennedy Ogollah (Project Team Leader – UON)
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Quality Assurance Team

Prof. Julius Ogengo – DVC - Academic Affairs (UON)
Prof. James M. Njihia – Deans (SOB)
Dr. Sarah Kinyanjui – Director (Mombasa Campus)

OCTOBER, 2019

CONFIRMATION OF DOCUMENTATION

I, **Dr. Kennedy Ogollah** on behalf of SEI Team of Consultants and School of Business of the University of Nairobi hereby confirm that to my knowledge, all information contained in this report is accurate and a truthful representation of all findings as relating to the study/project.

Signed in **MOMBASA** at The Governor's Office, County Government of Mombasa on this 15TH day of **October 2019.**

Signature: .....

Designation: **Lead Technical Team Consultant and Project Team Leader**

I, Prof. Julius Ogeng'o on behalf of the SEI Quality Assurance Team and University of Nairobi submit hereby confirm that to my knowledge, all information contained in this report is accurate and a truthful representation of all findings as relating to the study/project.

Signed in **MOMBASA** at The Governor's Office, County Government of Mombasa on this 15TH day of **October 2019.**

Signature: J. Ogeng'o

Designation: **Deputy Vice Chancellor (Academic Affairs) – University of Nairobi**

ACKNOWLEDGEMENT

This assessment report on the socio-economic impact of the operationalization of the Standard Gauge Railway on the Port City of the Mombasa was undertaken through a consultative and participatory process that involved a series of meetings with the County Government of Mombasa officials, sector stakeholders and affiliated business and channel players. The result of this report therefore remains the contribution and concerted efforts of many people through collaborative initiatives.

Special thanks to H.E the Governor – Hon. Hassan Joho, the Chief of Staff, the County Executive Committee Members (CECM) Finance and Economic Planning; Trade, Investment and Tourism; Transport and Infrastructure among other key county officials. Immense appreciation goes to the Office of the Governor, County Government of Mombasa SGR study secretariat team led by Mr. Hamisi Mwaguya, Advisor Urban Renewal and Planning for the significant amount of time they put in facilitating activities and smooth execution of processes during the assessment period.

We wishes to express our gratitude to all the respondents who availed information sought by the team both during the focus group discussion and field data collection. This report could not have been completed without the support accorded by key stakeholders including the relevant players and members of Mombasa Port Community Charter, Members of Parliament and other political leaders, the local residents especially those in identified selected interest areas. Of critical importance was the information availed from the key informants and stakeholders who took part in the socio-economic assessment process namely representatives of and members of road truckers through their umbrella body the Kenya Truckers Association (KTA); warehousing businesses through the Kenya International Freight and Warehousing Association (KIFWA); Clearing and Forwarding agents (C&F); Container Freight Stations (CFS); Kenya Association of Manufacturers (KAM), Kenya National Chamber of Commerce and Industries (KNCCI)and, individual drivers, loaders and people employed in related roadside businesses. We are grateful to Beavon Kefah for leading the team of field work enumerators and supporting the consultants' technical team secretariat. To Mr. Justus Nyarandi (CEO, the Northern Corridor Transit and Transport Agreement - CTTA), your insights and support with documentations remains invaluable.

Our final appreciation goes to the University of Nairobi for accepting to fully support this project study. Special thanks to the Ag. Vice Chancellor, Prof. Isaac M. Mbeche, Prof. Julius Ogeng'o (DVC, Academic Affairs), Prof. James M. Njihia (Dean, School of Business) and Dr. Sarah Kinyanjui (Director, Mombasa Campus) and Centre for Self Sponsored Programmes (CESSP) for housing the project.

EXECUTIVE SUMMARY

Kenya has made significant political, structural and economic reforms that have largely driven sustained economic growth, social development and political gains over the past decade joining the top 10 economies in Africa and being propelled to the level of newly industrializing "lower" Middle Income Country (MIC) with a per Capita Gross National Income (GNI) of $1,246 in September 2014. Some of the enabling factors that have contributed significantly to this achievement is Kenya's growing youthful population, a well-trained and highly skilled manpower and workforce, improved infrastructure, a new constitution, as well as technology – factors which also double as necessary inputs into the growth process, and its pivotal role in Eastern Africa region.

Developing infrastructure as evidenced, enhances a country's productivity, makes firms more competitive, provides economic incentives to public and private sector participants and has a potential to boost a region's economy. Particularly, accessible and quality infrastructure plays a key role in shaping an entrepreneur's investment decisions, thus is directly related to a country's ease of doing business and determines its attractiveness to foreign investors.

Kenya's Vision 2030 recognizes the enabling role infrastructure sector plays in realization of the overarching vision of a globally competitive and prosperous nation by 2030 and highlights the importance of scaling up the quantity and quality of infrastructure (which is one of the foundations of its three pillars namely economic pillar, social pillar and political pillar), aiming for interconnectedness through world-class infrastructural facilities and services. The vision of the infrastructure sector is "Deploying World Class Infrastructure Facilities and Services for a Globally Competitive Kenya" (Kenya Vision, 2030). Although there has been a significant improvement of physical infrastructure facilities in the country years, there is still a huge deficit in infrastructure.

It is in this light that the Government of Kenya (GOK) has in the past two decades embarked on a historically most ambitious and revolutionary endeavor in infrastructural development. The government has invested heavily in word class infrastructure and one of the key flagship projects completed in the Second Infrastructure Medium Term Plan (MTP) (2013-2017) arrangement was the Standard Gauge Railway (SGR) Project - the most

important railway channel in Kenya, which links the coastal city of Mombasa and the capital city of Nairobi in its first phase. It has a total length of 485.303km consisting of 33 yards/terminals.

The completion of the Standard Gauge Railway which is a flagship project is the hallmark of the country's expansion and interconnectedness strategy. It has however posed increased challenges during and after its operationalization among them the resultant effect on the Port city of Mombasa especially on its economic and social activities. This heightened with the Government's pronouncement requiring shipping agents to transport goods by SGR (SD, 2018) directly from the port to the inland container depot (ICD).

Despite the Port city of Mombasa having a major socio- economic stake in the shipping and transportation sectors due to its location, no stakeholder engagement has taken place to assess the possible downsides as result of the Government's directive. The County Government of Mombasa who are the proponents therefore found it necessary to commission this assessment study of the Socio-Economic Impact of the Operationalization of Standard Gauge Railway on Port city of Mombasa, to fully demonstrate its impact on both social and economic fronts, and provide the essential reference basis for negotiations with the National Government of Kenya, foreign investors and the international lending agencies such as World Bank (WB), European Union (EU), Trade Mark East Africa (TMEA), Africa Development Bank (ADB), the donor Countries and other development partners.

In this regard the proponent contracted the School of Business (SOB), University of Nairobi (UON), under the Government to Government partnership as the consulting firm to undertake an assessment Socio-Economic Impact (SEI) full study and to draft a report. This report details the findings of that study.

Project Description and Project Justification

Port city of Mombasa owing to its unique geographic, historic and socio-economic and political situation has a number of strategic advantages and opportunities. These include development corridors and initiatives by the national Government and neighbouring counties within, and through the County that offer strategic opportunities towards

achievement of the county vision. To this extend Port city of Mombasa viewed the completion of the Mombasa-Nairobi Standard Gauge Railway Project which is the most important railway channel in Kenya linking the coastal city of Mombasa and the capital city of Nairobi as a great opportunity to deliver on the County's development agenda.

The SGR is expected to ferry cargo directly from the Port to the inland container depot (ICD). With the Government directive to have all the cargo to be boarded from vessel to the rail (SGR), the tradition approach whereby the importers have had the liberty to determine how their cargo is cleared at the Port, and the eventual modes of evacuation to various destinations or to storage facilities such as the container freight stations (CFS) has been taken away. This heightened concern for the County and the Port city of Mombasa more so due to the strategic nature of the county as one having a major socio-economic stake in the shipping and transportation sectors due to its location. There was also further concerns that a structured stakeholder engagement seem not to have took place to assess the possible downsides as result of the action.

The interest of implementing the operationalization of the SGR therefore, needed to be placed into the appropriate socio-economic context and explained in the perspective of existing restrictions (such as societal, cultural, political, economic among others). The operationalization of the SGR is also required to be explained in terms of diverse institutional settings, organizational structures and policy processes especially for the hosting county which is Mombasa. In order to meet the challenge of integrating social and economic aspects it is necessary to develop an integrative approach encompassing methods, processes, data streams, among others that are able to grasp the interactions between complex systems.

These arguments thus informed the basis for this SEI Assessment study to which the report provides an analysis of the "soft" measures flanking the technical realizations of the SGR projects and offers a preliminary assessment of the socio-economic impact in the various sectors. The socio-economic evaluation addresses the quality, social impacts, and added value of the SGR project in selected areas. Therefore, this assessment informed an **empirically** based analyses used to determine the complex interactions while noting that:

"What is technically and economically feasible is not necessarily ecologically or socially acceptable, and vice versa".

Objectives of the Assessment Study

"The purpose of the study was to evaluate the possible impacts of SGR operationalization on the various socio-economic activities in the Port city of Mombasa and the possible implications on the County's revenues".

The specific objectives of the study were to evaluate the impact of the SGR operationalization on:

a) Road Truckers (KTA) in the Port city of Mombasa;
b) Warehousing businesses (KIFWA) in the Port city of Mombasa ;
c) Roadside Businesses in the Port city of Mombasa;
d) Clearing and Freight (C&F) in the Port city of Mombasa;
e) Container Freight Stations (CFS) in the Port city of Mombasa;
f) Drivers and people employed in related road businesses in the Port city of Mombasa;
g) Mombasa County's Revenue.

Expected output of the study was envisaged broadly as setting a basis for future engagements with various stakeholders and investors both at the Glo-cal (global and local) level. More specifically the study is aimed at informing the national Government/County Government negotiation on a revenue sharing model to mitigate the established impacts if any; the County of Mombasa and the Regional block (Jumuiya ya Kaunti za Pwani – JKP) on policy directions in regards to establishing new economic options and opportunities; and finally to guide donor funding with regards to interventions and investments options within the county on Mombasa and the coastal region.

The study relied on projections and possible perceived implication as informed by focused group discussions (FGDs), and evaluation of secondary data. **The study focused on activities only at the county level and specifically within the Port city of Mombasa.** To achieve the above scope of work, the consultants employed a rigorous and tested assessment study methodology in order to identify challenges, remedial recommendations and way forward.

Study Area Baseline

The Port City of Mombasa has interesting physiographic and natural conditions enhanced by very interesting topographic features. The County lies within the coastal lowland which rises gradually from the sea level in the East to about 132m above sea level in the mainland. The terrain is characterized by three distinct physiographic features, which includes the **coastal plain** found along the shoreline - covering parts of the south coast, the island parts of Changamwe and the north coast. The plain consists of an expansive flat land with raised beach terraces covered mainly by coral limestone and back reef sand deposits that not only provide firm foundation for construction but also provide building materials.

The second category is the **hilly areas** mainly found within the western part of the County that is underlain by shells and rises gently from 45m to 132m above sea level. This is characterized by poorly drained clay soils which restrict settlement and infrastructural development. The third category is the **Indian Ocean** and the shoreline covered with geologically sedimentary rocks of Jurassic to recent age. The topography has evolved as a result of the lowering of the sea level over time leading to severe erosion by the storm water draining into the sea. In addition, the subsequent rise in sea level led to the submergence of the valleys and the creation of Mombasa Island surrounded by deep natural creeks, ports and harbors such as Kilindini, Tudor, Makupa, and Old Port creeks. Other notable physiographic features include the fringing coral reefs, cliffs and tidal flats, sandy beaches, the coastal plain and a hilly severely dissected and eroded terrain. These features have greatly influenced the economic development of the County in a number of ways.

The county's ecosystem has both marine and terrestrial components. Both ecosystems are characterized by diverse species of flora and fauna, the most common being coconut trees and different species of fish, which have different cultural, social and financial values. The ecological conditions are evolving fast due to numerous developments in the county, including the recent dredging to deepen the Kilindini Channel, construction of the second container terminal and the expected construction of the Mombasa city southern by-pass (Dongo-Kundu).

The county lies within the coastal strip in the hot tropical region where the climate is influenced by monsoon winds with the annual mean temperature in the county as 26°C with a minimum of 23 °C and a maximum of 33 °C. The urban and pre urban population is 98 per cent of the county's population according to the 2009 census. It was projected to be 1,247,158 in 2018 and 1,327,908 and 1,412,008 in 2020 and 2022 respectively. The large urban population can be attributed to the fact that Mombasa is an industrial city, a port city and a major gateway to the East and Central African region. As a result, many people come into the city in pursuit of employment opportunities, education and investment opportunities. This implies more pressure on infrastructure, housing, transport and other social services, hence the need to invest in these sectors as well as expand economic activity to create more jobs for the rapidly increasing population. In terms of the infrastructural development, the Port city of Mombasa has roads, rail network, ports and airports, airstrips and jetties. The current status of infrastructure relative to roads, rail network, ports and airports, airstrips and jetties requires upgrade.

Policy, Legal and Institutional Framework

Relevant Government of Kenya (GOK) policies and legislation, and international safeguards, guidelines, policies and conventions that frame a sustainable approach to eco development, including the approach towards the social and economic impacts of such developments in this case the Mombasa- Nairobi Standard Gauge Railway (SGR) and the subsequent pronouncements and directives by the National Government and how they should be mitigated were taken into consideration in undertaking this study.

The legislation have been used to inform the development of this SEI assessment report and to ensure that adequate mitigation measures put in place to deal especially with the negative impacts as was identified. In addition, it was necessary to review and use information as contained in a number of national and internal social economic policies and plans, relevant institutional frameworks and other documents which were deemed important to oversee their fruition.

For the **National Policy Framework** the Sessional Paper Number 10 of 2012 on Kenya Vision 2030 is the National Policy Economic Blueprint that entrenches Kenya Vision 2030 as the long term development strategy for Kenya was considered. The Jubilee

Governments 'Big Four' agenda, which is to guide the development agenda of the country in the period 2018-2022 along with the first and second County Integrated development Planning (CIDP) were also considered.

Other **National Legal Framework** were also factored in among them, the Constitution of Kenya, 2010; The County Governments Act 2012; The Physical Planning Act of 1996 CAP 286; Mombasa Vision 2035 and Jumuiya ya Kaunti za Pwani (JKP). Lastly several **National Institutional Frameworks** among them those of Kenya Ports Authority (KPA); Kenya Revenue Authority (KRA); Kenya Railways Corporation (KRC); Kenya National Highways Authority (KeNHA); Kenya Pipeline Company (KPC) Limited; Kenya Trade Network Agency (KENTRADE); Kenya Maritime Authority (KMA); Kenya National Police Service (KNPS); Kenya Bureau of Standards (KEBS); National Transport and Safety Authority (NTSA); Kenya Plant Health Inspectorate Service (KEPHIS); Port Health Services (PHS), and Radiation Protection Board (RPB).

Study Methodology

The study conducted a preliminary baseline analysis. Consequently, an information collection guide was developed and used as the standard format for collecting data. As well, Focus Group Discussion guides were developed for stakeholder's engagement on social and economic issues.

Primary data was collected between 27th August, 2018 and 14th September, 2018 with a further field work review and subsequent verification exercise taking place between 04th February, 2019 and 15th February, 2019 with on port city of Mombasa targeting the specific zoned areas. Secondary data was drawn from various Government and specified institutional source. Additional financial and operational data was obtained from the County Government of Mombasa, Department of Finance and Planning. The methodology included an inclusive project initiation process, consultative workshops and meetings to ensure the active participation of key stakeholders. With this context in mind, the proposed technical approach and methodology proposed contributed immensely to the successful delivery of this study.

In order to achieve and address the terms of reference (TOR) for this study as provided by the client (CGM), the study adopted a cross-sectional survey design with a fusion of dominant quantitative and qualitative approaches. This Evaluation Framework (EF) was modelled along two methodological elements, namely (1) Economic and social issues assessments; and (2) Stakeholder consultations.

The Consultant employed a participatory approach especially for the stakeholders that entailed a range of research methods:

a) First was the use of FGDs that were held in controlled hotel environment after identification of the key stakeholders. Additional interviews mainly telephone were also used to provide essential background and baseline information. Secondary data was collected through interactions with relevant concerned stakeholders through formal engagements.
b) Second was the field study where reconnaissance and field visits to the proposed project areas were undertaken.

This also formed part of the larger public engagement which took various forms including interviews and administration of 500 questionnaires (230 roadside businesses – kiosks, small traders and small hotels; 230 drivers, loaders and mechanics and 40 trucking firms). The response rates out of the questionnaires are captured in Table 0.1.

Table 0.1: Response Rates

Sector	Target Respondents	Actual Respondents
Trucking firms	40	32
Road Side Businesses	230	219
Drivers, Loaders, Mechanics	230	201
Total	**500**	**452**

Meetings with key stakeholder groups from the Kenya International Freight and Warehousing Association (KIFWA), Kenya Transporters Association (KTA), Kenya National Chamber of Commerce and Industry (KNCCI), Container Freight Stations and Truckers (CFS/T), Kenya Association of Manufacturers and the Executives from the County Government of Mombasa among others were held as detailed in Table 0.2.

Table 0.2: Schedule for public forums

Date	Stakeholder	Time Held	Venue	Number of Participants
09/08/2018	CGM Officials	9.00am-1.00pm	Bahari Beach Hotel & Conference Center	35
16/08/2018	KIFWA, CGM and KMA	9.00am-1.00pm	Bahari Beach Hotel & Conference Center	46
17/09/2018	CFS/T, KTA and KNCCI	9.00am-1.00pm	Bahari Beach Hotel & Conference Center	38

A phased methodological approach based on, a six stage assessment line study methodology was used. Stage one: Project commencement; Stage two: Historical perspective including port throughput, modal split and socio-economic status prior to the operationalization of SGR; Stage three: Development of data collection tools, sampling, quality assurance and training materials; Stage four: Preparation for fieldwork and training of research assistants and enumerators; Stage five: Data collection/field work, data cleaning, analysis and presentation; Stage six: Final presentation and project sign off.

This approach is anchored on six main pillars namely: Screening and scoping analysis; Gravity & scenario analysis; Additional quantitative and qualitative analysis; Sectoral Analysis; Causal Chain Analysis (CCA); Economic Analysis and Econometric Analysis. The first five pillars are part of the analytical process while pillar six refers to the interactive part. Methodological pillars of the analytical process was applied involving economic and social analysis. The general criteria for selecting significant socio-economic impacts covered the following, Probability of the event occurring; Duration of the impact; Value

of benefits or costs to the impacted group; Extent to which identified social impacts are reversible or can be mitigated; Likelihood that an identified impact will lead to secondary or cumulative impacts; and Uncertainty over possible effects.

Identification of Socio-Economic Impact

The operationalization of the SGR and the subsequent directives from the Government were envisaged to generate economic and social impacts which could be positive or negative, direct or indirect, local, regional, reversible or irreversible and hence the necessity to subject the proposed project to a SEI assessment process.

The process of determining the various impacts was done through stakeholder participation, discussion with proponent's technical team, field data collections and surveys, review of the secondary data on project, and review of appropriate policy and legal frameworks. The prediction and analysis of the social issues identified are discussed within two framework areas of focus group discussions (FGDs) and field data analysis and these have been collapsed into six themes namely: (1)Employment opportunities; (2) Security concerns; (3) Psychological and related issues; (4) Breakup of societal bonds; (5) Health services on port city of Mombasa; (6)Housing situation. Stakeholders during the FGDs provided vital statistics that informed later analysis and included the service providers listed in the Mombasa Port Community Charter (MPCC).

Focus for the discussions on economic impacts were analysed along the following themes: (1) Business growth for stakeholders (Profits); (2) County and regional business growth (Revenue); (3) Job implications (personal gains), (4) Financial obligations on the county Government (5) Future prospects. This was done through Pearson Correlation analysis along with economic and econometric analysis.

Possible Positive Impact

a) **Tourism Promotion**

It was evident that there is a positive impact on tourism due to reduced cost of commuting and high passenger capacity to and from Mombasa. As a result it was envisaged that there will be some positive impetus on this sector on both local and international tourism activities.

Table 0.3: Tourism Promotion

Criteria	Category	Significance Rating
Extent	Local	Medium
Magnitude	Medium	High
Duration	Long term	High
Probability	Probable	
Confidence	Sure	
Reversibility	Irreversible	
Recommended Maximization measures	Proactively; i. Market SGR as a means of commuting ii. Manage cost of commuting	
Implication to The Port City of Mombasa	Increased hotel occupancy and tourism related activities resulting in increased revenue for the County	

b) **Decongesting Mombasa City**

There is notable decrease in the number of trucks carrying containers to and from the port of Mombasa. Due to the reduced number of trucks in the roads accessing the port through Changamwe, Port-Reitz, Docks and Shimanzi, there has been a resultant gradual reduction in congestion and traffic snarl-ups in the city thus improving the flow of traffic.

Table 0.4: Decongestion of Mombasa City

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Long term	High
Probability	Probable	
Confidence	Sure	
Reversibility	Reversible (due to population increase)	
Recommended Maximization measures	i. Reroute traffic from CBD	
Implication to The Port City of Mombasa	A clean city with smooth flow of traffic, and increased productive man-hours	

c) **Environmental Protection**

This huge reduction in road traffic is envisaged to reduce distillate consumption, potentially augmenting climate change management initiatives. With 60 – 80 trucks off the road, the green gas emission reduction will be significantly reduced. This will also increase safety on the roads due to reduced traffic.

Table 0.5: Environnent Protection

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	low
Duration	Long term	High
Probability	Definite	
Confidence	Certain	
Reversibility	Irreversible	
Recommended Maximization measures	i. Enact policies to manage pollution and environmental protection	
Implication to The Port City	A health population with a clean environment	

Possible Negative Impact

Some of the negative effects of the SGR operationalization and subsequent Government pronouncement on the matter that were noted during the assessment period included:

a) Road Truckers Collective Redundancies
b) Closure of Trucking Businesses
c) Impact on Warehousing Businesses
d) Roadside Businesses Activity Contraction
e) Container Freight Stations Relocation/Closure
f) Job Losses (loaders/drivers, mechanics, shop, hotel and petrol attendants etc.)
   - Increase in Crime Rate and Social Ills
g) Mombasa County Revenue Decline
   - Reduced small businesses permit uptake/ Low housing uptake and default and non-delivery of CIDP.

The assessment criteria of the significant impacts are as shown in the previous tables was equally used for the registered negative impacts.

Quantitative Analysis of Potential Losses.

Following the promulgation of the Constitution of Kenya 2010, development planning was devolved, thus resulting in enhanced demand for county-level data. Kenya National Bureau of Statistics (KNBS) is now generating data at County to capture Gross County Product (GCP), economic growth, per capita income, sectoral growth and employment to support economic planning. Mombasa County is the fourth (4th) largest contributor to the National GDP after Nairobi, Nakuru, and Kiambu respectively.

The KNBS data released on county GCP for the year 2017 indicated that Mombasa county had a GCP of 332.122 billion (current prices). The transport sector was the highest contributor to the County's GCP at 27.4 percent, followed by manufacturing, construction, and wholesale retail & vehicle repairs at 14.6, 11.5, and 11.5 percent respectively. In total the four sector contribute a whopping 60 per cent the GCP at county level.

This study findings indicate that the impact of SGR on the port city of Mombasa is significant both at macro and micro level. Table 1 shows a quantified estimation of the social-economic impact (actual and projected) on county GCP and jobs. The results support argument that in the event the proposal to convey all upcountry cargo through SGR, there will be serious social and economic implications to the Port City's GCP and employment sustainability.

It is envisaged as shown in Table 0.6 that between the three sectors, long distance trucks, lubricants and fuels and container freights services a total contribution of Kshs 33.3 Billion will be lost as well as 8,111 jobs. If the option to ferry all containerized cargo is immediately effected. However, if execution of the plan is done gradually, the loss will be smoothed out such that initially the loss to will be Kshs 17.382 Billion and 2,987 jobs. With proper mitigation in place this effect can be addressed adequately with minimal direct impact on the overall social and economic environment in the port city of Mombasa.

Overall, the hit on the County GCP will be 10.0 percent in the event all inland cargo is ferried through SGR. The CFSs fully rely on containerized cargo, hence without any spillover to port side town, there a high likelihood that most of them will close shop. Other likely causalities include the petrol and lubricant outlets, long distance truckers, road side and auxiliary businesses and the wholesale, retail and vehicle repair garages.

The summary of the quantified projected estimation direct loss on the County GCP and jobs is critical in this assessment and the results are captured in the table 0.6;

Table 0.6: Summary of Quantified Projected Direct Losses

	Income Loss Per Annum - Kshs	Total No of Employee	Actual Immediate Loss	No of Employees Redundant	% reduction
Long distance Trucks					
Accommodation	318,960,000				
Supplementary Industry	850,560,000				
Job losses - Long Distance	696,276,000	1,008			
Parking & Security	89,280,000				
Sub Total	**1,955,076,000**	**1,008**	**293,261,400**	**151**	**15%**
Lubricants & Fuels					
Transit Trucks Fuel	1,329,000,000				
Local Transport	1,326,240,000				
Job Losses - local transport	696,276,000	2,763			
Sub Total	**3,351,516,000**	**2,763**	**281,527,344**	**232**	**8%**
Container Freight Stations					
Job Losses	831,600,000	2310			
Turnover loss	26,400,000,000				
Clearing & Forwarding	781,200,000	4,340			
Sub Total	**28,012,800,000**	**4,340**	**16,807,680,000**	**2,604**	**60%**
Loss to County GCP/Job loss	**33,319,392,000**	**8,111**	**17,382,468,744**	**2,987**	
Actual GCP in 2017 KNBS (2019) *(Current Prices)*	332,122,000,000		332,122,000,000		
Percentage of Loss	**10.0%**		**5.2%**		

***Redundant employee data is based on actual field analysis**

The Mombasa-Nairobi Standard Gauge Railway project cost was reported to be $3.6 Billion. Looking at the overall long term impact of SGR on the transport and related sectors, particularly on the port city of Mombasa, there is likely to be a resultant redundancy in assets to a tune of kshs 54.56 Billion as shown in Table 0.7. The annual projected economic depletion on the County GCP is estimated to a tune of Kshs 122.3 Billion based on GCP data 2017 (KNBS, 2019) in the event the conveyance of cargo by SGR is fully operationalized as currently proposed through the Government directives.

Table 0.7: Summary Projected Economic Losses - Investment Cost/GCP

Sources	Per Unit	No	Total Investment	Annual GCP Likely Depletion	Total
Capital Expenditure - ICDs	1,756,942,500	22	38,652,735,000		
Trucks - Transit	8,000,000	443	3,544,000,000		
Local Trucks	6,500,000	1902	12,363,000,000		
Hit on GCP - Overall Transport - KNBS				52,984,800,000	
Wholesale, Retail & Vehicle Repairs - KNBS				14,764,800,000	
Total			**54,559,735,000**	**67,749,600,000**	**122,309,335,000**
Cost of SGR					**360,000,000,000**

NOTES:
***1. On the transport sector - we assume that of the overall Kshs 8.8 Billion contributed by the sector, trucks represent approximately 60%**

***2. On retail & vehicle repairs - we assume that of the overall Kshs3.6 Billion contributed by the sector, trucks represent approximately 40%**

Conclusions and Recommendations

This assessment study report on the social and economic impact of the operationalization of the SGR on the port city of Mombasa identifies a series of serious and unique, positive and negative impacts that are likely to be significant (scoping) and thereafter undertaken their assessment in detail. In this screening and scoping process it has been determined that the project meets a threshold requirement of a Finding of Significant Impacts (FOSI). However, noting that a number of the established impacts can be mitigated, a major recommendation measure is the need for establishment of a comprehensive engagement and action plan (CEAP) to address the implementation of the mitigation exercise.

The impacts which have been identified by this study are those that are manageable through the adoption of the mitigating measures that have been listed in this report. Exhaustive consultation with all the major stakeholders holds the key to the acceleration and successful undertaking of the proposed actions.

The assessment was able to establish and bring out clarity surrounding the debates that have been on-going around the Government's directives on the operationalization of the SGR. To that extend the following issues have been empirically established and supported through this assessment study;

a) There is a very strong link between the Port and the City of Mombasa thus creating a situation of a "mutual inclusive" relationship;

b) The operationalization of the SGR and subsequent pronouncements to it has significant impacts on the key stakeholder and service providers;
c) There is impact on the provision of social services within the county and possible escalation of security concerns; and,
d) The operationalization of the SGR has impacted on the small businesses adversely.

In light of assessment findings, the report recommends as proposals the following actions to be considered:

a. The County Government on behalf of its business community members to lobby the National Government for policy/legislative alignment that will allow market forces to operate freely to create a sustainable environment for other sector stakeholders and SGR;
b. County Government to make a case to be part of the Mombasa Port Community Charter (MPCC) as a key interested party under the Landlord Policy Framework (LPF) for PA Governance;
c. To mitigate depletion in GCP as result of cargo evacuation, County Government of Mombasa to negotiate for additional funding either from National Government, and to equally negotiate with KPA for a throughput based levy funding model as a landlord;
d. The National Government to review the application of the Rail levy policy;
e. The National Government to fast truck alternative investment, including SEZs (Dongo Kundu) and other potential industrial parks to create new employment;
f. To negotiate for passenger train termination to be extended to old Railway Station through inter connectivity;
g. Serious considerations to restoration Mombasa as Port City for export rather than import as is envisage in the County Integrated Master Plan; and
h. Develop and implement a joint County and National Government development caucus on infrastructure and social development with a joint monitoring and evaluation (M&E) system.

Recommended Areas for Further Action

In addition to the full assessment report presented, this report proposes the following as areas for further assessment and action.

(i) Need to conduct an assessment study of the socio-economic impact of the operationalization of the SGR on all towns along the Mombasa-Malaba corridor (Northern Corridor in Kenya);

(ii) Need to undertake a spatial distribution study on the port city of Mombasa post SGR operationalization;

(iii) Review the SEZ feasibility reports for possibility of shortening projects time-lines to create mitigation effects during transition period (now and full realization period).

(iv) An assessment of the post SGR operationalization on the provision of social services by the County Government of Mombasa.

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ABBREVIATIONS AND ACRONYMS

AfDB	: Africa Development Bank
Ag	: Acting
ANOVA	: Analysis of Variance
ARSO	: African Regional Organization for Standardization
BPO	: Business Process Outsourcing (BPO
C&F	: Clearing and Forwarding agents
CBD	: Central Business District
CCA	: Causal Chain Analysis
CDFs	: Constituency Development Funds
CEAP	: Comprehensive Engagement and Action Plan
CECM	: County Executive Committee Members
CEO	: Chief Executive Officer
CESSP	: Centre for Self Sponsored Programmes
CFS	: Container Freight Stations
CFS/T	: Container Freight Stations and Truckers
CGA	: County Governments Act, 2012
CGM	: County Government of Mombasa
CIDP	: County Integrated Development Plan
CSD	: Customs Service Department
DD	: Demographic
DRC	: Democratic Republic of Congo
DVC	: Deputy Vice Chancellor
EAC's	: East Africa Community
EAR&H	: East African Railways and Harbours Corporation
ECD	: Early Childhood Development
ECDE	: Early Childhood Development Education
EF	: Evaluation Framework
EU	: European Union

FDGs	: Focused Group Discussions
FOSI	: Finding of Significant Impacts
GCP	: Gross County Product
GDP	: Gross Domestic Product
GIS	: Geographic Information System
GNI	: Gross National Income
GOK	: Government of Kenya
H.E	: His Excellency
IBEA	: Imperial British East Africa
ICD	: Inland Container Depot
ICT	: Information and Communications Technology
IEC	: International Electro-technical Commission
IMF	: International Monetary FundGross Domestic Product (GDP)
ISO	: International Organization for Standardization
ISUDP	: Mombasa Integrated Urban Development Plan
JKP	: Jumuiya ya Kaunti za Pwani
K.R.As	: Key Result Areas
KEBS	: Kenya Bureau of Standards
KEMFRI	: Kenya Marine and Fisheries Research Institute
KeNHA	: Kenya National Highways Authority
KENTRADE	: Kenya Trade Network Agency
KEPHIS	: Kenya Plant Health Inspectorate Service Port Health Services
KIFWA	: Kenya International Freight and Warehousing Association
KMA	: Kenya Association of Manufacturers
KMA	: Kenya Maritime Authority (KMA)
KMP	: Kenya Municipal Program
KNBS	: Kenya National Bureau of Statistics
KNBS	: Kenya National Bureau of Statistics
KNCCI	: Kenya National Chamber of Commerce and Industries
KNPS	: Kenya National Police Service

KPA	: Kenya Ports Authority
KPC	: Kenya Pipeline Company Limited
KPIs	: Key Performance Indicators
KRA	: Kenya Revenue Authority
KRC	: Kenya Railways Corporation
KSHs	: Kenya Shillings
KTA	: Kenya Truckers Association
LATF	: Local Authorities Transfer Fund
LPF	: Landlord Policy Framework
LPG	: Liquid Petroleum Gas
M&E	: Monitoring and Evaluation
MCC	: Mombasa Chamber of Commerce
MGR	: Middle Gauge Railway
MIC	: Middle Income Country
MPCC	: Mombasa Port Community Charter
MTP	: Medium Term Plan
MTP	: Medium Term Plan
NCPD	: National Council for Population and Development
NCTTA	: Northern Corridor Transit and Transport Agreement
NTSA	: National Transport and Safety Authority
NUR	: National Unemployment Requirement
PA	: Port Authority
PFM	: Planning and Financial Manangement
PPP	: Public-Private- Partnership
RPB	: Radiation Protection Board
RVR	: Rift Valley Railways
SACCOs	: Saving and Credit Cooperative Societies
SD	: Sector Deepening
SDGs	: Global Sustainable Development Goals
SEAI	: Social and Economic Impact Assessment

SEI	: Socio-Economic Impact
SEZs	: Special Economic Zones
SGR	: Standard Gauge Railway
SGR	: Standard Gauge Railway
SOB	: School of Business
SSATP	: Sub-Saharan Africa Transport Program
TEUs	: Tons Equivalent Unit
TMEA	: Trade Mark East Africa
TOR	: Terms of Reference
UN	: United Nations
UON	: University of Nairobi
USA	: United State of America
USD	: United State Dollar
VC	: Vice Chancellor
WB	: World Bank

1.0 INTRODUCTION

Kenya has made significant political, structural and economic reforms that have largely driven sustained economic growth, social development and political gains over the past decade. Kenya has joined the top 10 economies in Africa after growth figures were revised, showing that it had been previously understated by at least 25% in September 2014. This has propelled Kenya to the level of a lower Middle Income Country (MIC) with a per Capita Gross Income (GNI) of $1,246).

Kenya's enabling factors such as environment and resources are central to the success of economic growth and transformation, and the development process at large. These factors that have the potential to propel Kenya as one of Africa's success stories include capital, its growing youthful population, a dynamic private sector, a well-trained and highly skilled manpower and workforce, improved infrastructure, a new constitution, as well as technology – factors which also double as necessary inputs into the growth process, and its pivotal role in East. Developing infrastructure as evidenced, enhances a country's productivity, makes firms more competitive, provides economic incentives to public and private sector participants and has a potential to boost a region's economy. Particularly, accessible and quality infrastructure plays a key role in shaping an entrepreneur's investment decisions, thus is directly related to a country's ease of doing business and determines its attractiveness to foreign investors.

Kenya's Vision 2030 highlights the importance of scaling up the quantity and quality of infrastructure, aiming for interconnectedness through world-class infrastructural facilities and services. Actually, it sets integrated, cost effective, safe and efficient infrastructure including a network of roads as a necessary foundation and precondition for unlocking the potential of the economy. The Kenya Vision 2030 aims to transform Kenya into a newly industrializing "middle-income country providing a high quality life to all its citizens by the year 2030". Infrastructure sector is one of the foundations of the three pillars namely economic pillar, social pillar and political pillar which is expected to provide cost effective world-class infrastructure facilities and services in support of Vision 2030. Although there has been a significant improvement of physical infrastructure facilities in the country years, there is still a huge deficit in infrastructure.

It is in this light that the Government of Kenya (GOK) has in the past two decades embarked on a historically most ambitious and revolutionary endeavor in infrastructural development. The government has invested heavily in world class infrastructure WITH one of the key flagship projects completed in the Second Infrastructure Medium Term Plan (MTP) (2013-2017) arrangement was the Mombasa-Nairobi Standard Gauge Railway (SGR) Project - the most important railway channel in Kenya, which links the coastal city of Mombasa and the capital city of Nairobi. The railway starts from the city of Mombasa, which is the largest port in East Africa, and ends in Nairobi, the political, economic and cultural center in Kenya and a key traffic hub in East Africa. Standard Gauge Railway line originates from Mombasa and passes through Kilifi, Kwale, Taita-Taveta, Makueni, Kajiado, Machakos and Nairobi Counties. It has a total length of 485.303km consisting of 33 yards/terminals.

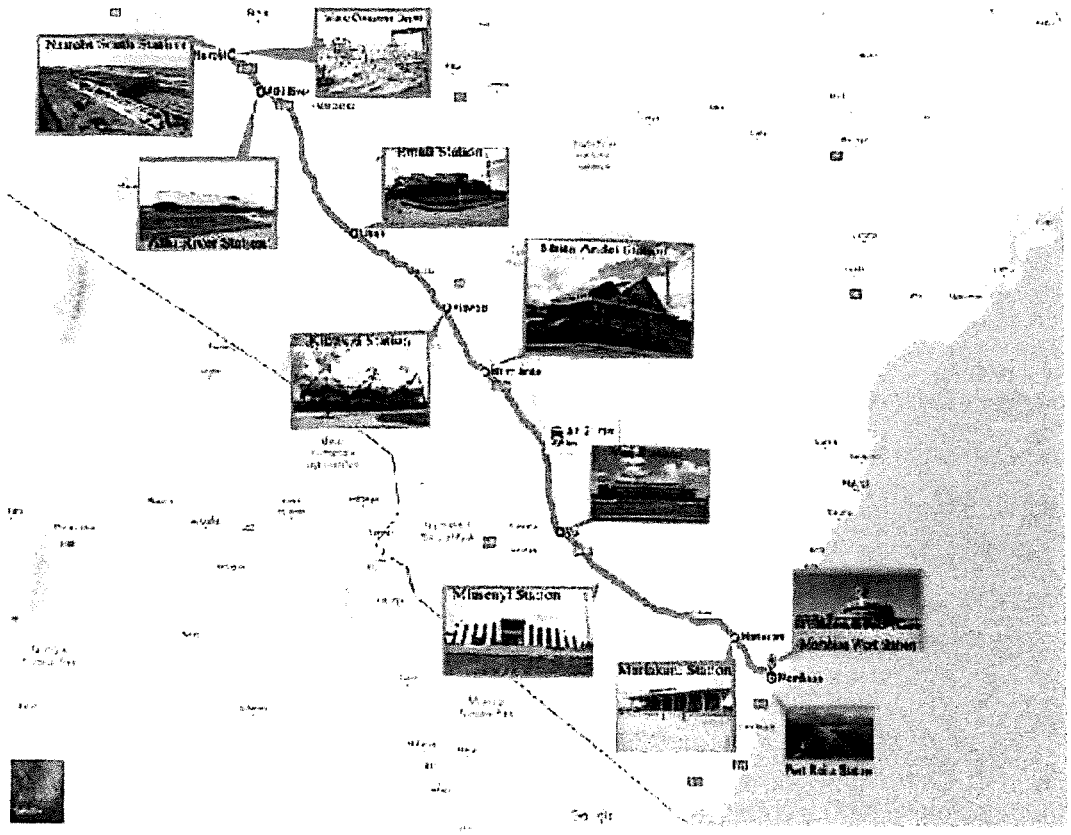

Figure 1.1. Mombasa-Nairobi Standard Gauge Railway

Devolution remains the biggest gain from the August 2010 constitution, which ushered in a new political and economic governance system. It is transformative and has promoted greater investments at the grassroots, strengthened accountability and public service

delivery at local levels. However with its emergence has created certain challenges among them disagreements between National and County Governments and more so the sharing of proceeds from utilization of natural resources domiciled within counties but which are treated as National interest. The completion of the Mombasa-Nairobi Standard Gauge Railway has posed increased challenges on the county of Mombasa especially on its economic and social activities. This heightened with the Government's pronouncement (Presidential Directive) requiring ship agents to transport goods by SGR (SD, 2018) directly from the Port to the Inland Container Depot (ICD) in Nairobi.

Despite the Port City of Mombasa having a major socio- economic stake in the shipping and transportation sectors due to its location, no stakeholder engagement has taken place to assess the possible downsides as a result of the Presidential directive. The County Government of Mombasa who are the proponents therefore found it necessary to commission this assessment study of the Socio-Economic Impact of the Operationalization of SGR in Port City of Mombasa. This is to fully demonstrate its impact on both social and economic fronts, and provide the essential reference basis for negotiations with the National Government of Kenya, Foreign investors and the International lending Agencies such as World Bank, European Union, Trademark East Africa, Africa Development Bank and Donor Countries.

In this regard the proponent contracted the School of Business (SOB), University of Nairobi (UON), under the Government to Government partnership as the consulting firm to undertake a Social and Economic Impact Assessment (SEIA) full study and to draft a report. This report details the findings of that study.

2.0 BACKGROUND OF THE PROJECT

The background information presented here is anchored on the socio-economic and infrastructural information that has a bearing on the development of the County. The section provides description of the County in terms of the location, size, demographic profiles as well as the administrative and political units. In addition, it provides information on infrastructure and access; employment and other sources of income, health access and nutrition, education and literacy, trade, housing, transport and communication, community development and Social Welfare. It further takes a look at the Port of Mombasa, the Port and the City and the transport channels in the Port City of Mombasa.

The project information provided in this section is outlined as provided by the proponent and consultants through the assessment study report and consultations. The project proponent, the County Government of Mombasa is one of the counties formed in Kenya through the 2010 Constitution of Kenya that reconfigured balance of power by devolving power and responsibilities from the national government to 47 elected county governments. See Figure 1.2.

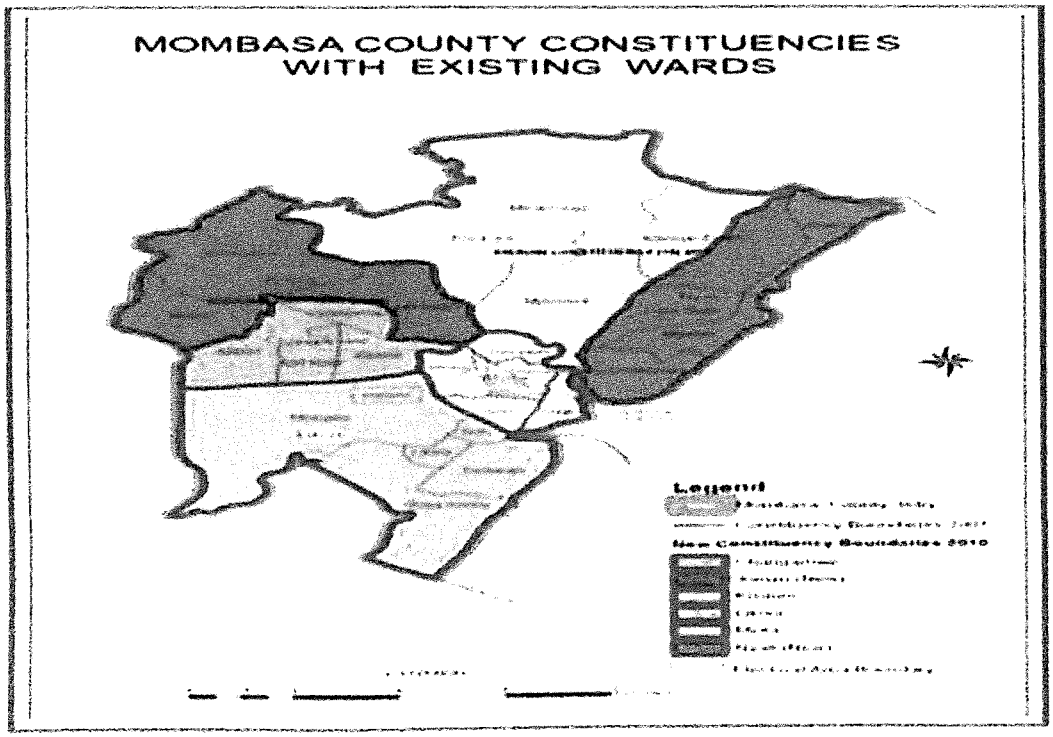

Figure 2.1: Port City of Mombasa Map

2.1 Port City of Mombasa

Port City of Mombasa formerly Mombasa district has been in existence for many centuries. A prosperous trading town in the 12th century and was key node in the complex Indian Ocean trading networks. In 16th century its significance in the world trade was recognized by some European powers hence construction of Fort Jesus by the Portuguese. Historical profile of Port City of Mombasa shows that, as a Port City, Mombasa has played an important part in the development of not only Kenya but East Africa region operating as a gateway. Port City of Mombasa is one of the 47 counties of Kenya and is designated as county number 001 in the numbering of the counties. Its capital and the only city in the county is Mombasa.

Port City of Mombasa is uniquely situated and forms part of a large Coast region in Kenya. Owing to its unique geographical, historical, social and economic and political situation has a number of strategic advantages and opportunities. These include development corridors and initiatives by the National Government and neighbouring counties within and through the country that offer strategic opportunities towards achievement of the county vision

"Being a vibrant modern regional commercial hub with a high standard of living for its residents".

The County also has opportunities presented by the seaport, a vast economically growing hinterland, diverse ecosystems and the rich ancient history. All these contribute towards giving it the potential to become an attractive place in which to invest, work and live, and also creates a critical mass that supports a variety of health, educational and retail facilities.

Port City of Mombasa has a land area of 229.9 Km^2 and 65 Km^2 of water mass (200 nautical miles into the Indian Ocean) and lies between latitudes $3^{0}56$ and $4^{0}100$ South of the Equator and between longitudes $39^{0}34$ and $39^{0}46$ east of Greenwich Meridian. Port City of Mombasa borders on the northern border Kilifi County, Kwale County on the southern and Kilifi and Kwale Counties on the western (Figure 3.2). The County also enjoys proximity to an expansive water mass as it borders the Exclusive Economic Zone of the Indian Ocean on the eastern border.

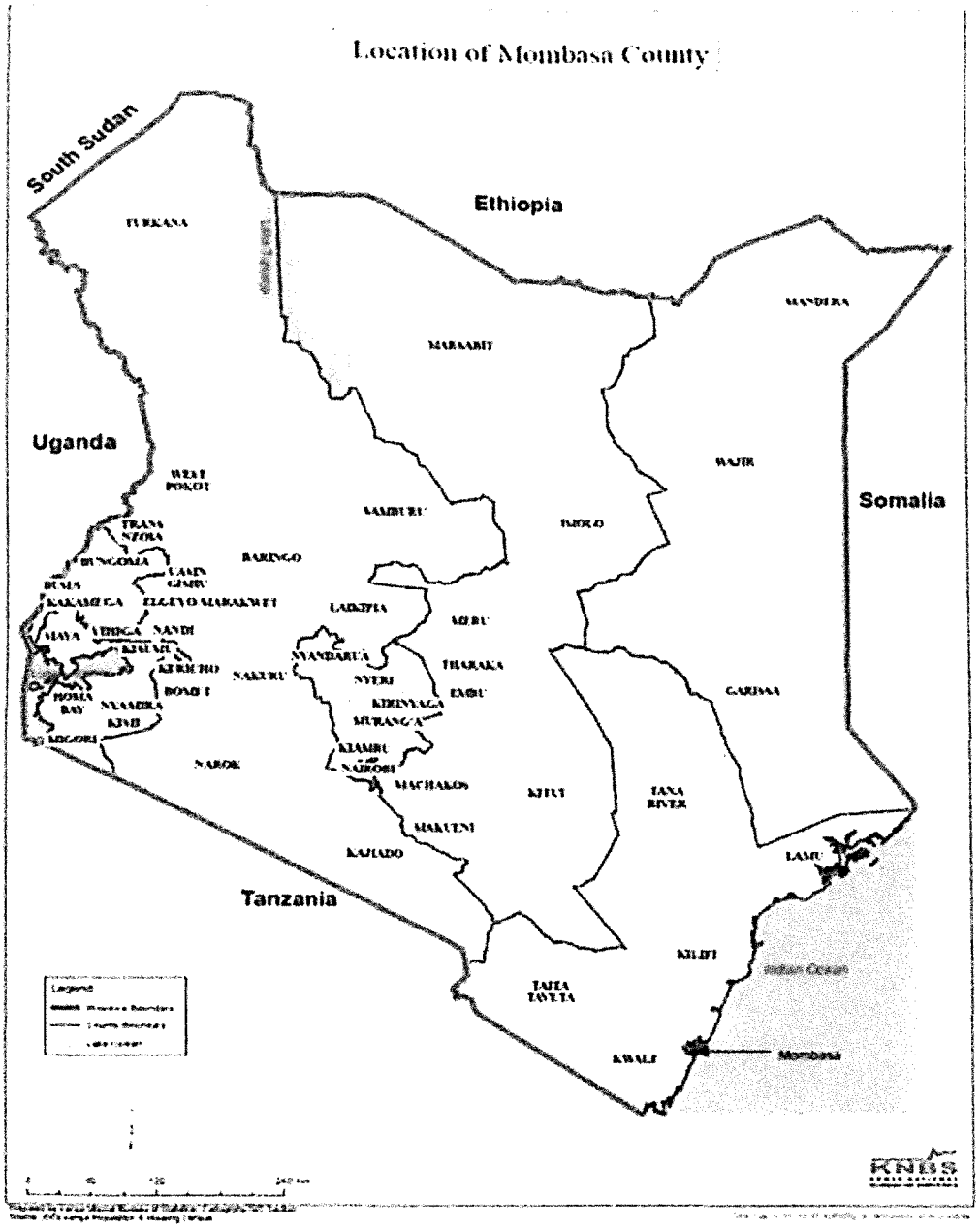

Figure 2.2. Location of the County in Kenya

Administratively, the County is divided into six sub-counties namely: Mvita, Nyali, Changamwe, Jomvu, Kisauni, and Likoni and thirty county assembly wards. These are further sub-divided into thirty locations and fifty seven sub-locations as shown in Table 2.1 and Figure 2.2.

Table 2.1: Administrative Units by Sub-County, 2017

Sub-County	Divisions	Locations	Sub-Locations	Villages
Changamwe	1	4	10	58
Jomvu	1	3	7	65
Kisauni	3	6	9	200
Nyali	2	4	8	55
Likoni	2	6	9	145
Mvita	1	7	14	134
Total	**10**	**30**	**57**	**657**

Source: **County Commissioner's Office, Mombasa County (2017)**

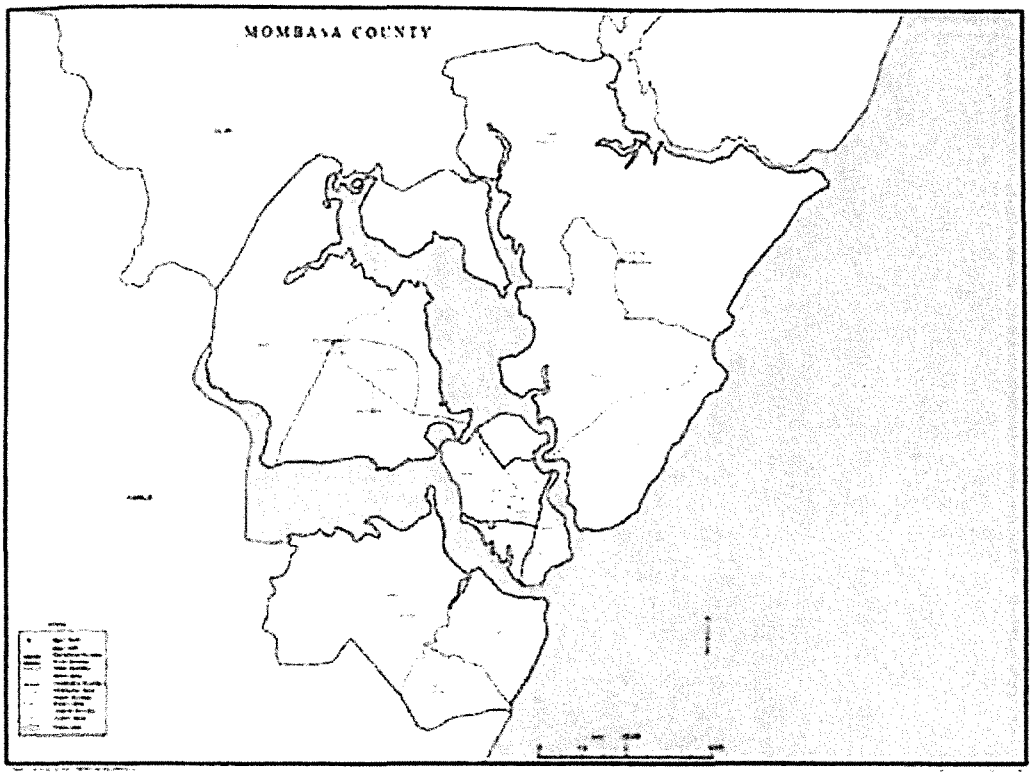

Figure 2.3. Location and administrative boundaries of Mombasa County

Source: Kenya National Bureau of Statistics (2010)

In 2009 total population of the county was 939,370 persons of which 486,924 and 452,446 were male and female respectively (KNBS, 2009). Based on projection of 2009 population the county was estimated to be 1,051,825 in 2012 (CIDP, 2013). The Port City of Mombasa currently has a projected population of 1,266,358 persons in 2018 and will rise to 1,433,689 persons by 2022 (KNBS, 2018).

Table 2.2: Population Projection by Sex and Age Cohort

Age Group	2009 (Census)			2018 (Projections)			2020 (Projections)			2022 (Projections)		
Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	
0-4	64,317	63,002	127,319	81,103	79,343	160,481	84,256	82,572	166,828	86,337	84,615	170,952
5-9	49,836	50,081	99,917	64,567	65,014	129,611	68,543	69,020	137,563	71,179	71,656	142,836
10-14	40,660	42,221	82,881	53,935	55,919	109,880	57,308	59,739	117,047	61,136	63,594	124,730
15-19	40,095	46,640	86,735	54,220	61,206	115,458	57,966	65,541	123,507	61,882	70,315	132,197
20-24	57,005	69,257	126,262	77,941	77,649	155,618	82,450	81,300	163,750	88,600	87,306	175,906
25-29	63,689	60,776	124,465	81,659	78,500	160,123	86,571	80,150	166,721	91,722	83,664	175,383
30-34	52,178	39,131	91,309	68,750	62,552	131,323	73,501	67,492	140,993	78,218	68,575	146,774
35-39	39,968	26,889	66,857	55,511	46,085	101,460	58,903	51,514	110,417	63,479	56,197	119,675
40-44	25,837	16,200	42,037	42,248	28,765	71,005	45,524	31,619	77,143	48,586	36,880	85,425
45-49	19,270	12,089	31,359	29,616	18,791	48,407	32,888	21,005	53,893	35,915	23,659	59,570
50-54	12,816	8,389	21,205	18,597	10,817	29,413	20,198	11,794	31,992	23,309	13,743	37,052
55-59	8,052	5,300	13,352	11,717	8,092	19,809	12,637	8,604	21,241	13,978	9,545	23,524
60-64	5,102	4,124	9,226	7,518	5,812	13,331	8,138	6,271	14,409	8,901	6,696	15,596
65-69	2,801	2,561	5,362	4,363	4,116	8,481	4,788	4,506	9,294	5,274	4,921	10,194
70-74	2,099	2,078	4,177	2,669	2,800	5,471	2,868	3,027	5,895	3,237	3,392	6,629
75-79	1,220	1,211	2,431	1,576	1,690	3,266	1,676	1,818	3,494	1,829	1,999	3,827
80+	1,979	2,497	4,476	1,299	1,920	3,220	1,302	1,951	3,253	1,359	2,060	3,419
Total	**486,924**	**452,446**	**939,370**	**657,288**	**609,069**	**1,266,358**	**699,517**	**647,923**	**1,347,440**	**744,941**	**688,817**	**1,433,689**

Source: Kenya National Bureau of Statistics (2018)

To support this population it's essential for sufficient job opportunities to be created to help reduce poverty and overcome inequality. Access to productive work enables people to have a source of income to help meet their basic needs and provide upkeep to their families. The County has a poverty rate of 37.6 percent compared to the national average of 47.2 per cent (CRA , 2011). The First County Integrated Development Plan (CIDP) identifies some causes of poverty as being inaccessibility to credit, high cost of living, and landlessness, lack of technical and entrepreneurial skills (MCG, 2013)

Port City of Mombasa has a transitional population structure due to a shrinking child population, where 0-14 year olds constitute 33%. From Table 1.4, it is evident that 47 per cent of the county's population in 2018 comprise youth between age 15 and 35 years. It is therefore paramount that the county's plans take cognizance of this group as it can immensely contribute to wealth creation. Children in the age bracket of 0-4 years are also considerable in number. This means that the county should invest in ECD facilities among others that will address the needs of this category of people. Other age groups of interest include the labor force 15-64 and the aged (over 65 years) which is very large and appears to be increasing at 65%. This can be attributed to the labour migration from the rural areas in search of employment opportunities. Figure 1.2 is the Mombasa population pyramid;

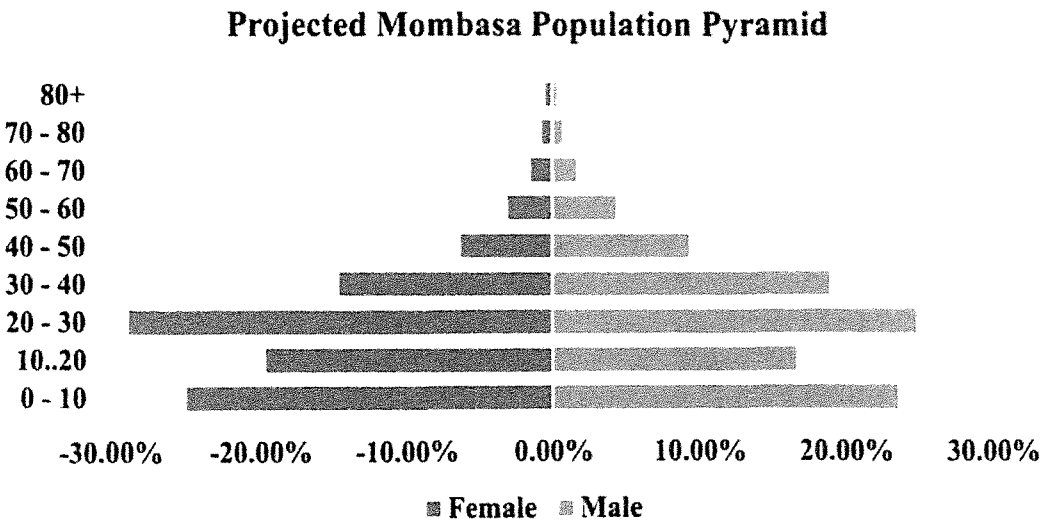

Figure 2.4. Mombasa Population Pyramid

Source: KNBS (2018)

Notably one of the major social challenge for the County is the particularly high unemployment rate among youth. Youth population comprises 41 per cent of the population in the county and 61 per cent of the county's labour force. Efforts need to be stepped up to ensure become gainfully employed. Current estimates indicate that 38 per cent of the population in the county is poor. The high employment and poverty rates underscores a critical need to address the challenge of unemployment by providing opportunities for gainful engagement to all youth. In 2013 the county economy needs to generate between 59,983 and 49,077 to bring unemployment level to NUR of 6% or 4% respectively. In order to keep unemployment at NUR the county economy needed to meet projected employment in 2017 of at least 780,694 jobs.

This requires that more effort be made to create jobs through capacity building in vocational training, initiation of policies that will promote investments and creation of more job opportunities in the county. At 60% the formal sector provides majority of employment. These formal employment opportunities are mostly found in Mvita, Changamwe and Jomvu Sub-counties. Despite high population density compared to other sub-counties Nyali and Likoni Sub-counties do not host any major industrial establishments. This may explain the relative high prevalence of crime rate, youth radicalization and apparent support to secessionist groups in Likoni and Kisauni areas.

The key sectors providing employment opportunities in Mombasa include Kenya Ports Authority, Container Freight Terminals, Small Medium Enterprises (SME's), and financial institutions. Employment opportunities are also provided by shipping lines, maritime repair services, transport sector, clearing and forwarding services, grain bulk handling and tea warehousing and sales, Government of Kenya and various private institutions. Other key economic drivers of the county include the manufacturing sector, tourism and hospitality (over 201 registered hotels and lodges with a total bed capacity of about 8,000 beds and average annually bed occupancy of 64 per cent), cement manufacturing, financial services (Over 38 Banks and several microfinance institutions), logistics services, shipping, transportation and fisheries (There are 14 fish landing sites and one fish processing plant. The County's fisheries potential of 994,718 metric tons).

2.2 The Port of Mombasa

It is the second largest port in Africa, providing direct connectivity to over 80 ports worldwide and is linked to inland regions by road and rail. The imports that pass through the port of Mombasa are critical to Kenya's economic growth and to the economic well-being of its neighbors. Total transit cargo tops 7.2 million tonnes, serving Uganda, South Sudan, Rwanda, Burundi, DRC, Tanzania, Somalia and Ethiopia. The Port of Mombasa is Kenya's principal seaport, comprising Kilindini Harbour and Port Reitz on the eastern side of Mombasa Island, and the Old Port and Port Tudor on the northern side.

The port of Mombasa is classified as a sea port. Sea ports are areas where goods to and from seaborne or maritime transport are loaded or offloaded. They act as interfaces between different transport modes, such as maritime transport, inland waterways, road and rail (Emiroglu et. all, 2016). Ports consist of a bundle of physical assets and resources: land plots adjacent to maritime and inland connections, deep draft access channels, roads, railways and river facilities. These facilities are naturally geographically bound. As a result of globalization there has been rise in international trade, concentration in the shipping industry and liberalization of transport markets. Because most of this international trade is handled through ports, port competition has become fiercer over time (Meersman & Van de Voorde, 2002).

Ports can be classified as hubs or as feeders. The hub and spoke system is growing as a result of the advent of large vessels. Whereas, in the past, most vessels stopped over in all ports at least once, if larger vessels are placed in navigations routes as is being done now, they will only be stopping at large hub ports with facilities to handle them. Trans-shipment usually takes place in dedicated hubs. A trans-shipment port is one where a larger vessel would discharge cargo for other destinations in that location and the cargo is later collected by other vessels and delivered to those destinations at an appropriate time.

A feeder port will mainly receive cargo from the hub ports or transfer their exports to a hub port for onward shipment overseas or for transportation to another region. In the case of spoke ports which move again from the hub, many are complex terminals which handle containers and bulk freights at the same time, and most consist of small scale manual terminals. Also, spoke ports are often small trans-shipment ports in regional getaway or new emerging economies, and whereas the hub ports own large scale terminal management companies, the spoke ports belong to regional terminal management companies, governments are port

authorities. Trans-shipment hubs usually do not serve hinterlands unless they also combine as gateways. A gateway port is anode in a globalized supply chain that serves as a critical link between geographical areas or regions by providing a system of road, rail, marine and air transportation infrastructure of national significance for international trade.

Figure 2.5. Cargo Operations at the Port of Mombasa

The Port of Mombasa is a primary resource and provides enormous social economic opportunities for the entire country and the coast region in particular. It is a major source of revenue and provides employment and livelihood support to a large population in the coast region. Its importance therefore cannot be over emphasized. However, it is important to note that port operations to a larger extent depend on the infrastructural support provided by Port City of Mombasa that bonds to the rest of the economy. The mutuality and interdependence of the two sister institutions provides the synergy that drives the local economy. Their relationship therefore may be described as mutually in-exclusive.

The port of Mombasa is also a key resource and the gateway to the East and Central African region, as it serves the entire region's export and import needs. As a Port City, Mombasa is a key trading center in the East Africa region operating as gateway linking the Indian Ocean trading networks and to the hinterland countries of Uganda, Rwanda, Burundi, Tanzania, Eastern Democratic Republic of Congo (DRC), Somalia, Ethiopia and South Sudan *(https://www.kpa.co.ke/AboutUs/Pages/KPA-History-Introduction.aspx).*

The history of The Port of Mombasa dates back many centuries from the existence of the Old Port. The Port served dhows from India, Arabian Gulf and Far East. Much of the port of Mombasa history is captured way back to 18th century when the Portuguese and the Arabs came to the East African Indian ocean shore for spice and slave trade. It is located near Fort Jesus at Mombasa Old Town. In 1890, Kenya and Uganda became a British Protectorate under the Imperial British East Africa (IBEA). The colonial government saw a need to create infrastructure inland to open up the area for effective administration, hence the construction of the Kenya- Uganda Railway (1895-1902). Coupled with increased activities at the Port there was need for a more spacious and convenient place to meet the demand and for construction of a rail network. Therefore the Port of Mombasa was relocated to the Kilindini Harbor West of Mombasa Island. The development of the present Port of Mombasa commenced in 1896 when the first Jetty, used for discharging materials for the construction of the railway line was built at Kilindini and since then the development has been routine.

In 2011, with a view of deepening the Likoni channel to facilitate usage of the port by larger post panamax vessels, the port channel was dredged to minus 15 meters and its turning basin widened to 300 meters. Alongside berths are now 12 meters deep. In the same year, a new berth no. 19 was built and completed in 2013. The berth is 240 meters long and 13.5 meters deep capable of handling panama vessels. This addition effectively makes Mombasa Container Terminal to have a total quay length of 840 meters. In the same year, the construction of a second container terminal commenced in phases where phase 1 was completed in February 2016 and started operating in April 2016, with a quay of 350 meters long and draft of 15 meters, and a side berth of 210 meters long with a draft of 12meters. The two berths have a capacity of 550,000 TEUs per year. The second and third phase are expected to be completed in 2020 in time to facilitate Kenya's Vision 2030. Figure 3.6 and 3.7 depicts the container terminal at the port of Mombasa.

Figure 2.6. Container Terminal Operations at the Port of Mombasa

Figure 2.7. The Container Terminal at the Port of Mombasa

2.3 The Port and the City of Mombasa

With its strategic placement between South Africa and the Gulf of Aden and its bustling port activity, Mombasa has become recognized around the world as the **"Gateway to East and Central Africa"**. Mombasa is most notably home to Kilindini Harbour, the largest, most efficient and heavily trafficked port in the region. For years, Mombasa has been known as "the city of merchants" due to its location, strategically placed midway between South Africa and the Middle East. Like many port cities, the City of Mombasa owes its origin to the Port of Mombasa; there is no city without the port. Invariably all the industrial and commercial developments within and around Mombasa revolve around the presence of the Port.

Ports and harbours conduct four important functions: administrative (ensuring that the legal, socio-political and economic interests of the state and international maritime authorities are protected), development (ports are major promoters and instigators of a country/wider regional economy), industrial (major industries process the goods imported or exported in a port), and commercial (ports are international trade junction points where various modes of transport interchange; loading, discharging, transit of goods). In the first instance, the port provides attraction to the population from the surrounding and visitors from distant places. On one hand there are those whose cargoes are in the port, as exports or imports while on the other there are tourists who come to see the port, ships and the marine environment.

Counties are expected to play a critical role in development at the grassroots levels. As a result, there are high expectations that the counties will become engines for economic growth and development. Moreover, many functions of the national government will be implemented at the grassroots through the counties. Therefore, County Government of Mombasa enable the county play a critical role in trade, investment, environmental protection, tourism, health, education and cultural exchange. The establishment of strong institutions in the county will be critical in realizing the objectives of devolution through the County Government Vision of Port City of Mombasa becoming a vibrant modern regional commercial hub with a high standard of living for its residents.

From a development perspective, it is important that these institutions work closely together to ensure sustainable social economic development of the coast region. As much as possible, the County of Mombasa should consider the Port of Mombasa as an important stakeholder whose development and strategic plans are incorporated in the County's development programme.

2.4 Governance of Ports

In most developing countries, ports are under the respective ministries in charge of transport or infrastructure for the obvious reasons that they are extremely important for the nation's wellbeing. Their roles go beyond the town/city boundaries they serve. The planning is integrated with that of the local government through the national planning hierarchy. The degree of ownership is naturally dependent on the national ideology. In Taiwan for example, the administration of ports is centralized while even in the USA they are under the watchful eyes of the Congress even if from an arm's length. At the time the Dubai Port World was to

acquire operations of six major USA ports, one Republican Representative from California observed that "let people buy apartments in Chicago, or farmland in Iowa, but they can't own and operate port operations" (*National Public Radio, Washington, 2006).* This underscores how matters of port ownership and development are close to the hearts of the citizens because of the perceived contribution to the development of their home areas.

According to Emiroglu et al, (2016), in order to increase their market share in a competitive environment particularly for hubs and gateways, many ports have come up with various strategies which include diversification of their services, capitalizing on their strongest resources, focusing on their core strengths and on cost cutting strategies to remain competitive. These ports take specific interests in lobbying regional governments to invest in improvement of hinterland transport systems in order to increase efficiency and reduce logistics chain costs. This way they attract more shipping traffic to the ports and associated corridors etc. and hence maintain and sustain competitive advantage over rivals.

In many countries ports are managed by Port Authorities (PAs) which are merely in public ownership and can institutionally vary between a departments of a governmental body, an autonomous organization subject to governmental control, or a corporate entity acting under private law but with public ownership. Many regional and feeder ports, are stuck in state ownership, are often characterized by complacency, inefficiencies, low productivity, and bureaucratic red tape in archaic customs practices, cumbersome documentation flows and port operating inefficiencies, low equipment availability and long cargo dwell time. Contrary to hub ports, where push for productivity is driven increasingly by use of technology, IT and automation, secondary ports face quite a different kind of problems, some of which are within their direct control, and others are not.

Strategically ports can operate under a landlord model principle. In this case the port is primarily responsible for the development and management of the ports land and infrastructure whereby private companies dominate the operations. The PA pursues both public and private goals and resembles the nature of a hybrid, shared value organization. Another model of port management is Corporatization. This is where PAs are governmentally owned, but with the organization and behavior of a corporation, (like Port of Singapore) and they show the greatest involvement in activities beyond the landlord. Corporatization seems an appropriate new institutional structure of PA's.

The new paradigm for PAs is to act beyond the landlord. Strategy-making for a PA is a network process that requires a continuous monitoring of other actor's strategies in its ecosystem and the ability to adapt its own strategy. PAs may benefit from developing a resource-driven approach and those that cannot reconsider their strategies and create more value in the port's ecosystem face a serious challenge in keeping the balance between private and public goals and this requires strategic leadership.

PAs have the primary goal of developing and managing sea ports, in tandem with operators and service providers, in order to establish an attractive port product. PAs therefore have a strong focus on resources. PA executives are expected to be constrained in exploring new market opportunities by the port's geographical location and infrastructure assets. They may focus more on their resources than on new markets for which they can develop new services.

It is important to note that in some parts of the world, the Port is treated as a department of the Council. An example is Port of Long Beach which is the second-busiest port along the west coast of the USA. This port is a department of the local City Council and is governed by a Board, whose five members are appointed by the mayor of Long Beach and confirmed by the City Council. Similarly the Port of Yokohama and most other ports in Japan can be rated as "Municipal" Ports in that they are managed by the Municipalities; they are departments of the respective Local Authorities, Prefectures. In Netherlands, the Port of Rotterdam which used to be a Municipal Port has changed ownership but the Municipality holds 75% equity and the balance is held by the Central Government. The Board and management are autonomous. However the dividends are to the accounts of the Municipal and Central Governments. With a profit margin of 10 to 20%, it is easy to visualize the amount of income the port makes

Even in the most developed democracy in the world, USA, ports are the property of the local municipal governments. The Port of Houston Authority is owned by the City of Houston and some councilors sit in the Management Board of the Port. There is no major project development that can be executed without the approval from the Municipality. The Port of Los Angeles is a department of the City of Los Angeles and the Chief Executive Officer reports to the city Mayor. The Port of Miami, home to the world cruise tourism is also a department of the City of the Miami. Port planning in all these instances is a small component of the city planning.

2.5 Economic Overview

2.5.1 Global Economic Scene

In 2017, the global economic growth reached 3 percent, the highest growth rate since 2011 (IMF , 2018). Labour market indicators continued to improve in a broad spectrum of countries, and roughly two-thirds of countries worldwide experienced stronger growth in 2017 than in the previous year. Growth is expected to remain steady at 3.0 percent in 2018 and 2019. It is estimated that 2016 and 2015 growth was 2.9 per cent and 3.1 per cent respectively.

Global inflation in 2017 was estimated at 3.2 percent compared to 2.9 percent recorded in 2016, fairly higher by 0.1 percent recorded in 2015. In aggregate, inflation in developed economies averaged 1.5 per cent in 2017, up from 0.7 per cent in 2016 (Statista, 2018) . In emerging markets and developing economies, headline inflation remained steady as currencies remained broadly stable, or appreciated in some cases. Buoyed by the cyclical upturn in global growth, world trade rebounded in 2017, expanding at an estimated pace of 3.7 per cent during the year (Statista, 2018).

2.5.2 Sub-Sahara Africa Economic Scene

The Economic Outlook Report (AfDB, 2018) shows the real Gross Domestic Product (GDP) for Sub-Saharan is estimated to have grown to 2.6 percent for 2017 compared to 1.5 percent in 2016, although significantly lower than 3.8 percent growth registered in 2015 (Statista, 2018). A projected recovery and economic pickup in growth to 3.4 percent is expected in 2018 (IMF, 2017). The momentum is however weak and growth will likely remain well below past the trends in 2019. While 15 out of 45 countries continue to grow at 5 percent or faster, growth in the region as a whole is unlikely to surpass the rate of population growth, and in 12 countries, comprising over 40 percent of sub-Saharan Africa's population, income per capita is expected to decline. The Sub Saharan Africa remains a region with tremendous growth potential; however the determination in overall outlook partly reflects insufficient policy adjustment. In this regard and to realize this potential, strong and sound domestic policy measures are needed to restart the growth engine (IMF , 2018).

2.5.3 East Africa Community Economic Scene

According to the Regional Economic Outlook report (AfDB) in 2017 average real GDP for the region grew at an estimated 5.9 percent, but with considerable country variations. Ethiopia has consistently grown at above 8 percent while countries embroiled in civil conflict and insecurity have grown at relatively lower rate. In the fastest growing economies, growth resulted from strong domestic private consumption, public investment in infrastructure, growth in light manufacturing, and growth in agriculture, particularly during periods of good rainfall. Some commodity-dependent economies, notably South Sudan, have suffered from weak commodity prices coupled with fragility and insecurity. Tanzania a real GDP growth at 7 per cent in 2017 but at lower margin change of -0.1 percent compared to 2016's projection at 7.1 percent. In Burundi, real GDP increased to 2 percent in 2017 compared to -0.5 percent in 2016. The inflation rate for EAC's declined to an average of 5.4 percent easing from 5.6 per cent in 2016 and 5.8 per cent in 2015 (AfDB, 2018). Currency stability helped to keep inflation within the Central Bank target in Kenya, Uganda and Tanzania. Inflation rate for Burundi increased to 9.4 percent in 2017 from recorded 6.4 percent in 2016.

The Kenyan economy advanced 4.4 percent year-on-year in the third quarter of 2017, slowing from a 5.6 percent expansion in the same quarter of 2016 (KNBS, 2018). It is the weakest growth since the last quarter of 2013 due to weak credit extension and political uncertainty arising from prolonged election season in the month of August, and its subsequent repeat in October 2017. According to the World Bank, there is hope in Kenya's economic recovery and growth which is estimated to get 5.5 percent in 2018 and rise further to 5.9 percent in 2019 (WB, 2018).

Admittedly, Kenya has a sophisticated entrepreneurship by regional standards but could increase its global footprint through increased investment in telecommunication technology. Further the country aims to have a robust, diversified and competitive sector to help its transformation into an industrialized middle-income economy by 2030. The overall goal is for the industrial sector to increase its contribution to GDP to at least 10% per annum and propel the economy towards becoming Africa's industrial hub. The anticipated growth is expected to be achieved through continued economic recovery, increase in number of tourists, favorable political environment, and, adjustment on the interest capping policy. The expected GDP in the next five years is presented in Table 2.3.

Table 2.3: Projections of GDP in Constant 2009 prices (Kshs Millions)

YEAR	GDP	GROWTH
2018	4,244,937	5.5
2019	4,499,633	6.0
2020	4,778,611	6.2
2021	5,084,442	6.4
2022	5,409,846	6.4

Source: Consultants (2019)

The increase in GDP growth rates are an indication of the expected economic activity in the country, hence Mombasa City being the gateway to the region is anticipated to benefit immensely from this growth as a logistics center. The City hosts providers of cargo handling facilities including warehousing, Cargo Freight Services, maritime services, and truckers both for long distance and for local transport between the Port to and from handling facilities.

2.6 Operationalization of the Standard Gauge Railway (SGR)

Mombasa-Nairobi Standard Gauge Railway Project is the most important railway channel in Kenya, which links the coastal city of Mombasa and the capital city of Nairobi. The railway starts from the city of Mombasa, which is the largest port in East Africa, and ends in Nairobi, the political, economic and cultural center in Kenya and a key traffic hub in East Africa. The newly operationalized Standard Gauge Railway (SGR) line passes through eight (8) Counties: Mombasa, Kilifi, Kwale, Taita-Taveta, Makueni, Kajiado, Machakos and Nairobi. It has a total length of 485.303km consisting of 33 yards/terminals.

The existing railway links the coastal city of Mombasa in Kenya and Kampala the capital city of Uganda, which was the only railway in East Africa at that time. Therefore, East African Community (EAC) five member states, Ethiopia and Sudan are in the process of constructing more than 10 new railways in this region in next 12 years in order to form a modern railway network to promote regional economic growth. Large amounts of container freights that arrive at the Port of Mombasa by sea have to be transferred by road to Uganda, Rwanda, Burundi, South Sudan and other destinations, not only causing huge pressure to Kenyan road system, but also increasing the freight cost, as well as causing negative impacts to the development of regional trade. The existing rail system has also negative environmental, health and safety issues.

Standard Gauge Railway Project is one of the Kenya's Vision 2030 flagship projects that will play an important role in strengthening cooperation among EAC member states and promote regional economic development. It is an important measure for improving Kenyan transportation network, and an important means to save resources and protect the environment. The old Middle Gauge Railway (MGR) reliability issues and long turn round trips, poor infrastructure and outdated technology i.e. basic manual engineering characteristics and geometrics limiting axle loads, speed and train capacity was critical in justifying the SGR.

Therefore, large amounts of container freights that arrive in Port of Mombasa by sea have to be transferred by roadway to Uganda, Rwanda, Burundi, South Sudan and other destinations within the country. This situation not only cause huge pressure to Kenya road system, but also increasing the freight cost, as well as causing impact to the development of regional trade. According to statistics, currently the transport expenses of import & export trades in East Africa account for 40% of total cargo costs, and among deferred import freights, 24% suffers from backward traffic infrastructure. The current railway being operated by Rift Valley Railways (RVR) can only handle about 6% of the cargo from the Mombasa Port (approximately 13 mt per year). The rest (94%) has to be hauled by road which is unsustainable in the long run as the cargo volumes increase.

Traditionally, shippers have had the liberty to determine how their cargo is cleared at the Port, and the eventual evacuation to various destinations or to storage facilities such as the Container Freight Services. However, in light of the governments implementation of the SGR, the state through several of its agencies has issued pronouncements (this has been followed by several Presidential pronouncements) requiring all local cargo to be transported by SGR (Standard Daily - SD, 2018). SGR is expected to ferry cargo directly from the Port to the Inland Container Depot (ICD).

The operations of the SGR were rolled out in mid-2017 firstly, with passenger transport followed by freight cargo in January 2018. It has however, been acclaimed as a success story especially for passenger service. This service is largely successful on account of the fare charged to economy class patrons which tends to out compete that of the road services. Indeed, the two modes of transport seem to complement each other. Furthermore there is no major commuter service that was dependent on the rail transport services that was likely to suffer.

From what has been experienced, it is as if the passenger service has not been affected much largely because of the number of services that were on offer.

It is important to make the position clear as regards the exercise at hand. The volume transported by the SGR will no longer be available for the road sector either as liquid or dry cargo. The reason this is significant is because the new player is "big" and enjoying some exclusive support through market place interventions that have profound impact on the total trade volume. It is this displacement that may be significant and cannot carry on without casualties in the wider scheme. This phenomenon is acknowledged by many as a game changer which means that change will fall somewhere. This study is meant to bring out the possible bearers of the burden.

Introduction of a passenger coach or road truck to provide transport services goes almost unnoticed. For the railway on the other hand is major with serious and deep rooted ramifications which are likely to impact on the Northern Corridor and its neighborhood.

2.7 Project Description and Project Justification

Port City of Mombasa owing to its unique geographic, historic and socio-economic and political situation has a number of strategic advantages and opportunities. These include development Corridors and initiatives by the National Government and neighbouring counties within and through the County that offer strategic opportunities towards achievement of the county vision. To this extent Port City of Mombasa viewed the completion of the Mombasa-Nairobi Standard Gauge Railway Project which is the most important railway channel in Kenya linking the coastal city of Mombasa and the capital city of Nairobi as a great opportunity to deliver on the Counties development agenda.

However upon its completion and in light of the government's implementation of the Standard Gauge Rail (SGR), the state has issued a pronouncement (Presidential Directive) requiring ship agents to transport goods by SGR (SD, 2018). The SGR is expected to ferry cargo directly from the Port to the Inland Container Depot (ICD). This took away the tradition approach whereby the importers have had the liberty to determine how their cargo is cleared at the Port, and the eventual modes of evacuation to various destinations or to storage facilities such as the Container Freight Services. There was also heightened concern that despite Port City of

Mombasa having a major socio- economic stake in the shipping and transportation sectors due to its location, no stakeholder engagement took place to assess the possible downsides as a result of the Presidential directive.

As a result, the experience implementing the operationalization of the SGR needed to be placed into the appropriate socioeconomic contexts and explained in the perspective of existing restrictions (e.g. societal, cultural, political, economic etc.). It required to be explained in terms of diverse institutional settings, organizational structures and policy processes especially for the hosting county which is Mombasa. In order to meet the challenge of integrating social and economic aspects it is necessary to develop an integrative approach encompassing methods, processes, data streams, among others that are able to grasp the interactions between complex systems.

This informed the basis for this Socio-economic Impact Assessment study to which the report provides an analysis of the soft measures flanking the technical realizations of the SGR projects and offers a preliminary assessment of the socio-economic impact in the various sectors. The socio-economic evaluation addresses the quality, social impacts, and added value of the SGR project in selected areas. Therefore, this assessment informed the empirically based analyses used to determine the complex interactions while noting that:

"What is technically and economically feasible is not necessarily ecologically or socially acceptable, and vice versa".

2.7.1 General Specifications on the Terms of the Reference

2.7.1.1 Aims and Objectives of the Assessment Study

The general objective of the study shall be to assess the possible socio-economic impact of operationalization of the Standard Gauge Railway on the Port City of Mombasa.

The following shall be the specific objectives of the study;

1. To assess the impact of SGR on Road Truckers in Port City of Mombasa.
2. To analyze the impact of SGR on warehousing business in Port City of Mombasa.
3. To assess the impact of SGR on Roadside Businesses in Port City of Mombasa.
4. To examine the impact of SGR on Clearing and Freight Agents in Mombasa.

5. To analyze the impact of SGR on Container Freight Stations in Port City of Mombasa.
6. To examine the impact of SGR on Drivers and people employed in related road businesses in Port City of Mombasa.
7. To assess the Impact of SGR on County Government of Mombasa Revenue.

The detailed objectives are contained in the Terms of Reference (TOR). The full Terms of Reference are annexed as Appendix VII.

The study relied on projections and possible perceived implication as informed by focus group discussions (FGDs), primary data from fieldwork and evaluation of secondary data. The study focused on activities only at the county level and specifically within the City of Mombasa. To achieve the above scope of work, the consultants employed a rigorous and tested assessment line study methodology in order to identify challenges, remedial recommendations and way forward.

2.7.1.2 Terms of the Reference

The School of Business (SOB) of The University of Nairobi (UoN) was appointed as the consultant to conduct the Social Economic Impact Assessment (SEIA) of operationalization of the Standard Gauge Railway (SGR) on the Port City of Mombasa. The scope of the assessment covered the desk literature reviews, mobilization of stakeholders and engagement through workshop and finally field study approach on the impact of the operationalization of the SGR; Analysis of the data and information collected; Isolation of the potential/perceived impacts on the stakeholders identified and possible suggest for mitigating them and/or remedial actions.

The output of this work is a comprehensive SEIA study report. The assessment report not only includes general social and economic impact but also considers specific impact on all stakeholders, beneficiaries and business community (truckers, CFSs, warehouses and micro enterprises) and the larger community.

3.0 STUDY AREA BASELINE

This section gives the background information on the project area location, socio-economic and infrastructural information that has a bearing on the development of the County. It provides description of the County in terms of the location, size, physiographic and natural conditions, demographic profiles as well as the administrative and political units. In addition, it provides information on infrastructure and access; land and land use; community organizations/non- state actors; crop, livestock and fish production; forestry, environment and climate change; mining; tourism; employment and other sources of income; water and sanitation; health access and nutrition, education and literacy, trade, energy, housing, transport and communication, community development and Social Welfare.

3.1 Physiographic and Natural Conditions

This section highlights the major physiographic and topographic features of the county. It also covers the ecological and climatic conditions and their influence on the settlement patterns and economic life of the County residents.

3.1.1 Physical and Topographic Features

The County lies within the coastal lowland which rises gradually from the sea level in the East to about 132m above sea level in the mainland. The terrain is characterized by three distinct physiographic features, which includes the coastal plain, which is are found along the shoreline, covering parts of the South Coast, the Island, parts of Changamwe and the North Coast. The plain consists of an expansive flat land with raised beach terraces covered mainly by coral limestone and back reef sand deposits that not only provide firm foundation for construction but also provide building materials.

The second category is the hilly areas mainly found within the Western part of the County that is underlain by shells and rises gently from 45m to 132m above sea level. This is characterized by poorly drained clay soils which restrict settlement and infrastructural development. The third category is the Indian Ocean and the shoreline covered with geologically sedimentary rocks of Jurassic to recent age. The topography has evolved as a result of the lowering of the sea level over time leading to severe erosion by the storm water draining into the sea. In addition, the subsequent rise in sea level led to the submergence of the valleys and the creation of Mombasa Island surrounded by deep natural creeks, ports and harbors such as Kilindini, Tudor, Makupa, and Old Port creeks.

Other notable physiographic features include the fringing coral reefs, cliffs and tidal flats, sandy beaches, the coastal plain and a hilly severely dissected and eroded terrain. These features have greatly influenced the economic development of the County in a number of ways. For instance, the sea supports maritime trade while the fringing coral reefs, creeks and tidal flats with extensive mangrove forests are breeding grounds for fish. The fringing coral reefs in North Coast are an important marine conservation area hosting the Mombasa Marine National Park and Reserve.

3.1.2 Ecological Conditions

The county's ecosystem has both marine and terrestrial components. Both ecosystems are characterized by diverse species of flora and fauna, the most common being coconut trees and different species of fish, which have different cultural, social and financial values. The ecological conditions are evolving fast due to numerous developments in the county, including the recent dredging to deepen the Kilindini Channel of the port of Mombasa, construction of the second container terminal and the expected construction of the Mombasa City Southern by-pass (Dongo-Kundu).

3.1.3 Climatic Conditions

The County lies within the coastal strip in the hot tropical region where the climate is influenced by monsoon winds.

1) **Rainfall:** The rainfall pattern is characterized by two distinct long and short seasons corresponding to changes in the monsoon winds. The long rains occur in April – June with an average of 1,040 mm and correspond to the South Eastern Monsoon winds. The short rains start towards the end of October lasting until December and correspond to the comparatively dry North Eastern Monsoons, averaging 240mm. The annual average rainfall for the county is 640mm.
2) **Temperature:** The annual mean temperature in the county is 27.90C with a minimum of 22.70C and a maximum of 33.10C. The hottest month is February with a maximum average of 33.10C while the lowest temperature is in July with a minimum average of 22.70C. Average humidity at noon is about 65 per cent.

3.2 Social Economic Baseline

3.2.1 Population Projections by Urban Centre:

The urban and pre-urban population is 98 per cent of the county's population according to the 2009 census. It is projected to be 1,247157 in 2018 and 1,327,008 and 1,412,008 in 2020 and 2022 respectively. The large urban population can be attributed to the fact that Mombasa is an industrial city, a port city and a major gateway to the East and Central African region.

As a result, many people come into the city in pursuit of employment opportunities, education and investment opportunities. This implies more pressure on infrastructure, housing, transport and other social services, hence there will be need to invest in these sectors as well as expand economic activity to create more jobs for the rapidly increasing population. It is important to note that the day population is much higher than the figures in Table 3.4, thus there is need to take into account this population at planning stage.

3.2.2 Population Density and Distribution

The County had a population density of 4,086 persons per Km2 in 2009 which was projected to increase to 5,508 persons per km^2 by 2018 owing to high population growth and the increased numbers of people seeking employment in the manufacturing, service and processing industries, the Port of Mombasa, Kenya Ferry Services, Container Freight Stations, go downs and hotels. Highly populated areas are in Majengo, Bamburi, Bangladesh, Mikindani, Jomvu, Miritini, Migadini, Port Reitz, Mishomoroni and Bombolulu among others (Table 3.1; Table 3.2). The County has various settlement schemes namely Mwakirunge, Jomvu- Kuu, Bububu-A, Shika-adabu, Vyemani, Mwembelegeza and Majaoni.

Despite efforts being made to settle people, the County still has a very large number of landless people most of whom live in the city's slums of Mishomoroni, Junda and Kisumu ndogo in Kisauni Sub- county; Shika-Adabu and Ngomeni in Likoni Sub-county and Bangladesh in Changamwe Sub-county. The land adjudication process is ongoing for Shika-Adabu and Vyemani settlement schemes. There are other proposed schemes in the county namely; Maweche, Kibundani, Ujamaa-Shonda and Kidungunyi. There are also sparsely populated areas in the outskirts of the County which include Mwakirunge-Maunguja, Mwangala, Mreroni and the Mkupe Jetty area. These areas are least developed in terms of

infrastructure such as road network, electricity and water supply. Education and health facilities are also scantly available in these areas making the inhabitants highly prone to poverty and disease incidences. Table 3.1 gives a breakdown of population projections by sub-county and gender. This information is vital for gender based programmes in the sub-counties. Table 3.2 shows population densities of each of the six sub-counties of Port City of Mombasa, and the projected trends up to the year 2022.

The high population densities in Mvita, Changamwe and Nyali are attributed to proximity to vital infrastructure such as roads, water, electricity and employment opportunities due to the presence of industries like the Export Processing Zones and other physical facilities such as the Port of Mombasa and the Moi International Airport, Mombasa (Table 3.3). Kisauni (1,829 persons / Km^2), Jomvu (3,537 persons/Km^2) and Likoni (4,039 persons/Km^2) are the least densely populated sub-counties in the county. This implies that Changamwe, Nyali and Mvita require more resources towards expansion and erection of additional social amenities. Low densities in Likoni and Kisauni can be attributed to inadequate social amenities and poor road network.

Table 3.1: Population Projections by Urban Centre

Urban	2009 (Census)			2018 (Projections)			2020 (Projections)			2022 (Projections)		
	M	F	T	M	F	T	M	F	T	M	F	T
Core Urban	466,002	439,625	905,627	629,046	591,810	1,220,856	669,460	629,563	1,299,023	712,933	669,298	1,382,230
Peri-Urban	10,039	9,471	19,510	13,551	12,750	26,301	14,422	13,563	27,985	15,359	14,419	29,778
Total	**476,041**	**449,096**	**925,137**	**642,598**	**604,560**	**1,247,157**	**683,882**	**643,126**	**1,327,008**	**728,291**	**683,717**	**1,412,008**

Source: Kenya National Bureau of Statistics, Mombasa, 2018

Table 3.2: Population Distribution and Density by Sub-county

	2009(Census)		2018 (Projections)		2020 (Projections)		2022 (Projections)	
	Pop	Density	Pop	Density	Pop	Density	Pop	Density
Changamwe	147,613	9,226	199,009	12,438	211,752	13,234	225,318	14,082
Jomvu	102,566	3,537	138,277	4,768	147,131	5,073	156,558	5,399
Kisauni	194,065	1,829	261,620	2,465	278,371	2,623	296,204	2,791
Nyali	185,990	8,129	250,734	10,959	266,788	11,660	283,879	12,407
Likoni	166,008	4,039	223,825	5,446	238,157	5,795	253,417	6,166
Mvita	143,128	9,671	192,893	13,033	205,242	13,868	218,382	14,756
County	**939,370**	**4,086**	**1,266,358**	**5,508**	**1,347,440**	**5,861**	**1,433,758**	**6,236**

Source: Kenya National Bureau of Statistics, Mombasa, 2018

Table 3.3: Population Projection per Sub-County

	2009 (Census)			2018 (Projections)			2020 (Projections)			2022 (Projections)		
	M	F	T	M	F	T	M	F	T	M	F	T
Changamwe	76,759	70,854	147,613	104,197	94,812	199,009	110,892	100,860	211,752	118,093	107,226	225,318
Jomvu	53,334	49,232	102,566	72,399	65,879	138,277	77,050	70,081	147,131	82,054	74,504	156,558
Kisauni	100,138	93,927	194,065	135,934	125,686	261,620	144,667	133,704	278,371	154,061	142,143	296,204
Nyali	95,971	90,019	185,990	130,277	120,457	250,734	138,647	128,141	266,788	147,650	136,229	283,879
Likoni	87,154	78,854	166,008	118,308	105,517	223,825	125,909	112,248	238,157	134,085	119,332	253,417
Mvita	70,848	72,280	143,128	96,173	96,720	192,893	102,352	102,890	205,242	108,999	109,384	218,382
Total / Mombasa	**484,204**	**455,166**	**939,370**	**657,288**	**609,069**	**1,266,358**	**699,517**	**647,923**	**1,347,440**	**744,941**	**688,817**	**1,433,758**

Source: Kenya National Bureau of Statistics, Mombasa, 2018

Kisauni Sub-county has projected population of 261,620 in 2018, which is the highest population representing 20.65 per cent of the County's population as shown in Table 3.5, and this is largely attributed to low cost housing and ease of access to most parts of the county from the sub-county. Noticeable in the County is that Jomvu sub-county has the lowest population and this is attributed to fewer settlements and poor infrastructure in the sub-county compared to the other sub-counties. There is close gender parity in terms of sub-county populations, with the male population marginally higher than female population in all sub-counties except Mvita, where the female population is marginally higher. This calls for affirmative action measures to enhance gender balance in access to employment opportunities.

3.2.3 Demographic Dividend

The demographic dividend is the accelerated economic growth that may result from a decline in a country's mortality and fertility and the subsequent change in the age structure of the population as presented in Table 3.4. It is evident that demographic transition is taking place at the county, creating a demographic window of opportunity to harness the Demographic Dividend.

This demographic window will be achieved when those aged below 15 8years in the county are less than 30% of the total population and those aged 65 years and above in the county are less than 15% of the population. The county is expected to achieve this by 2028 as shown in Table 1-10. By then, the population below 15 years will be approximately 29.4% while total fertility will have, on average, dropped to two births per woman of reproductive age (2.1). While working age population will have hit 67.8 per cent, only 2.77 per cent of the population will be above 64 years. With this scenario, dependency will drop to 44.56 per cent compared to 53.15 per cent in 2009. This period is estimated to last for about 40 years during which a county can achieve the fastest economic growth due to the large workforce relative to dependents. For the demographic window to open and stay longer, fertility levels must continue to decline.

Table 3.4: Demographic Dividend Potential

Indicator/Year	2009	2028	2030	2050
Population Size	936,439	1,369,389	1,366,781	1,603,675
% Below 15 Years	33.11	29.43	28.26	22.91
% Above 64 Years	1.44	2.77	3.13	10.42
% 15-64 Years	65.44	67.78	68.61	66.67
Dependency Ratio	53.15	44.56	41.88	49.29
TFR	3.3	2.2	2.1	2.1
% 15-25 Years	22.74	18.65	18.99	15.09
% WRA	28.93	28.7	28.29	25.79

Source: NCPD, 2018

According to 2nd CIDP by County Government of Mombasa (CGM-CIDP, 2018), in order to harness the DD, the county will implement various interventions in the socio-economic sectors as provided for under county priorities. In this regard the following areas are of interest:

a. Fostering sustainable investments in health systems, including in human resources and infrastructure, with the goal of enhancing access to quality health services for all. In the plan period, the county will recruit and train health personnel with the aim of improving their density, skills and competencies;

b. Expand vocational training opportunities for skills acquisition for young people to enhance their employability (including self-employment), productivity and competitiveness. The county will aim to improve inclusive access to education at all levels and provide viable alternatives for the many young people, particularly adolescent girls, who drop out of the formal educational system.

   - The county intends to implement the **Vocational Training Program** and targets to offer sponsorship of 70% annual fees to students recruited to join Mombasa City Polytechnics through ***'Tukuze Vipawa'*** Programme to acquire vocational skills.
   - The county also targets to give bursaries to 82,000 students under the ***'Elimu Fund"*** by 2022; construct and equip Vocational Training Centers in all sub-counties; and undertaking community sensitization on the benefits of vocational training to improve uptake;

c. Develop and support transformative youth development initiatives towards building entrepreneurial skills and capacities of youth. The county intends to establish industrial parks in all sub-counties; promote entrepreneurship and build the capacity of approximately 52,000 youths on entrepreneurship; develop youth talent and enhance youth access to financing; and

d. Invest in sectors with high job-multiplier effects, including Information and Communications Technology (ICT), trade, manufacturing, agriculture and agro-industries in order to generate employment and spur inclusive growth.

3.2.4 Education Institutions

The county is relatively well-endowed with education facilities though inadequate as demonstrated by a literacy rate of 57 per cent. The teacher pupil ratio stands at 1:48 and 1:41 for primary and secondary schools respectively. There are a total of 96 public primary schools in the county with 70,345 enrolled students and 1,454 teachers. At the secondary school level, there are 28 public secondary schools with a student population of 14,576 and teachers population of 423.

The county also hosts Kenya School of Government, Mombasa, four youth polytechnics, one technical training institute (Mombasa Technical Training Institute) and a teacher training college (Shanzu Teachers Training College). There is one chartered public university (the Technical University of Mombasa); one research institution, Kenya Marine and Fisheries Research Institute (KEMFRI); satellite campuses of public universities namely University of Nairobi, Kenyatta University, Jomo Kenyatta University of Agriculture and Technology and Moi University; and three satellite campuses of private universities namely Daystar University, Kenya Methodist University and Mt. Kenya University.

3.2.5 Energy Access

The main source of cooking energy for the county residents is paraffin at 53.6 per cent, charcoal at 30 per cent, firewood at 8.8 per cent LPG at 4.7 per cent and electricity at 1.7 per cent. This trend continues when it comes to lighting where paraffin also leads at 51.5 per cent followed closely by those relying on electricity at 47.5 per cent. The Kipevu power plant produces power which is fed into the national grid. The county has a high potential for generation of solar and wind energy, but this remains unexploited.

3.2.6 Markets and Urban Centers

The entire county is urban and hosts Mombasa City which is the second largest city in Kenya. It also hosts one of the largest wholesale and retail fresh produce market (Kongowea) where traders from all over the country and East Africa congregate and conduct business throughout the year. The city and the whole county experiences physical planning challenges due to the proliferation of slums, lack of a well-planned sewerage system, lack of effective solid waste

management system/unplanned waste disposal points and other infrastructural facilities. Other key markets include Mwembe Tayari fresh produce market and Marikiti retail market. Additionally, there are all major supermarket and shopping malls within the city which provide convenient shopping to the residents.

3.2.7 Housing

In the county, 65.6 per cent of all houses are stone walled while those made of brick walls stand at 7.5 per cent. Corrugated roofing accounts for 69.0 per cent of all roofing materials while tiles make up 9.7 per cent of all the houses in the county. Most of the mud walled houses are found in the slum areas where they are temporarily built. In these areas, land ownership is not guaranteed as most of the residents do not legally own land and the ones they live on are owned by absentee landlords.

3.2.8 Industry and Trade

The county hosts a significant number of industries spread across all sectors of the economy. Specifically, the service industry leads where shipping lines, ship repair and servicing yards, container freight stations, transport, clearing and forwarding firms and grain bulk handling leading the pack. Additionally, there are a number of manufacturing industries such as export processing (apparel) companies, oil refineries (both edible and petroleum), glassware, flour mills and car assembly plants located across the county. These industries offer the much needed employment opportunities to the local residents as well as other expatriates especially in the shipping sub-sector. However, Nyali and Likoni Sub-counties do not host any meaningful industry and the residents have to access employment opportunities in Mvita, Kisauni and Changamwe sub-counties where the majority of these industries are located.

3.2.9 Employment and other Sources of Income

3.2.9.1 Wage Earners

The total number of people engaged in agricultural activities stand at approximately 6,797 which is 1 per cent of the entire labour force. However, taking into consideration wage earners, in all other sectors, the figure rises to over 408, 830 which represent 60 per cent of all the labor force in the county. Major employers include the hotel industry, the Kenya Ports Authority, the Government of Kenya, Container Freight Terminals and various private institutions such as banks.

3.2.9.2 Self-employed

The rural self-employed stands at 2 per cent, which translates to 13,594 individuals out of the current labor force, while those engaging in self-employment in the urban center are 24.4 per cent, numbering 165,851. This is significant because the county is predominantly urban.

3.2.9.3 Labor force

The total county labour force stands at 679,717 of which 6,791 are employed in the agricultural sector, 13,594 are engaged as rural self-employed while 408,830 are wage- employed. The remaining 165,857 are engaged as urban self-employed.

3.2.9.4 Unemployment Levels

The number of people either involved in self-employment, formal employment or agriculture stands at 594,752, which is 87.5per cent of the labour force in the county. The unemployment rate, therefore, stands at 13.5 per cent.

3.2.9.5 Literacy

The county's literacy rate stands at 57 per cent due to high accessibility to learning institutions. The Free Primary Education Programme, the Subsidized Secondary Education Programme, adult literacy programmes along with numerous bursary schemes from the CDFs, LATF and Government are expected to contribute to a higher literacy rate in the future.

3.2.10 Security, Law and Order

Mombasa is a fairly safe destination. Other than occasional terrorist threats and election atmosphere, the county has been peaceful and has even attracted local tourism during high peak season. The National police and County inspectorate have been working in harmony to ensure order on the roads and on heavily populated areas as expected.

3.2.11 Social Protection

The county population of those above 65 years of age stands at 15,576, and 0.9 percent of the total population as orphans. Social protection is very crucial in planning for the vulnerable in society. County Government of Mombasa, through the Department of Education and Children have constructed 8 ECDE Centers across the 6 sub-counties and have provided the milk feeding program to the children from ECDE level up to class 3 for improved nutritional care and retention rate. Through collaboration with the social departments in the County, a social protection policy is being developed to ensure equal opportunity for the vulnerable in Port City of Mombasa.

3.2.12 Sports, Culture and Creative Arts

Mombasa thrives on its heritage and is a popular tourist destination not only for her access to the beach, but for its rich culture too. This has brought about curio markets in the creative arts section. The Department of Youth, Gender, Sports and Culture looks into developing sports and culture in the county and empowers its own youth towards achieving this goal. The County has constructed Uwanja wa Mbuzi stadium and Bomu grounds in a bid to improve the sports facility in the wards. Mombasa is also home to one of the renowned world heritage sites, the Fort Jesus.

3.2.14 The Blue Economy

Mombasa is endowed with rich coastal and maritime resources with a huge potential for development of the Blue Economy. The county, through the Department of Agriculture, Livestock, Fisheries and Cooperatives and its development partners have prioritized training in fisheries management, capacity building the fisheries sub-sector, aquaculture, fishing gear technology, seamanship in all the sub counties to conserve the rare and endangered species and the ecosystem.

3.3 Infrastructure Development and Services

3.3.1 Roads, Rail Network, Ports and Airports, Airstrips and Jetties

Infrastructure is a basic pillar for global competitiveness and a foundational enabler towards the CGM vision of making Port City of Mombasa a vibrant modern regional commercial hub with a high standard of living for its residents. The current road system in the county was originally designed for low traffic, have not been upgraded for quite a long period and now being used by heavy commercial vehicles. This situation has led to rapid damage therefore increasing the road maintenance costs. This poses a threat to the county s efforts to promote investment since it results in an increase in the cost of doing business. It is estimated that on an ordinary day, more than 1 million people enter and leave Mombasa Island. Therefore in order to improve transport infrastructure the county is looking at other attractive alternatives. The alternatives include the following:

- Water transport is likely to contribute to a reduction of traffic congestion in Mombasa if it is made attractive
- Use of personal cars on Mombasa Island is discouraged at the same time (for example by increasing parking fees in the city center).

- Construction of commuter railway from the West Mainland to the Island, from CBD to Nyali bridge and Likoni Ferry in the north and south respectively
- Construction of a second Nyali bridge between Tudor area (northern part of Mombasa Island) to Mshomoroni (North Mainland)
- Construction of the Dongo Kundu bypass, linking Port Reitz with the South Mainland
- Improvement of the ferry services at Likoni and Mtwongwe with new
- Construction of a marshalling yard for heavy commercial vehicles
- Construction of a bus terminal for public transport
- A commuter train and railways system

The current status of infrastructure relative to roads, rail network, ports and airports, Airstrips and Jetties is discussed in the next sections.

Roads: There is a total of 257.17km of bitumen surface roads, 127km of gravel surface roads and 91.29km of earth surface roads in the county. Main classified roads include Mombasa-Nairobi highway, Mombasa-Malindi road and Likoni-Lunga Lunga Road connecting Kenya and Tanzania. While the major roads are in fair condition, access roads within the residential and industrial areas are in deplorable state. The situation is worsened by the poor storm drainage systems most of which are in dilapidated conditions.

The roads are maintained by the national government through Kenya Rural Roads Authority (KeRRA) and overseen by Sub-county Road Committees, Kenya Urban Roads Authority (KURA) and the Kenya National Highways Authority (KeNHA) and the private sector. The County has key bridges linking the Island with the mainland and other coastal areas; these include Nyali and Mtwapa bridges. The construction of the Dongo-Kundu by-pass will ease congestion at the central Business Sub-county as traffic from Nairobi to South Coast shall be diverted at Miritini towards Likoni and Diani.

Ferries: The Likoni Ferry links the Island to Likoni and subsequently to Kwale and Tanzania through the Lunga-Lunga Border. Kenya Ferry Services operates more than 7 ferries and carries over 250,000 people and over 5,000 vehicles per day across the Likoni channel. It also operates in Mtongwe area at peak hours to minimize congestion at the Likoni Ferry crossing. Figure 3.1 shows the Kenya Ferry Service which forms an important link between the Island and Mainland South towards Tanzania.

Figure 3.1. Likoni Ferry Crossing

Railway: The County has ten kilometers of railway line and three railway stations from the colonial era. The Standard Gauge Railway replaces this parallel and colonial Uganda Railway that was originally built during the British colonial rule in the 19th century. It is the country's largest infrastructure project since independence. Under the East African Railway Master Plan, the Mombasa–Nairobi SGR will link up with other standard gauge railways that are being built in East Africa. This will tremendously revolutionized the transport industry. The passenger train service began in June 2017 and freight services are expected to begin commercial operation in 2018 (Figure 3.2).

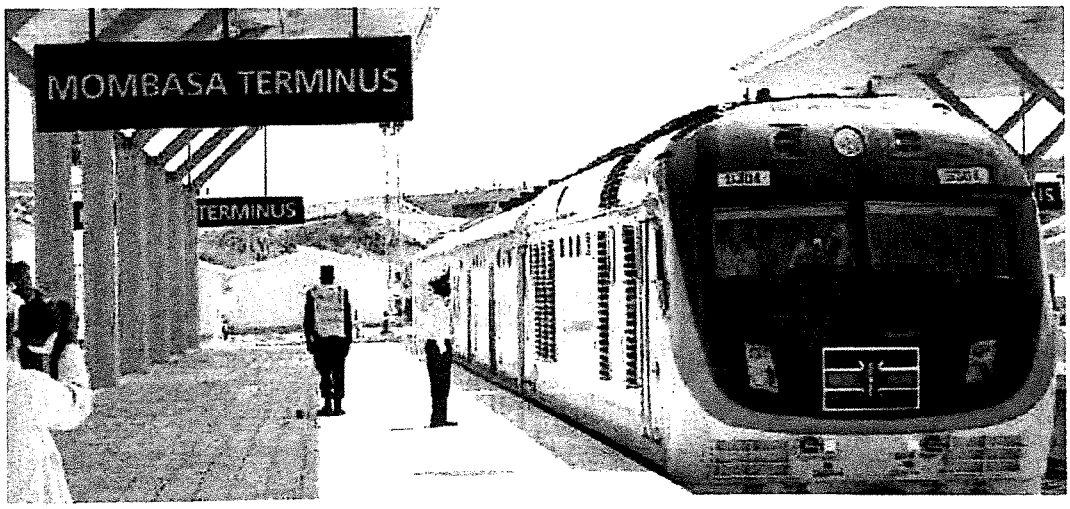

Figure 3.2. SGR Mombasa Terminus

Port: The port of Mombasa is also a key resource and the gateway to the East and Central African region, as it serves the entire region's export and import needs. In 2012, dredging was being undertaken with a view of deepening the Likoni channel to facilitate usage of the port by larger post panamax vessels. Figure 3.3 depicts the container terminal at the port of Mombasa.

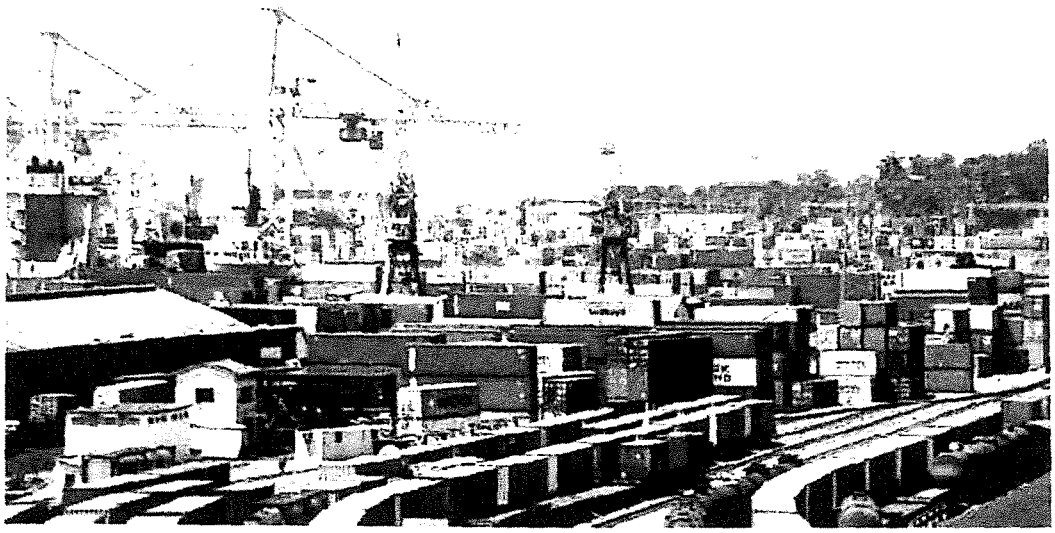

Figure 3.3. The Container Terminal at the Port of Mombasa

Airports: The County has one international airport, the Moi International Airport in Changamwe sub-county (Figure 3.4). The airport is the second largest airport in Kenya and is used by both domestic and international flights. The airport is essential in the promotion of tourism and investment opportunities in the county and in the coast region.

Figure 3.4. Moi International Airport, Mombasa

3.3.2 Posts and Telecommunications

There are seven registered post offices and one sub post office with the average distance to the post office being 5km. Despite new communication trends, the post office still controls a significant share of the market. The county hosts approximately 247 cyber cafes, most of which are located in the central business sub-county. This has led to increased internet access, though there is need for more investment in this area to meet the increasing demand. There are 18 registered courier service providers offering services within the country and other international destinations. These include DHL, Nation courier, Wells Fargo among others. Mobile telephone coverage stands at 95 per cent with the major telecommunication providers, including Safaricom, Airtel and Telkom, having a strong presence within the county. This has led to diminishing popularity of landline services. The use of mobile phones for internet access has also increased, especially among the youth. There are approximately 3700 land line telephone connections which are increasingly losing business to the fast growing mobile service.

3.3.3 Financial Institutions, Banks, SACCOs and Micro Finance Institutions

Banks: The presence of financial institutions in Mombasa is very strong as there is representation of all the banks (38) in Kenya within the County. The Central Bank of Kenya also has a branch in Mombasa. The County has many outlets with forex services which is usually boosted with presence of tourists. Furthermore, mobile banking has grown rapidly reaching people in the grassroots area. This has been largely through the ease of access to Mpesa outlets by Safaricom Limited. With all the major commercial banks having a presence in the county, the financial services sector is well positioned to drive and facilitate growth of all other sectors in the county.

Microfinance: The County has a number of microfinance institutions which include Kenya Women Finance Trust, Rafiki, SMEP, Faulu Kenya and Real People microfinance.

Insurance: Due to its cosmopolitan nature, the county hosts all the dominant players in the insurance industry with 18 companies and several agents operating fully within it.

SACCOs: The County hosts several SACCOs, building societies and numerous investment groups popularly known as *'Chamas'* which are used by members as resource mobilization vehicles. Most of these institutions have a large clientele and serve a wide cross-section of the population in County and across.

4.0 POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

This section therefore considers the relevant Government of Kenya (GOK) policies and legislation, and international safeguards, guidelines, policies and conventions that frame a sustainable approach to eco-development, including the approach towards the social and economic impacts of such developments in this case the Mombasa- Nairobi Standard Gauge Railway (SGR) and the subsequent pronouncements and directives by the National Government and how they should be mitigated. Relevant legislation must therefore be recognized and strictly be adhered to in response to the current developments for the successful implementation of the SGR project, and throughout the lifetime of this project.

The legislation have been used to inform the development of this SEIA report and to ensure that adequate mitigation measures are put in place to deal especially with the negative impacts as will be identified. In addition, it was necessary to review and use information as contained in a number of national and internal social-economic policies and plans, relevant institutional frameworks and other documents which were deemed important to oversee their fruition.

4.1 National Policy Framework

4.1.1 Kenya Vision 2030 and Medium Term Plans

Sessional Paper Number 10 of 2012 on Kenya Vision 2030 is the National Policy Economic Blueprint that entrenches Kenya Vision 2030 as the long term development strategy for Kenya. The Kenya Vision 2030 aims to transform Kenya into a modern, globally competitive, middle income country providing a high quality of life to all its citizens. Kenya Vision 2030 is a product of highly participatory, consultative and inclusive stakeholder's process conducted throughout the country and in all sectors of the economy. The Vision is anchored on three key pillars: economic; social; and political.

- The Economic Pillar aims to achieve an average Gross Domestic Product (GDP) growth rate of 10 percent per annum and sustain the same until 2030 in order to generate more resources to reinvigorate the economy to meet its envisaged goals and aspirations. The key sectors in this pillar include: tourism, agriculture and livestock, manufacturing, wholesale and retail trade, Business Process Outsourcing (BPO) and financial services, all

which are instrumental in stimulating growth in Port City of Mombasa. A seventh sector, oil and mineral resources, has now been added taking cognizance of the recent developments.

- The Social Pillar seeks to build a just and cohesive society with social equity in a clean and secure environment. The main sectors under this pillar include education and training, health, water and irrigation, environment, housing and urbanization, gender, sports, youth and culture.
- The Political Pillar aims at realizing a democratic political system founded on issue based politics that respect the rule of law, and protects the fundamental rights and freedoms of every individual in the Kenyan society.

The three pillars are anchored on a number of foundations, which serve as enablers that create an environment that is geared towards the realization of Vision 2030. These include: macroeconomic stability; continuity in governance reforms; enhanced equity and wealth creation opportunities for the poor; infrastructure; energy; Science, Technology and Innovation; Land Reforms; Human Resource Development; Security and Public Sector Reforms. An additional enabler, national values and ethics, has been included following the passing of the Constitution of Kenya 2010.

The Kenya Vision 2030 is being implemented in five year successive Medium Term Plans. The first plan covered the period 2008-2012 and the second MTP covered the period 2013-2017. This Social Economic Impact (SEI) Assessment uses the Third Medium Term Plan (MTP III) acts as its accompanying implementation plan, for achieving the assessment of the Social and economic impacts. MTP (III) has integrated and will implement the 17 Global Sustainable Development Goals (SDGs) as outlined in the UN 2030 Agenda for Sustainable Development. The Plan's Implementation is also aligned towards achieving the Goals of the African Union Agenda 2063 which constitutes the strategic framework for socio-economic transformation of the continent in the next 50 years.

4.1.2 Big 4-Agenda

On 12th December 2017, His Excellency President Uhuru Kenyatta announced his new plan, the 'Big Four', which is to guide the development agenda of the country in the period

2018-2022. The Kenya Big 4 Agenda (2018-2022), prioritizes affordable and decent housing, affordable healthcare, food and nutritional security, and employment creation through manufacturing. It focuses on key basic needs that are critical in uplifting the standard of living of Kenyans on the path to becoming an upper middle-income country by 2030.

These four areas are expected to bolster strong inclusive economic growth. The agricultural sector is a major driver of the economy, but Kenya is still classified as a food deficit country. Food production has been declining due to dependence on rain-fed agriculture, low adoption of technology including biotechnology, frequent attacks by pests and crop diseases, adverse weather, degradation of agricultural land, encroachment of urbanization into arable land, and rural-urban migration of the young people.

To improve on food and nutrition security, efforts need to focus on promoting indigenous food consumption and diversifying the staple foodstuffs; enhancing reduction of food wastage and food loss; strengthening the supply chains and linkages to value addition; improving on food information market systems; and increasing investment especially in agriculture infrastructure.

Manufacturing has the potential to advance socio-economic development through increased and diversified exports, reduced import bills and enhanced employment creation. As such, policy interventions towards promoting the competitiveness of the manufacturing sector should aim at enhancing product diversity and complexity, improving the business environment, developing relevant infrastructure, enhancing credit and market access, strengthening technology transfer and innovation, and building an industrial culture.

4.1.3 The County Integrated Development Planning (CIDP)

The County Integrated Development Planning (CIDP) Process is a process through which the counties prepare strategic development plans for a five-year period. Articles 103 and 104 of the County Government Act, of 2012 defines objectives and conditions for planning. Article 108 stipulates the content of the CIDP. The Kenya Constitution 2010 stipulates that one of the objectives of counties is to encourage the involvement of

communities and community organizations in the matters of County Government. The preparation of this plan included pre-draft consultation with communities throughout the county, sectoral groups, statutory agencies and adjoining local authorities.

The County Integrated Development Plan (CIDP) is a plan prepared by all counties to guide development over a five-year period. The Public Finance Management Act, 2012 provides that no public funds shall be appropriated outside a county's planning framework. The CIDP should contain information on development priorities that inform the annual budget process, particularly the preparation of annual development plans, the annual county fiscal strategy papers, and the annual budget estimates. A County Integrated Development Plan is a super plan for the counties that gives an overall framework for development. It aims to co-ordinate the work of both levels of the government in a coherent plan to improve the quality of life for all the people and contribute towards devolution. The county governments act section 108 outlines the county integrated development plan (CIDP) this outlines the county development goals covering a period of five years.

The planning process is an integral part of the development process. It is the first critical stage of the budget process (PFM 35 and PFM 126). The PFM 126 provides that every county shall prepare a development plan in accordance with Article 220(2) of the Constitution of Kenya for approval by the county assembly. The county executive committee member responsible for planning shall submit the development plan before the county assembly by 1st September of every year.

The development plan will inform the budget priorities for the coming year. The County Governments Act, 2012 (CGA), 104 obligates a county to develop an integrated plan, designate planning units at all county administrative levels and promote public participation and engagement by non-state actors in the planning process. The county plans shall consist of the following;

The County Integrated Development Plan (CIDP) is a 5-year plan that shall inform

- The county's annual budget;
- County Sectoral Plan (10-year plan);

- County Spatial Plan is a 10-year plan using the Geographic Information System (GIS);
- Based system and will be reviewed every 5 years; City and municipal plans.

The CIDP shall reflect the strategic midterm priorities of the county governments. The CIDP will contain specific goals and objectives, a coasted implementation plan, provisions for monitoring and evaluation and clear reporting mechanisms. It will contain information on investments, projects, development initiatives, maps, statistics, and a resource mobilization framework. County Government of Mombasa like a majority of others have their Second CIDP in place to cover the period 2018-2022.

4. 2.National Legal Framework

4.2.1 The Constitution of Kenya, 2010

The Constitution of Kenya (2010) prescribes national values and principles of governance which include sharing and devolution of power. It creates a two-tier government: a national government and 47 county governments. The Fourth Schedule delineates the functions of the national and county governments. A total of 14 functions have been devolved to the counties. The main ones include: county planning and development; agriculture; county health services; control of air pollution, noise pollution, other public nuisances and outdoor advertising; cultural activities, public entertainment and public amenities; county roads and transport; animal control and welfare; trade development and regulation; pre-primary education and village polytechnics; specific national government policies on natural resources and environmental conservation; county public works and services; firefighting services and disaster management; and, control of drugs and pornography. In Article 69 and article 43 provides for economic and social rights which is the basis for this project.

Emphasis is also made for the counties to ensure participatory development and capacities are developed at the county and community level. Five laws which provide the framework for devolution have been enacted, namely: Urban Areas and Cities Act, 2011; The County Governments Act, 2012; The Transition to Devolved Government Act, 2012; The Intergovernmental Relations Act, 2012 and The Public Finance Management Act, 2012. The PFM Act 2012 provides for effective and efficient management of public resources.

Article 125 of the Act requires the budget process for county governments in any financial year to consist of integrated development planning process which include long term and medium term planning as well as financial and economic priorities for the county over the medium term.

Articles 126 of the Act further obligates each county government to prepare an integrated development plan that includes strategic priorities for the medium term that reflect the county government's priorities and plans, a description of how the county government is responding to changes in the financial and economic environment; and programmes to be delivered. The County Governments are composed of the County Executive Committee and County Assemblies. The County Executive Committee is expected to supervise the administration and delivery of services to citizens as well as conceptualize and implement policies and county legislation.

The County Assembly is a legislative organ and will play an oversight role on all County public institutions including the urban areas and cities. The County Governments are required to prepare the County Integrated Development Plans to enable prioritization of socio- economic development issues at the local level. This is mandatory before the funding of county projects and programmes.

4.2.2 The County Governments Act, 2012

This Act provides for county governments' powers, functions and responsibilities to deliver services and for connected purposes. It reiterates the role of the county government as to control air and noise pollution, and other public nuisances from activities within their jurisdiction. This is necessary or desirable for the maintenance of the health, safety and well-being of the inhabitants of an area. In addition, the Act covers matters of planning, placing the responsibility of planning within counties, and the development of various plans as outlined in Section 107 on the county government. This includes the County Integrated Development Plan (CIDP) and the County Spatial Plan (CSP).

Sections 114 and 115 deal with planning for nationally significant projects in a county. These require mandatory public hearing and public participation as well as provision of clear and unambiguous information through clear environmental impact assessment reports – a function to be observed through the public participation process planned under this EIA study.

The County Government Act, 2012, requires that a county government shall plan for the county and no public funds shall be appropriated without a planning framework. It also states that the county planning framework shall integrate economic, physical, social, environmental and spatial planning. In addition to an integrated county development plan, each county is expected to have the following:

a. County Sectoral Plan (for the county departments and other county entities);
b. County Spatial Plan; and
c. City and Urban Areas Plans.

The above county plans serve as a basis for engagement between county government and the citizenry, other stakeholders and interest groups. They shall also serve as the basis for all the budgeting and spending in a county.

The CIDP integrates sectoral plans, from various sectors within the County, urban and City plans, spatial plans among other plans. The Urban Areas and Cities Act, 2011 is emphatic on the need for five year cities and urban areas integrated development planning and the need to align annual budgeting to the plan. These plans are aligned to the County Integrated Development Plan. The Act further states that an integrated urban or city development plan shall bind, guide and inform all planning for development and decision-making and ensure comprehensive inclusion of functions.

Section 37(1) of the Urban Areas and Cities Act, 2011 requires that a city or urban area integrated development plan shall be aligned to the development plans and strategies of the county governments. The city or urban area integrated development plan is expected to be the basis for the preparation of environmental management plans, the preparation of valuation rolls for property taxation, provision of physical and social infrastructure and transportation, preparation of annual strategic plans for a city, disaster preparedness and response, overall delivery of service including provision of water, electricity, health,

telecommunications and solid waste management; and the preparation of a geographic information system for a city. These are pertinent social economic development issues the CIDP intends to address.

4.2.3 The Physical Planning Act of 1996 CAP 286

The Act provides for the preparation and implementation of physical development plans, and for connected purposes. In part V, it vests on local authorities the powers for development control and reserving land planned for open spaces and parks, among others. Section 30 on control of development, requires Kenya National Highways Authority to apply for development permission and approvals to be granted by the local authority under section 33 prior to the start of any developments. This should be done to avoid fines or the development being discontinued.

Any application for development permission and for development activities which are likely to have injurious impact on the environment shall be submitted together with an environmental impact assessment report, as stipulated in section 36.

4.2.4 Mombasa Vision, 2035

The Mombasa Integrated Urban Development Plan (ISUDP) defines a vision for future growth and development of the County over the next 20 years. The Plan covers the entire land mass 222.82 km^2 and 65.12 km^2 of water mass of Port City of Mombasa/city. The overall vision is based on ground realities and ethos of the city which is to be prepared for midterms (10 year) and long term (20 year) as appropriate period for the strategic planning and in line with Kenya's Vision 2030.

The plan preparation has followed the requirements of the Physical Planning Act CAP 286 and is a Kenya Municipal Program (KMP) project dubbed Digital Topographical Mapping and Integrated Strategic Urban Development Plans for Cluster Towns. The KMP aims to strengthen local governance and improve service delivery by reforming frameworks for urban governance, Municipal Restructuring, strengthening of planning mechanism, financing and capacity building, and investment in infrastructure and service delivery improvements in towns. The ISUDP falls under Component 2 Participatory Strategic Planning for Urban Development of KMP, hence germane to the Mombasa IDP.

The Plan provides an overall integrated physical framework for urban growth of Mombasa city: After digital topographic mapping of the planning areas of Mombasa city and detail analysis of existing situation, an overall integrated physical framework is to be prepared to fulfill the current and future requirements. It also provides a basis for coordinated programming of projects and budget, thereby serving as a downstream management tool: the realistic implementation plan for all identified projects along with capital investment plan will be incorporated in the CIDP with subsequent implementation in the annual budgets.

4.2.5 Jumuiya ya Kaunti za Pwani (JKP)

Jumuiya ya Kaunti za Pwani, formed in 2015, is an economic bloc that brings together the six Coast counties in Kenya (Mombasa, Kwale, Taita-Taveta, Kilifi, Lamu and Tana River). JKP is a 'home-grown" solution aimed at tackling the socio-economic challenges facing the Coastal region. It is anchored on Article 189 (2) of the constitution that allows cooperation among counties as well as the national government to improve performance and delivery.

JKPs vision and directive is to rationalize status at county level and action forward on legal framework to anchor JKP; enhancing and promoting agricultural production for economic empowerment and food and nutrition security; enhancing/ investing in livestock production for economic empowerment and food and nutrition security; and strengthening health systems, governance and leadership to enhance health, nutrition and livelihoods. The Mombasa IDP looks into addressing these socio-economic objectives in its planning.

Cross- County Interventions include:

i. Joint approach into investing and utilization of specialized services;
ii. Joint approach into establishment of Community Based Health Insurance Mechanisms;
iii. Joint approach into establishment disease surveillance and outbreak/emergency preparedness and response mechanisms;
iv. Disease surveillance systems;
v. Outbreak management schemes;

vi. Joint approach into subcontracting of certain services through Public-Private-Partnership (PPP) initiatives; and

vii. Establish Jumuiya Health Summit.

4.3 National Institutional Framework

4.3.1 Kenya Ports Authority (KPA)

KPA is a statutory body under the Ministry of Transport established by an Act of Parliament on 20th January 1978. The Authority is responsible for the operation and management of the Port of Mombasa, other small seaports, and Inland Container Depots in Nairobi and Kisumu. Liaison offices in Kampala, Kigali and Bujumbura cater for all transit countries. Its mandate is to maintain, operate, improve and regulate all scheduled seaports along Kenya's coastline.

4.3.2 Kenya Revenue Authority (KRA)

The KRA Customs Service Department (CSD) was established by an Act of Parliament, Chapter 469 of the Laws of Kenya. It became effective on 1st July 1995. The Authority is charged with the responsibility of collecting revenue on behalf of the Government of Kenya.

4.3.3 Kenya Railways Corporation (KRC)

This is a state corporation, established to contribute to the development of the country by fostering an efficient, sustainable, competitive, safe and secure rail transport system. Its mandate includes management of the Rift Valley Railways (RVR) concession, management of non- conceded assets, and promotion, facilitation and participation in national and metropolitan railways development.

4.3.4 Kenya National Highways Authority (KeNHA)

Roads are the main mode of transport for cargo inland from the Port, accounting for up to 96% of all transfers. Congestion within the Port City of Mombasa road system creates a great challenge to efficient evacuation of cargo. The parent ministry for KeNHA has identified key interventions to be put in place to address the immediate challenges.

4.3.5 Kenya Pipeline Company (KPC) Limited

The Kenya Pipeline Company (KPC) Limited is a state corporation wholly owned by the Government, incorporated on 6th September 1973 under the Companies Act (CAP 486) of the Laws of Kenya. KPC's core mandate is to construct, operate and maintain a multiproduct pipeline system and related white-oils storage facilities for transportation of refined petroleum products from Mombasa to the hinterland.

4.3.6 Kenya Trade Network Agency (KENTRADE)

The Kenya Trade Network Agency (KENTRADE) is a state corporation established by the Government of Kenya in January 2011 to implement, operationalize and manage the Kenya National Electronic Single Window System (Kenya TradeNet) as a trade facilitation tool. The Single Window System has been identified as a solution to lengthy, inefficient and slow manual trade procedures that are prone to corruption and years.

4.3.7 Kenya Maritime Authority (KMA)

KMA was established with a mandate to regulate, co-ordinate and oversee quality, availability and affordable delivery of maritime transport services in the country in line with national standards and international conventions.

4.3.8 Kenya National Police Service (KNPS)

The KNPS consists of the Kenya Police Service and the Administration Police Service. KNPS is a national service whose core functions throughout Kenya are protection of life and property, prevention and detection of crime, and maintenance of law and order. Parliament may enact legislation establishing other police services under the supervision of the National Police Service and the command of the Inspector-General of Police.

4.3.9 Kenya Bureau of Standards (KEBS)

KEBS is a statutory organization of the Government of Kenya established in 1974 under the Standards Act, Cap 496 of the Laws of Kenya. Its primary functions are to promote standardization in commerce and industry through the development of standards, quality assurance, inspection, certification and metrology. KEBS is a member of International Organization for Standardization (ISO), the International Electro-technical Commission (IEC), and the African Regional Organization for Standardization (ARSO).

4.3.10 National Transport and Safety Authority (NTSA)

The NTSA is an authority that brings together under one institution the functions of motor vehicle registration, transport licensing and motor vehicle inspection, road safety, and driver testing and to some extent traffic law enhancement. The objective of forming the NTSA was to harmonize the operations of the key road transport departments and help in effectively managing the road transport subsector to minimize loss of lives through road traffic accidents

4.3.11 Kenya Plant Health Inspectorate Service (KEPHIS)

KEPHIS is a statutory body established by the Government of Kenya through Legal Notice No. 305 of 18th October 1996 to oversee quality control of agricultural inputs, plant variety protection and plant health. It has the mandate to protect Kenya's agriculture from pests and diseases that could impact upon the environment, economy and human health.

4.3.12 Radiation Protection Board (RPB)

The RPB is a department of the Ministry of Health established under CAP 243 of the Laws of Kenya. The RPB is the only Government agency responsible for the safety of persons and the environment from exposure to the harmful ionizing radiation and the security of radiological and nuclear materials both under and out of regulatory control. The board issues licenses for import/export of radiological and nuclear items, and issues radiation-free certificates for consumable goods including items coming in from radiological or nuclear contaminated areas of the world. RPB shall require that all import/export containerized cargo be passed through the radiation portal monitors at the Port of Mombasa before shipping.

4.3.13 Port Health Services (PHS)

The PHS is a department of the Ministry of Health responsible for the enforcement of the Port Health Act (CAP 242 of the Laws of Kenya), Food, Drugs and Chemical Substances Act (CAP 254 of the Laws of Kenya). The department's core mandate relates to promoting, securing and maintaining the health of the public both locally and internationally through prevention and control strategies.

5.0 MOMBASA PORT COMMUNITY

This Mombasa Port Community Charter (the "Charter") proclaims the desire of the Mombasa Port Community to realize the full trade potential of the Mombasa Port Corridor. It represents the culmination of intense and extensive consultations among all stakeholders; government agencies, business, civil society organizations, the Coastal Community and special interest groups in Kenya. While the parties included in the Mombasa Port Community form the core team tasked with executing the initiatives proposed in the Charter, all stakeholders are obligated to pursue and encourage the realization of the trade potential of the Mombasa Port Corridor. This is the intent of this Charter.

Mombasa Port Community has formalized through the charter, the desire to support and complement the Government of Kenya (GOK) efforts to translate the Port of Mombasa into a World class Seaport of Choice. The Charter, developed by the public and private sector members of the Mombasa Port Community, expresses our commitment to discarding the 'silo mentality' work culture in which agencies have operated for so long. This desire is manifested by the overall vision of the Charter which seeks to commit the parties towards significantly improved efficiency and competitiveness of the Northern Corridor.

The Charter seeks to provide an innovative monitoring and evaluation framework with a performance dashboard for ease in analysis, policy and operational decisions and interventions. This process will augment the GOK initiatives to enhance accountability of service delivery in organizations that provide services to the maritime trade along the Northern Corridor. It is hoped that the improvements brought about by the implementation of the Charter shall provide quality services to our neighbouring countries that utilize the Northern Corridor.

5.1 Purpose of the Charter

The purpose of this Charter is to:

a) Establish a permanent framework of collaboration that binds the Port Community to specific actions, collective obligations, targets and time lines;

b) Complement the individual institutional service charters by way of adoption where appropriate, in a holistic approach along the Mombasa Corridor;

c) Introduce, educate and publicize to cargo owners, traders, labour unions, civil society and the general public the best industry practices and guiding principles, and inculcate acceptable behaviour by all citizens participating in international trade; and,

d) Develop and implement a self-monitoring mechanism to ensure implementation of collective community obligations. The senior managers of the participating Port Community entities shall voluntarily submit themselves to sanctions for breach of any of the collective obligations.

5.2 The Mombasa Port Corridor Reform Programme Goals

To accelerate the realization of the potential of the Mombasa Corridor and spur the region's economic growth, the Port Community has set ambitious goals that MUST be achieved to create the requisite momentum. These cut across the entire logistics continuum. The Anchor Members of the Port Community who have signed this founding Charter shall undertake their specific obligations within it. Where applicable, the obligations shall appear under each member's name. It is noted, for avoidance of doubt, that each member or entity continues its allegiance to its own legal instruments and structures, through which each member shall procure to provide legitimacy to this. Table 5.1 is a listing of all the partners/members of Port Community Charter.

Table 5.1: Mombasa Community Charter

Category and Name of Partner A: Public Sector	Designation
1. Kenya Revenue Authority	Commissioner General
2. Kenya Ports Authority	Managing Director
3. Kenya Railways Corporation	Managing Director
4. Kenya National Highways Authority	Director General
5. Kenya Pipeline Company Limited	Managing Director
6. Kenya Trade Network Agency	Chief Executive Officer (CEO)
7. Kenya Maritime Authority	Director General
8. Kenya National Police Service	Inspector General
9. Kenya Bureau of Standards	Managing Director
10. National Transport and Safety Authority	Director General
11. Kenya Plant Health Inspectorate Service	Managing Director
12. Port Health Services	Director, Public Health
13. Radiation Protection Board	Secretary/Chief Radiation Protection Officer

B: Special Interest Partners	Designation
1. The Northern Corridor Transit	Transport Co-ordination Authority Executive Secretary
2. Trade Mark	East Africa CEO
3. The Intergovernmental Standing Committee on Shipping	Secretary General
C: The Private Sector Players	**Designation**
Core Cargo Owners	
1. The Kenya Private Sector Alliance	CEO
2. Kenya Association of Manufacturers	CEO
3. East African Tea Trade Association	CEO
4. The Kenya National Chamber of Commerce	Chairman
5. Shippers Council of Eastern Africa	CEO
Service Providers	
1. Container Freight Stations Association	Chairman
2. Kenya Ships Agents Association	Chairman
3. KIFWA	Chairman
4. Kenya Transport Association	CEO

Source: Mombasa Port Community Charter (2014)

The Port Community has identified four distinct but interdependent pillars and eight overlapping **Key Result Areas** (hereafter referred to as **K.R.As**) as critical to achieving these goals:

5.2.1 Pillar One: Fit for Purpose Logistical and Transport Infrastructure

This pillar is based on the fact that physical infrastructure and capacity to handle maritime operations, terminal operations and hinterland operations must be developed in concert to facilitate a smooth flow of freight. Without this end-to-end perspective, partial infrastructural developments will not yield good results.

K.R.A 1: Transform Mombasa Port into a high-performance landlord port

K.R.A 2: Proportionately grow the capacity of hinterland channels

5.2.2 Pillar Two: Operational Efficiency

This pillar is based on the fact that many inefficiencies are occasioned by lengthy and largely manual processes, an inefficient IT platform and a lethargic work culture. These result in high transaction costs, long lead times and incorrect processing for enterprises, as well as complex regulations, difficulty in monitoring cargo movements and loss of revenue due to official corruption. The need to go digital on a 24-hour basis cannot be overemphasized.

K.R.A 3: Actualise paperless trading through the single window system

KRA 4: Reduce cycle-times through speed and a 24/7 work economy

5.2.3 Pillar Three: Synergistic and Collaborative Port Community

This pillar is based on the premise that, ultimately, it is the people who make the system work or fail. It takes into account the demonstration of leadership within the larger Port Community structure, work culture, teamwork as well as expected alignment. Unless all strategy formulating heads within the community see and pursue the same big picture, the Mombasa Corridor and indeed all those working within its ambit will continue to operate under par.

K.R.A 5: Drive planned initiatives through stakeholders' executive leadership

K.R.A 6: Ethical and professional business practice

5.2.4 Pillar Four: Facilitative Regulation and Oversight Engagement

This pillar is based on the fact that there are several statutory bodies mandated to carry out regulatory, oversight and or monitoring functions at different stages of the trade process. Some of these agencies' roles overlap, reverse or disregard one other. Apart from creating confusion and slowing down trade, this situation also erodes the very purpose for which these agencies were established. The gaps witnessed in governance aspects can only be closed through appropriate legislation.

K.R.A 7: Streamline the regulatory and oversight roles throughout the Corridor

K.R.A 8: Review and enactment of enabling legislation

6.0 TRANSPORT IN THE NORTHERN CORRIDOR

The Northern Corridor is a multimodal trade route linking the landlocked countries of the Great Lakes Region with the Kenyan maritime sea port of Mombasa. The Northern Corridor Transit and Transport Agreement (NCTTA) is a comprehensive agreement with defined 11 Protocols on strategic areas for regional cooperation relating to: Maritime Port Facilities, Routes and Facilities, Customs Controls and Operations, Documentation and Procedures, Transport of Goods by Rail, Transport of Goods by Road, Inland Waterways Transport of Goods, Transport by Pipeline, Multimodal Transport of Goods, Handling of Dangerous Goods and Measures of Facilitation for Transit Agencies, Traders and Employees. It was signed in 1985 and revised in 2007 for regional cooperation with a view of facilitating interstate and transit trade, between the Member States of Burundi, Democratic Republic of Congo, Kenya, Rwanda, and Uganda. South Sudan acceded to the Agreement in 2012.

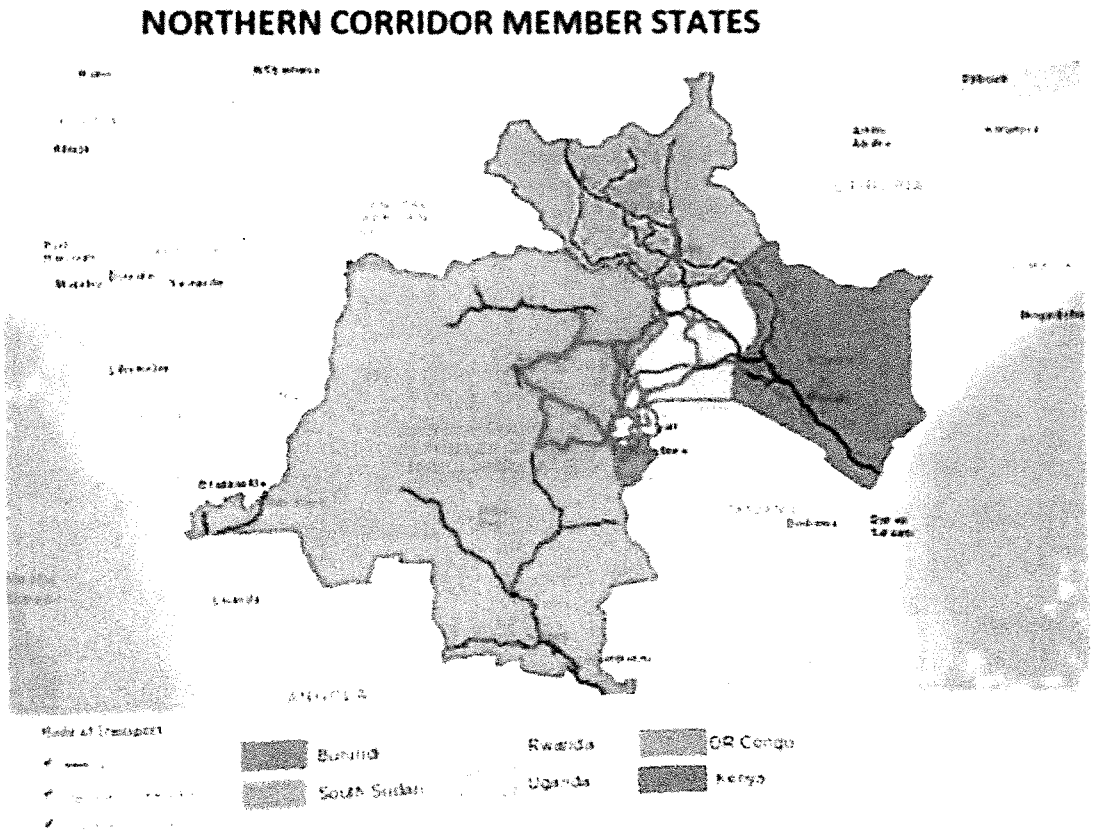

Figure 6.1. Northern Corridor Member States and Modes of Transport

The objectives of the agreement are based on 3 pillars of sustainable transport namely economic pillar aiming at promoting efficient and competitive transport; social pillar with the view to fostering an inclusive transport and the environmental pillar for a green freight transport. The Northern Corridor Transit and Transport Coordination Authority (NCTTCA) was established and mandated by the Member States to oversee the implementation of the agreement, to monitor its performance and to transform the Northern trade route into an economic development corridor and making the corridor a seamless, efficient, smart and green Corridor. Below is the map of the Northern Corridor Member States.

6.1 Road Transport

The trucking industry along the Northern Corridor is undertaken by transport companies either on hire or as own cargo carriers. The largest proportions of transporters are carriers on hire and depend on the freight paid by shippers for their services. The transporters vary in size from those that own over 1,000 trucks to those who own just a few trucks. It has been reported in studies carried out in the recent past that the trucking sector is growing very rapidly in the Northern Corridor countries. Kenya has the largest fleet of trucks in the region, followed by Uganda. This is not surprising taking cognizance of the fact that they are the larger economies in the hinterland served by the Northern Corridor (Barak, Hoffman & Kidenda, 2014).

From available information, the Kenya Revenue Authority had licensed 9,632 trucks in 2016 bringing the number of registered trucks in Kenya to approximately 100,000 as at 2016, while the latest Uganda's registered fleet was 33,425 trucks. For Rwanda the number was 3,134 trucks. The Sub-Saharan Africa Transport Program (SSATP) surveys further revealed that a high proportion of trucking companies had direct access to freight, either when transporting their own goods or when handling third party goods with regular contracts (with shippers or clearing and forwarding agents).

It was further noted that ownership of trucks in the road transport industry in East Africa is concentrated with 5% of the enterprises operating about 45% of the truck fleet in Kenya and 40% in Tanzania. The market for trucking services is also segmented where large enterprises co-exist and compete with much smaller ones. It was further noted that 50%

of the enterprises in Tanzania operate 7 trucks or less, and 4 trucks or less in Kenya, while in Rwanda, almost 80% of the enterprises operated only one truck (Hartmann, Olivier Asebe, 2012).

However, the situation above does not differ much from other trade blocks worldwide. For example, the road freight transport market in the European Union consists of ca. 600,000 predominantly small enterprises, with an average size of four employees per company (EC, 2014). Over time, this average has remained quite stable.

6.2 Rail Transport

6.2.1 Historical Perspectives

Rail transport is the second most important mode of transport after road and offers the best alternative for transporting bulky products for both local and export markets (Irandu, 2000). The author argues that the railway transport system in the region is expensive mainly due to the rough terrain, low demand and the scarcity of human and financial resources. Before 2016 the railway network in Kenya was principally comprised of a single line, overland rail track from Mombasa through Nairobi, Nakuru, Kisumu/Eldoret, Jinja, Kampala to Kasese in western Uganda totalling to 1650 Kms.

The key rail track for transit cargo runs from Mombasa to Kampala via Malaba comprising of 1330 km. The Kenya-Uganda Railway was originally built by the British to provide Uganda with access to the sea. Construction began at Mombasa in 1896 and reached Lake Victoria in 1901 (Greywall, 2004). In 1929, the Uganda Railway was merged into Kenya and Uganda Railways and Harbours, which was then merged into East African Railways and Harbours Corporation (EAR&H) in 1948. EAR&H operated transportation links for Kenya, Uganda, and Tanzania until the East African Community was dissolved.

Following the collapse of the East African Community in 1977, Kenya's portion of the railway became the Kenya Railways Corporation. Over the next 30 years, Kenya's railway network deteriorated from lack of maintenance. In 2006, the operations were taken over by Rift Valley Railways (RVR) under a 25 year concession whose tenure even worsened the already bad situation as freight cargo took a major dip. In 2016, the government of Kenya completed a new standard gauge rail (SGR), financed through Exim Bank of China

(BD, 2017). The line currently runs from Mombasa to Nairobi and is expected to progress to Malaba border of Kenya/Uganda. The line to Naivasha is currently under construction. It is expected that the government of Uganda will build the Malaba-Kampala the Line.

In the freight transportation, the rail has exponentially losing the market share, despite the rapid and general increase in freight volumes Obviously the increase in volume, the greater part has gone to road transport. The freight level of 4.3 Million tons was attained in 1980, while in 1989-1990, the railway carried 3.5 million tons. In Sweden for example, in 1970, the share of cargo was 43%, this declined to 32% in 1995 and 28% in 2000 (Bo - Lennart, 2005) (Bo-Lennart Nelldal, 2000). Romania the share was 49.1% in 2000 but subsequently subsided to 21.9% in 2013 (Statista, 2018).

Freight traffic on the Kenya and Uganda's railways in 2008 was only 1.65 million metric tons (Berger, 2011). Traffic has dramatically dropped over the past twenty years. The report observes that while the traffic of Kenya Railways only was 4.5 million in the early 1980s, the current Northern Corridor rail traffic represents one third of that tonnage now. At that time, the railway market share of freight transport exceeded 40%. In its present condition, the capacity of the Northern Corridor main railways (MGR) could be estimated at less than 5 million tons a year. With the investment in SGR, it could be increased to 7 million rising to 15 Million by 2030.

6.2.2 Railway Concession (Rift Valley Railways -RVR)

The operation of the railway in Kenya and Uganda was run by Kenya Railways Corporation (KRC) in Kenya and Uganda Railways Corporation for Uganda prior to 2006. However, due to poor uptake of cargo, it was deemed fit that the Kenya-Uganda railways be concessioned (Berger, 2011). Thus in November 2006, the Rift Valley Railways Consortium (RVR) took over the operation of railways under a 25-year concession. The RVR was however unable to turnaround railway operations, hampered by inept management and aging infrastructure. As result, by early 2017 both the Kenya Railways Corporation and Uganda Railways Corporation had terminated the concession. Kenya railways has since stopped the operation of the metre rail between Mombasa and Nairobi, leaving only the SGR. The Table 6.1 shows three years prior to the Concession, Rail accounted for 10% of the cargo freight.

Table 6.1: Mode of Container Transport in TEUs 2004 - 2006

DETAILS	2004	2005	2006
TEUs BY ROAD	320,552	312,592	334,269
TEUs BY RAIL	37,285	37,285	37,285
TOTAL TEUs	357,837	349,877	371,554
% SHARE			
ROAD	89.60%	89.30%	90.00%
RAIL	10.40%	10.70%	10.00%
Total	100.00%	100.00%	100.00%

Source: KPA Bulletin Statistics (2019)

However, after the concession to RVR, as cargo increased the volume freighted by the railway decreased as shown on table 6.2.

Table 6.2: Mode of Container Transport in TEUS 2007 – 2017

DETAILS/TEUs	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
ROAD	415,780	432,437	422,849	420,857	489,945	699,258	730,603	799,827	876,069	945,347	978,353
RAIL	37,285	32,494	21,668	24,478	25,268	24,997	26,653	2,162	21,642	21,902	19,571
TOTAL	455,072	466,939	446,526	447,345	517,224	726,267	759,269	804,003	899,726	969,265	999,941
%SHARE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
ROAD	91.40%	92.60%	94.70%	94.10%	94.70%	96.30%	96.20%	99.50%	97.40%	97.50%	97.80%
RAIL	8.20%	7.00%	4.90%	5.50%	4.90%	3.40%	3.50%	0.30%	2.40%	2.30%	2.00%
TOTAL	99.60%	99.60%	99.60%	99.60%	99.60%	99.70%	99.70%	99.70%	99.80%	99.80%	99.80%

Source: KPA Bulletin Statistics (2019)

An analysis of the cargo volumes conveyed for the last 20 years reveals that KRC was carrying 10% in 2006. When the RVR took over the volumes by rail declined to 2% of the freight volumes from the port of Mombasa by the end of 2017. Available data shows that RVR carried 1.7million tons of cargo in 2013 compared to 1.6 million tons in the previous year. However, this is far below the freight volumes that were carried in the years prior to RVR winning the concession. However, the data indicates that a larger percentage of the cargo ferried from Mombasa was by road transport. Thus, Mombasa City as logistic centre had a direct revenue implication from both shipping, warehousing and clearing and forwarding.

RVR fell into liquidity challenges and become unable to meet its minimum targets in managing the centurion railway line, thus necessitating the two country's agencies Kenya Railways and Uganda Railways Corporation to revert to the old arrangements that existed before the concession. The departure of RVR came when construction of the SGR was already underway. The network is planned to link Mombasa - Kampala - Juba.

6.2.3 Pricing by RVR

The RVR charged a price of USD 500 per twenty foot container and 1,000 for a forty foot container from the port of Mombasa to the Nairobi Inland Container Depot (ICDE) yard in Embakasi – Nairobi while the concession was still in operation. For the Kampala route the rates were USD 1,250 and USD 2,200 respectively. There an added charge of $300 levied by the shipping companies for the Through Bill of Lading (TBL) for containers railed by RVR to ICD Nairobi. The return route had lower rates since most of the containers were empty. For Kampala the rate is USD 600 and USD 700 for a twenty foot and forty foot container respectively. Similarly for the Nairobi to Mombasa route the rates were USD 200 and USD 400 dollars.

Table 6.3: Rift Valley Railway Rates between Mombasa, Nairobi and Kampala

	From Mombasa		To Mombasa	
Ft/Route	Nairobi	Kampala	Nairobi	Kampala
20ft	USD 500	USD 1250	USD 200	USD 600
40ft	USD 1000	USD 2200	USD 400	USD 700

Source: KPA Bulletin Statistics, 2019

The actual price thus for Nairobi bound 40 foot container is $1300 in addition to the last mile approximated to be $200 making it a total of $1,600. This price excludes return of empty container to the shipping line nominated yard in Mombasa. This prices when compared to road are expensive probably explaining why RVR could not effectively compete with road. A survey by Shippers Council of East Africa in 2015 revealed the following prices by the road sector.

Table 6.4: Pricing by Road Transport

Year	Nairobi	Kampala	Kigali	Bujumbura	Goma	Juba
2015	1000	2500	4500	6900	6900	5500
2014	1045	3700	4800	6500	7000	7500
2013	1200	3000	4900	9000	7500	7200
2012	1200	3000	4900	9000	7500	7200
2011	1300	3400	6500	8000	9500	9800

Source: East Africa Performance Survey, 2015

The price for Nairobi bound 40 foot container is $1000 for a door to door service that includes a return of the empty container. The tariff for Kampala bound container is fairer ($2200 plus shipping line charges of $300) at $2500 similar to what was being charged by road except that for road, it included return of the empty while for rail, one has to add $600.

6.2.4 Modal Split between RVR and Road

Cundill (1986) carried out a study in Kenya to examine the scope for transferring long-distance freight traffic from road to rail as a way of reducing consumption of diesel fuel by the transport sector. In Kenya, both lorries and railway locomotives are powered by diesel oil but rail is more fuel efficient. The data used for the study was obtained targeting long-distance traffic volumes, commodity flows and modal split was computed from road and rail surveys of freight traffic passing into, out of and through Nairobi. The researcher findings indicate that that travel time and cost were critical factors in determining the choice of mode.

For long-distance traffic, in general, rail offers a cheaper but slower service than road, and its price advantage increasing with journey length (Cundill, 1986). Modal split for competitive traffic was analysed in terms of haul length and travel cost by each mode. The results suggest that consignors place an average value which is far higher than usually assumed in economic studies. The study concludes that the fuel savings resulting from transferring goods from road to rail by normal market forces would be modest, the realistic maximum being a saving of only one or two percent of national consumption of diesel oil.

6.2.5 Standard Gauge Railway (SGR)

In 2011 Kenya signed a memorandum of understanding with the China Road and Bridge Corporation to build the Mombasa–Nairobi Standard Gauge Railway (SGR). Financing for the US$3.8 billion project was finalised in May 2014 through the Exim Bank of China extending a loan for 90% of the project cost, and the remaining 10% coming from the Kenyan government (RT, 2017) . The passenger service on the SGR was inaugurated on 31 May 2017 and Cargo Freight operations started in January 2018 (GoK, 2017). Work is underway to extend the SGR to Naivasha and later to the border town of Malaba.

The first Phase of SGR project is directed towards movement of freight and passengers between Mombasa and Nairobi with emphasis on freight of cargo. It is further underscored that the cargo expected to dominate the freight is the containerized segment. There however over dominance of imports over exports by a factor of almost 4.5 leading to serious imbalance that certainly affects the cost of transporting goods in either direction. Between the five years, 2013 and 2017 the share of exports vis a vis total traffic ranged between 12 and 14 percentage points (KPA, 2017).

6.3 Traffic through the Port of Mombasa

The port traffic is more often a barometer of the economic activities of the port's hinterland. In this regard, there is an established a strong correlation between Gross National Income/Gross Domestic Product (GDP) and the port traffic. The Port of Mombasa serves a hinterland that goes beyond Kenya to include Uganda, Rwanda, South Sudan, DR Congo, Tanzania and Burundi. It expected therefore that the port traffic in Mombasa could have a significant impact on the GDPs of all these hinterland countries.
Port traffic through the Port of Mombasa can be categorized broadly into for four conventional classes: dry general, dry bulk, containerized and liquid bulk cargoes. In the last ten years, the tonnages handled of the respective cargoes are as shown in Table 6.5.

Table 6.5: Traffic through the Port of Mombasa in "000" Tons

CATEGORY	2013	2014	2015	2016	2017
Containerized Cargo	8,838	10,047	10,276	10,615	11,410
Conventional Cargo	1,854	1,938	2,256	1,968	2,209
Dry Bulk	4,978	5,638	6,928	7,053	8,467
Liquid Bulk	6,637	5,638	7,272	7,728	8,467
Total	**22,307**	**23,261**	**26,732**	**27,364**	**30,553**

Source: KPA Bulletin Statistics (2018)

The rate of growth between 2007 and 2016 averaged 6.33% which is a fairly high rate of growth. This growth rate tends to dwarf the overall growth rate of global port traffic which stands at about 3.5%. The increases in cargo volumes indicate investment opportunities for the private sector to compliment port infrastructure that will be overstretched over time. In the long run, therefore these developments will position Port City of Mombasa as a potential beneficiary of the possible expansions resulting from the cargo volumes growth.

Table 6.6: Traffic through the Port of Mombasa in %

CATEGORY	2013	2014	2015	2016	2017
Containerized Cargo	40%	43%	38%	39%	37%
Conventional Cargo	8%	8%	8%	7%	7%
Dry Bulk	22%	24%	26%	26%	28%
Liquid Bulk	30%	24%	27%	28%	28%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: KPA Bulletin Statistics, 2019

In terms of cargo categorization, containerized cargo constitutes almost 40 per cent of the total cargo handled through the port, followed by liquid bulk and dry bulk cargo with each constituting 28% respective of the total cargo. One important feature is however the near constant shares of both dry general and containerized cargoes. Containerized cargo continues to rise (refer Table 6.7) at the expense of other complementary cargoes especially in the recent past years when freight rates have been coming down. There are a number of CFS situated in Mombasa that are complimenting through offering container handling and storage facilities.

Table 6.7: Number of Container Handled In the Port of Mombasa in "000" TEUs

CONTAINERIZED CARGO		YEAR				
		2013	2014	2015	2016	2017
IMPORTS	FULL	441,004	482,055	514,086	527,816	554,400
	EMPTY	8,385	6,617	5,970	8,167	7,055
TOTAL		449,389	488,672	520,056	535,983	561,455
EXPORTS	FULL	129,522	130,757	121,531	128,913	134,464
	EMPTY	298,820	331,719	391,841	378,444	406,799
TOTAL		428,342	462,476	513,372	507,357	541,263
TRANSHIPMENT	FULL	12,118	52,707	37,384	42,586	60,998
	EMPTY	4,151	8,147	5,306	5,445	20,205
TOTAL		16,269	60,854	42,690	48,031	81,203
RESTOWS	FULL	-	-	-	-	5,238.00
	EMPTY	-	-	-	-	798.00
TOTAL		-	-	-	-	6,036.00
TOTAL	FULL	582,644	665,519	673,001	699,315	755,100
	EMPTY	311,356	346,483	403,117	392,056	434,857
TOTAL		894,000	1,012,002	1,076,118	1,091,371	1,189,957

Source: KPA Bulletin Statistics, 2019

Loaded containers, both exports and imports, have on the other hand been growing at the rate of 6.11% which is close to the global average of 6.1% and is nearer to the overall growth in port traffic which stands at 6.22% (MBEC, 2017).

6.4 An analysis of the diverted Cargo from Road to Rail

The Port of Mombasa is the focal point from which the Northern Corridor radiates to the Great Lakes Region. Other than Kenya, the Port serves Uganda, Rwanda, Burundi, South Sudan, DR Congo and North Eastern Tanzania. Combined, the transit countries provide about 28% of the Port traffic. Of this proportion, Uganda accounts for over 80%. In 2017, the Port handled 30.34 million tons of which 8.64 million tons was subscribed by the Transit Countries which is 28.48 % of the port traffic. The modal split between the road and rail was about 96% for the road and the balance to the account of railway service.

It has been indicated that the railway at its best is expected to handle 40% of the Port traffic which is estimated to constitute 22.00 million tons. We take this figure as given but we prefer considering a relatively moderate base figure which is more in line with experiences elsewhere that, at best 30% of the port cargo is dealt by railways. We hold this view because in some earlier assignment undertaken for CFSs, it was observed that owner-nominated containers constituted 72% of the domestic imported container traffic thereby leaving the balance to be nominated by the Port Authority.

Indications are that the SGR will reach its optimal level of operations by 2023. We presume that it at 2025 that 30% of the port traffic will be railed. In the first six months of 2018, when the SGR started lifting cargo, it has dealt nearly one million tons. We presume that growth in the railed traffic will be smooth and will be spread equally over the five year period. In year 1, it would be fair to assume that 10% of the dry cargo will be served by SGR. In fact, between 2003 and 2006, the eve of concessioning of the railway services, the share of railways in containerized cargo was 10%.

6.5 Freight Tonnage by SGR

Amazingly, in the first six months of this year, the share of containerized cargo that the SGR has lifted was 24% of the total containerized cargo. When one adds transit containers, the percentage falls to 17%. In this regard, we are emboldened to consider a share of 10% of the total traffic as a fair starting point to estimate the likely share of the SGR bound cargo. We strongly feel that this share out of the total cargo is justifiable in that the SGR is much faster and efficiently served upon arrival than the meter gauge which did 10% of the containerized cargo. At any rate, a lot of the then conventional cargo and some bulk cargoes like wheat, sugar and even motor vehicles have found their way into containers even though it is a small percentage.

In the second year of operation, this throughput will be 15% and rise to 20% in year three. By year 4, the share will be 25% and eventually 30% by 2023. Writing on 22nd July, 2018, in the Weekend Business in an article titled "Rail to help Kenya achieve higher economic growth" Victor Kabeeha, a communications adviser, observed that;

> ***"The upshot is that the original design plan for the number of freight container transportation to be achieved at 2025 has already been reached. Significantly, SGR has achieved the eight-year container transportation plan within a year." He goes further to observe that "By operating 14 freight trains daily (lifting 108 TEUs per train, this translates to 1512 TEUs per day), SGR has fully utilized the advantage of Mombasa-Nairobi SGR for its large volume, safe and comfortable, punctual and fast characteristics.***

This has cut 700 trucks per day which were to transport heavy and empty containers between Mombasa and Nairobi".

"According to the plan, SGR is posed to start the transportation of bulk cargo, in August and with a target to operate 28 freight trains by the end of this year, achieving 10 million tonnes of annual transportation capacity, which was to be achieved by 2024, as stipulated in the original agreement."

(Sunday Standard, pg. 29, 22 July 2018)

The County Government of Mombasa recognizes the logistics and cargo handling sectors as a critical part of the socio-economic development in the county. Hence, the advent of the SGR and the transfer of all undesignated cargo to Nairobi ICD is expected adversely impact on the County's revenues and other socio-economic activities. The analyzed data clearly shows that a greater proportion of the cargo ferried from Mombasa as always used the road modal. The Port City of Mombasa has therefore been a beneficiary of both the direct and auxiliary activities relating to cargo transportation by road.

The transportation of cargo through SGR took effect in January, 2018. To meet the cargo targets, the Government gave discounted tariffs to attract importers and exporter to use the rail. The uptake was not encouraging thus resulting in a Government directive for all non-designated containers to be ferried to ICD in Nairobi. This resulted in an upsurge of cargo through the SGR as detailed in table 6.8.

Table 6.8: ICD Cargo Comparative Analysis - Jan – March 2017 and Jan – June 2018

Status	Jan-March 2017	Jan-March 2018	Variance	% Variance
Imports (Full)	2,386	12,903	10,517	440.8
Exports (Full)	1,140	2,043	903	79.2
Exports (Empty)	1,019	2,196	1,177	115.5
Total	**4,595**	**17,142**	**12,547**	**273**

Source: KPA Bulletin Statistics, 2019

Generally during the month of March, 2018 the ICD handled 11,493 TEU's compared to 1,401 TEUs handled in March 2017. Between Jan-March 2018 the ICD handled a total of 17,142 TEUs as compared to 4595 TEUs in a corresponding period 2017, recording an increase of 273 per cent over the previous period. Import traffic increased from 2,386 TEUs to 12,903 TEUs, an increase of 440.8 per cent. Export (full) traffic increased from 1,140TEUs to 2,043TEUs, a change of 6.5% whereas Exports (Empty) traffic increased from 1,019TEUs to 2,196TEUs, a change of 9.7%. Overall, in all categories there a remarkable increase on cargo handled at the ICD. For the period to June 2018, the following table illustrates deliveries both by road and rail.

Table 6.9: Deliveries by Road and Rail for Kenya (January – June 2018)

	FULL IMPORTS (LOCAL)						
	ROAD			SGR			TOTAL
	20`	40`	TEUs	20`	40`	TEUs	TEUs
JAN	14,112	9,919	33,950	383	336	1,055	35,005
FEB	10,530	8,462	30,368	1,048	830	2,708	33,076
MAR	10,088	7,650	29,926	3,323	2,656	8,635	38,561
APR	7,941	4,566	27,779	4,721	4,243	13,207	40,986
MAY	9,236	5,877	29,074	4,453	4,536	13,525	42,599
JUNE	8,223	4,613	28,061	5,097	6,099	17,295	45,356
TOTAL	**60,130**	**41,087**	**179,158**	**19,025**	**18,700**	**56,425**	**235,583**

Source: KPA Bulletin Statistics, 2019

When comparing full import containers, SGR handled 56,425 TEU's compared to the road's 179,158 TEUs for the first six months of 2018. This is a ratio of 24:76 or 24% of full import cargo (local). This is a significant increase from the 3% share in previous years.

Table 6.10: Deliveries by Road and Rail for Uganda (January – June 2018)

	FULL IMPORTS/TRANSIT				
	UGANDA			OTHER TRANSIT	
	ROAD	RAIL	TOTAL	ROAD	TOTAL TRANSIT
JAN	13,569	212	13,781	3,070	16,851
FEB	11,383	83	11,466	2,468	13,934
MAR	12,213	-	12,213	3,145	15,358
APR	9,230	-	9,230	2,206	11,436
MAY	12,138	-	12,138	3,120	15,258
JUNE	12,337	-	12,337	3,169	15,506
	70,870	***295***	***71,165***	***17,178***	***88,343***

Source: KPA Bulletin Statistics, 2019

The results in Table 6.10 when compared to full local import for transit countries, the figure reduces as the as the directive by government is yet to take effect with Transit Countries. Since this is a deliberate stance from the Government, the increasing trend is likely to continue, thus depriving the road transport their natural share of cargo in a fair competition. The policy change will impact on cargo handling activities at the Port City of Mombasa, and the facilities designated for that purpose could be rendered redundant.

6.6 Inland Container Depot, Nairobi

The standard newspaper reports that;

"The Inland Container Depot in Nairobi has recorded a 606 per cent growth in business since full operationalization of the Standard Gauge Railway (SGR) cargo in January 2018. The facility has since January this year handled 51,608 twenty-foot equivalent units (TEUs) of cargo compared to 7,305 TEUs in the corresponding period in 2017."

The article goes on to say that the railway line is designed to carry 22 million tonnes a year of cargo or a projected 40% of Mombasa Port throughput in 2035. With regard to operations, the Head of Inland Container Depots was ecstatic;

"We intend to quadruple our numbers and reach 12 trains per day by December. This will translate to 1,296 containers transported in a day"

(The Standard Newspaper, 24, July 2018, My Gov. pg1)

In a very elementally approach and considering 2018 where it is estimated that 32.00 million tons will be handled, 3.2 million tons would be the share SGR would deal. It is evident the average tonnage that SGR should deal to meet the loan obligation is about 5.05 million tons per year for the next 15 years following the lapse of the grace period (2020 to 2035). For ease of this analysis, it is assumed that the share of cargo dedicated to the SGR will all be containerized which though farfetched, the implication is the same and in fact if the cargo is loose, it may lead to bigger impact.

Furthermore, no distinction has been made between domestic and transit cargoes Based on an average of 15 tons per Twenty-Foot Equivalent (TEUs), 213,000 TEUs would be required. It is this volume that would not be "available" in Mombasa for the road trucks to lift. On the understanding that the Port worked 360 days during which the 213,000 TEUs have to be transported, close to 443 truck journeys laden with two and single TEUs will be made every day. A recent study on Corridor Observatory stated that trucks to Nairobi can make 10 to 11 round trips in a month. For the truck to make a round trip, it needs to spend two nights in Mombasa so that in the morning of the third day, it takes off.

6.7 Long Distance Trucks

Trucks have as a minimum two personnel. In other words, the trucks are manned by two people: the 443 trucks will employ 886 persons who will spend 1772 nights in Mombasa per trip. The total number of bed nights in a year stands at 318,960. The amount lost for Mombasa accommodation providers will be approximately 318,960,000.00 million. The supporting industry will relinquish 797,400,000 .00 million.

6.7.1 Fuel and Lubricants

In Mombasa, there are several fueling stations that benefit from the presence of the long distance trucks. It is a known fact that the cost of fuel is lowest in Mombasa. It is therefore befitting that invariably most if not all trucks will feel their tanks before departing Mombasa. It is estimated that each truck will consume some 250 liters per visit. The 443 trucks will consume 110,750 liters per day which translates to 39,870,000.00 liters per year which would cost nearly 3.89 Billion in a typical year. Much as it is the profit margin that would be of greatest concern, the "income" effect would be felt on the ground as far as

circulation of the income is concerned. But assuming a profitability margin of 10%, close to 400 million will be lost from Mombasa.

The local transport can be estimated at 921 trucks per day at 40 liters each day hence a total of 13,262,400 liters per year yielding Kshs 1,192,160,000.00. These trucks unlike the long distance ones, support not only the numerous garages in Mombasa, but also the spare parts business in town. It is estimated that every local transport truck supports in terms of employment three people including those in fuel stations. The 921 trucks would daily "employ" 3684 employees. These will be on the verge of losing their jobs. To facilitate this service, we need another three trucks to supplement the active truck. In essence, a total of 14,736 persons would be required to support the industry. It is this local support sector that is behind most of the roadside traders including small eating houses and kiosks and support accommodation services

6.7.2 Parking and Security

The 443 trucks are packed in Mombasa town and its environs. We provide that the parking and security services are generally needed for two days at a cost of Kshs 500.00 per day. When computed, this cumulates to Kshs 89,100,000.00 which will no longer be realized following the loss of cargo to SGR. Whereas this loss may not mean total closure of the parking yards, we expect it to affect the number employed in this sub-sector.

6.7.3 Vehicle Cleaning

To the foregoing, one should add the cost of washing vehicles estimated at the same rate as parking and security which yields an amount equal to 89,100,000.00. Once again this may not lead to total closure but would lead to a sizeable reduction in business further impacting on the number employed regardless of whether self-employed or otherwise.

6.7.4 Maintenance and Repairs

It is possible (it is often the case) that most of the long distance trucks are not serviced in Mombasa exclusively but the complementary port-Mombasa trucks will require periodic maintenance as they do most of the times. With the skimming of the cargo to SGR, these trucks will not only find themselves severely affected but the local garages they frequent will find themselves with a lot of idle times and reduced earnings.

6.7.5 Short Term Accommodation

The 886 personnel will presumably take up a similar number of hotel rooms in medium sized hotels which have the capacity of 15 guests per day hence, 60 hotels would be required to serve this trade. On the understanding that each establishment will have a labour force of 5 persons including management, a total of 300 persons directly employed will be rendered jobless when the 60 short term facilities close down. These will no longer pay rates and licenses fees.

6.7.6 Truck Redeployment

It is possible that a sizeable number of drivers and their assistants may also lose employment on account of the SGR operations. Most of the trucks that do long distance haulage cannot be economically relocated to "first" or "last" miles and are therefore likely to be pushed out of business. Approximately 35% will most likely not be affected except that they will ply shorter routes because they transport transit cargo. However we expect transit traffic to also start relocating to Nairobi, ICD as the service level continues to rise and more people become accustomed. But once this service is extended to Kampala, the equation will be very different and would require a separate study

6.8 Container Freight Stations

Another service provider that is also affected is the Container Freight Stations. These facilities are principally bonded storage areas where Customs treatment is undertaken while the shippers enjoy longer periods of free storage. There are about 22 CFSs within Mombasa which have invested heavily in equipment and labour. A good number of the CFSs have their own trucks for transporting containers from the Port: their services are complementary to those of long distance haulage. On advent of SGR, it is clear now most of the containers are cleared now in Nairobi ICD. Potentially close to 2000 persons employed directly in Mombasa are likely to suffer from the move to operationalize SGR in County City of Mombasa. Further there will be under utilization of the equipment and facilities.

6.8.1 Labour Absorption

In an earlier assignment carried out for CFS Association, it was observed that the CFSs employed about 2304 persons including permanent, contract and casuals workers who were estimated to support some 9000 persons. It is highly likely that a good number of those employed in Mombasa are likely to find themselves out of gainful employment. The likelihood that all can "follow" these jobs to Nairobi is highly improbable because of the high degree of unemployment and the relatively not too high earnings in this sub-sector. Through one of the leading dailies in Kenya in an article titled "SGR renders hundreds jobless", it was observed that hundreds of Container Freight Station (CFS) workers and drivers in Mombasa have been rendered jobless, thanks to increase in volume of goods transported through Standard Gauge Railway." The author goes on to say that:

"Yesterday (23rd July 2018), the Nation learnt that CFSs and transport firms in Mombasa have started laying off workers following reduced business"

More than 500 truck drivers and 100 workers in CFSs have been declared redundant after the government ordered cargo to be cleared in Nairobi. A senior CFS manager noted that:

"The work we used to do has now been transferred to Nairobi and we can no longer pay our staff. All the CFSs in Mombasa are facing a bleak future, there is no future in this business anymore"

Along similar lines, the Kenya Transport Association opined that:

"As we speak now, a cargo train carries 108 containers and making seven trips a day. That literally means that more than 500 truck drivers are currently jobless. Hundreds of trucks have no business and this is to the detriment of our members, who have pumped billions of shillings into buying trucks, trailers and other infrastructure"

Much as it might be difficult to estimate the actual number of staff that will be affected in the interim, it is a health guess to go by the 600 comprising of 500 short distance truck drivers who serve the CFS. In the long run, we expect the number to reduce to only those serving Less Container Loads destined for Mombasa which ideally is small.

6.8.2 Empty Container Depots

There are about seven though one deals in reefers, empty container depots that receive, store, clean and repair containers. Approximately 32% of the shipped containers will be returned empty which is 384,000 containers which would have been received and cleaned in Mombasa. The Depots will be denied the accruable revenue because the service will be provided in Nairobi. Based on a 60% charge of handling rate of USD 105, the total loss would be 2,419,200,000. The loss of this revenue to Mombasa will also impact on labour lay off. This will also be accompanied by loss of transport services to the Port.

6.9 Clearing and Forwarding Services

There are about 868 established Clearing and Forwarding Agents that are licensed and authorized by KRA to provide Customs services to cargo. There is even a bigger number operating outside the system in the form of "briefcase" agents. Whereas the well-established may relocate or have branches in Nairobi and elsewhere, the informal ones who are based in Mombasa will by all means be rendered redundant. In the same vein, cargo brokers/agents will find themselves with little to do. Most of these support the roadside commercial enterprises which constitute another source of employment despite the "informality." During the course of this study, we gathered that of the 1,200 agents who applied for clearance licenses, about 300 were unsuccessful and cannot therefore officially offer services. It is highly unlikely that they resigned to their dwelling units but would rather be offering "consultancy" and services on the sidelines of formal establishment.

It is a common practice that a good number of licensed agents tend to engage the unlicensed to conduct the actual business on their behalf. There is little doubt that a good number of F&CA will have to follow business into Nairobi. It might be too early to speculate but as things stand there is all indication this category will be split 50:50 but in fullness of time, the share will largely depend on the competitiveness of the service and the share of traffic meant for Coast Region including Tanzania, Burundi, Congo and Rwanda. The unfortunate bit is that business will not be split equally and most likely on 30% of the trade might require the services of clearing agents. Hence 20% will be rendered jobless.

6.10 Destuffing

There is another source of casual employment that is offered in go downs where containers are destuffed to facilitate return of the empty containers to the shipping line within the free period granted of 14 days for Kenyan destined containers. These containers will find their way to Nairobi while the serving labour will become unemployed in Mombasa. In a study carried out in 2013 on Ports in UK, it was observed that the direct employment generated indirect and induced employment which was two and a half times that of direct; 118,000 direct jobs generated 216,000 jobs. We believe that a similar scenario will be generated by the loss! Hence with regard to Mombasa, we would expect a more fortified loss given the high levels of poverty.

6.11 Stuffing

There are some few products that are exported but that are consolidated or stuffed into containers in Mombasa. Whereas a number of products are delivered into Mombasa while containerized, some products like tea and coffee are stuffed into containers from go downs situated in Mombasa. The Table below indicates shipments of tea and coffee for the last five years thereby underscoring demand for warehousing services for these two products.

Table 6.11: Exports of Tea and Coffee '000 tons

Product/year	2013	2014	2015	2016	2017	average
Tea	541	554	528	548	571	548.4
Coffee	264	256	262	271	361	282.8
Total	805	810	789	819	932	831.2

Source: KPA Bulletin Statistics, 2019

The weight of tea packed into Twenty Foot Containers rages between 12 and 14 tons thereby averaging 13 tons per TEU. However tea is stored in palletized form while packed into 60 to 70-kilo bags. Every TEU is loaded with ten pallets that are stuffed using low mast forklift trucks. And every container carries 200 bags. Warehousing of tea will entail unloading, porterage and arrangement onto pallets. For ease of work arrangement and compensation, it is assumed that one container, TEU, will be stuffed by 5 porters in a day i.e. five porters will unload, transport and arrange the ten pallets in a day.

On average 42185 TEUs were stored and shipped between 2013 and 2017 which means that some 440,000 tons may be exported in 2018 which will require some 33850 TEUs. This translates to 2821 TEUs per month. Each container carries 200 bags of 65 Kgs each. You need five porters to stuff one container in a day. While one needs to stuff 109 TEUs daily to be able to ship at least 2821 TEUs per month. This would require some 545 porters per day and approximately 252,747 square meters of storage space per month for the whole year. The likely revenue from warehousing is approximately 114.00 million. This revenue is likely to be lost to Nairobi which might be hard pressed to avail this space sooner than it might be prepared to do.

6.12 Coffee Exports

Analogous to tea, we expect coffee to employ five porters per container and to occupy proportionate space. It will retain 282 porters and occupy 131,000 square meters for which a rent of 60.00 million will accrue.

6.13 Manufacture of Pallets

Every tea container shipped out goes with ten wooden pallets. It follows that every container that is exported, ten pallets are also shipped away as exports. Total pallets to be exported in 2018 will be 33,850 for tea. Presumably another 17,264 will be required to ship coffee. In total 51,114 pallets will be exported away. This suggests that 172 pallets must be manufactured every day. Manufacturing two pallets per hour by two people would require 22 carpenters to meet the target. The necessary inputs, wood, is assumed to be generated from the incoming cargoes in the form of dunnage. We assume that dunnage collection involves half the number involved in manufacture but it also occupies space though not as classic as cargo. It is assumed that total provision of pallets will on daily basis including storage and retrieval require forty people, some, 11, skilled while the balance may be unskilled. We estimate the cost of storage to vary with number of people involved in the trade: 825 porters were involved in loading the two products, tea and coffee while 40 are engaged in manufacture and storage of pallets, approximately, storage of pallets and dunnage should cost 8.44 million.

There is close to a gang of 1,000 people daily that visits the industrial area and adjoining environs to go and serve the warehousing industry. Each wooden pallet costs between 300 and 500. For the 51,114 pallets exported yearly, some Kshs 20.5 million is generated which based on per capita income of US$ 1702 as of 2017, is enough to support 117 individuals. A walk through to enumerate and map businesses on the ground that support this league of workers returned approximately 100 number of establishments that engage a minimum of one trader and a max of 10 persons for those established over a long period of time.

6.14 Household Support

In Kenya, the overall dependency ratio is about 80%. However in Mombasa, it averages 50% meaning that for every two employed persons, there is one unemployed person. Furthermore, the average household size is 4.4 persons. For all the truck drivers and their assistants coupled with those affected through association, the impact of the SGR will be extremely heavy. In all regards, an additional 50% of the affected labour force will be affected.

7.0 STUDY METHODOLOGY

7.1 Overview of the Study Methodology

In order to respond to the Terms of Reference this study on Assessment study on the socio-economic impact of the operationalization of SGR in Port City of Mombasa, the consultants conducted a baseline preliminary feasibility analysis. Consequently data collection questionnaire was developed (see Appendix I - III) and used as the standard format for collecting much of the primary data. As well, a Focus Group Discussion (FGD) guide was also developed for stakeholder's engagement (see Appendix IV- VI) for social and economic issues. Secondary data was collected using a secondary data matrix.

Primary data was collected between 27th August, 2018 and 14th September, 2018 with a further field work review and subsequent verification exercise taking place between 04th February, 2019 and 15th February, 2019 within the port city of Mombasa targeting the specific zoned areas. Additional financial and operational data obtained from the County Government of Mombasa, Department of Finance and Planning. Data obtained was organized, coded and analyzed using both SPSS vs21 and MS Excel to determine trends and forecasts on both social and economic fronts. The methodology included an inclusive project initiation process, consultative workshops and meetings to ensure the active participation of key stakeholders. With this context in mind, the approach and methodology adopted contributed immensely to the successful delivery of this study.

7.2 The Study Design

In order to achieve and address the Terms of Reference for this study a cross-sectional Survey design with a fusion of dominant quantitative and qualitative approaches was adopted. This suited the study as the used data was collected at one point in time. Survey research is a quantitative and qualitative method with two important characteristics. First, the variables of interest are measured using self-reports. Survey studies ask the participants/respondents to report directly on their own thoughts, feelings and behaviours. The second justification for using this design is the considerable attention that needed to be paid to the issue of sampling.

A coherent feature in this study and most survey studies is a strong preference for large random samples because they provide the most accurate estimates of what is true in the population. A survey is the most appropriate research study design and can be about most of the social and economic issues in any society such as voting intentions, consumer preferences, social attitudes, health, living standards, government programmes impacts or anything else touching on the masses.

A phased methodological approach based on rigorous tried and tested six stage assessment was employed with the following stages: Stage one: Project commencement; Stage two: Historical perspective including port throughput, modal split and socio-economic status prior to the operationalization of SGR; Stage three: Development of data collection tools, sampling, quality assurance and training materials; Stage four: Preparation for fieldwork and training of research assistants and enumerators; Stage five: Data collection/field work, data cleaning, analysis and presentation; Stage six: Final presentation and project sign off.

7.3 Methodological Design and Approach

The assessment study was organised into three main phases whose aim was to cover different aspects required to accomplish the assignment in an organised and focused manner. Broadly, the three phases were conceptualized as follows: Project Initiation and Development: This will entail validation of the engagement requirements, consultative meetings, detailed planning and mapping out key stakeholders to understand the current state i.e. review the existing reports from the port and other key sectors, the County revenue collection levels, literature review and desktop research. It also involves setting up of data collection tools, quality assurance standards and enumerator training materials.

Fieldwork: Training of enumerators, use of consultative forums, stakeholder workshops, focus group discussions, interviews and questionnaire administration to collect data, and analyse collected data from stakeholders. **Reporting and Dissemination**: Validation draft report, dissemination the findings, knowledge transfer and handover. The three phases were supported by a continuous on-going project coordination and management. The end to end project was delivered over a period of a 55 days period.

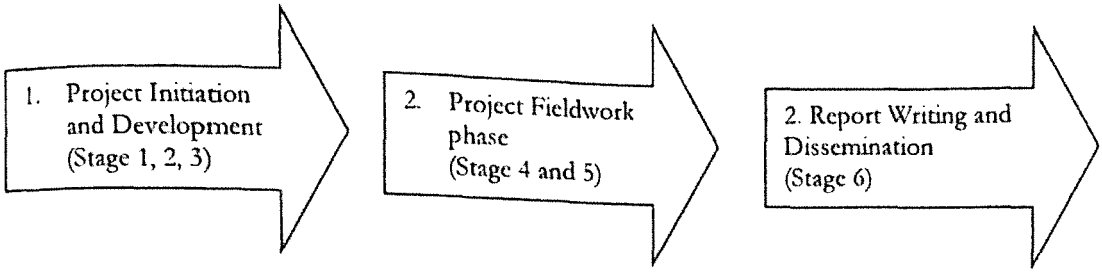

Figure 7.1 Project Management and Coordination

7.4 Summary of Methods Employed

A wide range of methods are used in SEIA, with their selection and application typically tailored to meet particular requirements. While the specific methods used in each SEIA may vary, they generally involve some or all of the following steps (Taylor, Bryan & Goodrick 1990):

- **Scoping** the nature and boundaries of the impact assessment
- **Profiling current impacts** of the activity being examined, including the historical context or current status to establish a baseline level and rate of change for relevant variables related to the activity of interest ***(referred to as establishing a 'baseline' rate of change)***.
- **Formulating alternatives**, in which alternative 'impact' scenarios are developed
- **Projecting and estimating effects** of different impact scenarios
- **Monitoring** actual impacts
- **Mitigation** and management of impacts
- **Evaluation** of the impact assessment process.

The scooping exercise done to determine the; time and resources available for the SEIA, the nature of the proposal being assessed, identification of the groups who are potentially impacted, the key impacts of interest, the extent of available information, its potential usefulness in terms of appropriate scale, timeframe, content, and how data gaps can be addressed and finally the process and methods to be used for the SEIA.

Baseline profiling and identifying who will be impacted can be done using a variety of methods. The most common methods are: (1) secondary data analysis of existing data sources, (2) primary data collection through surveys, interviews, focus groups etc. In this assessment we the survey and focus group approaches were adopted.

There are two important reasons for applying such a multipronged approach: (1) weaknesses of one tool or method was overcome by using others and (2) different methodologies and tools delivering results that point in the same direction, were important to validate and test the robustness of results.

In order to conduct an analysis that fulfils the requirements, different methodological approaches will be applied. The mapping of specific tasks (Schematically this approach is presented in Figure 7.2.

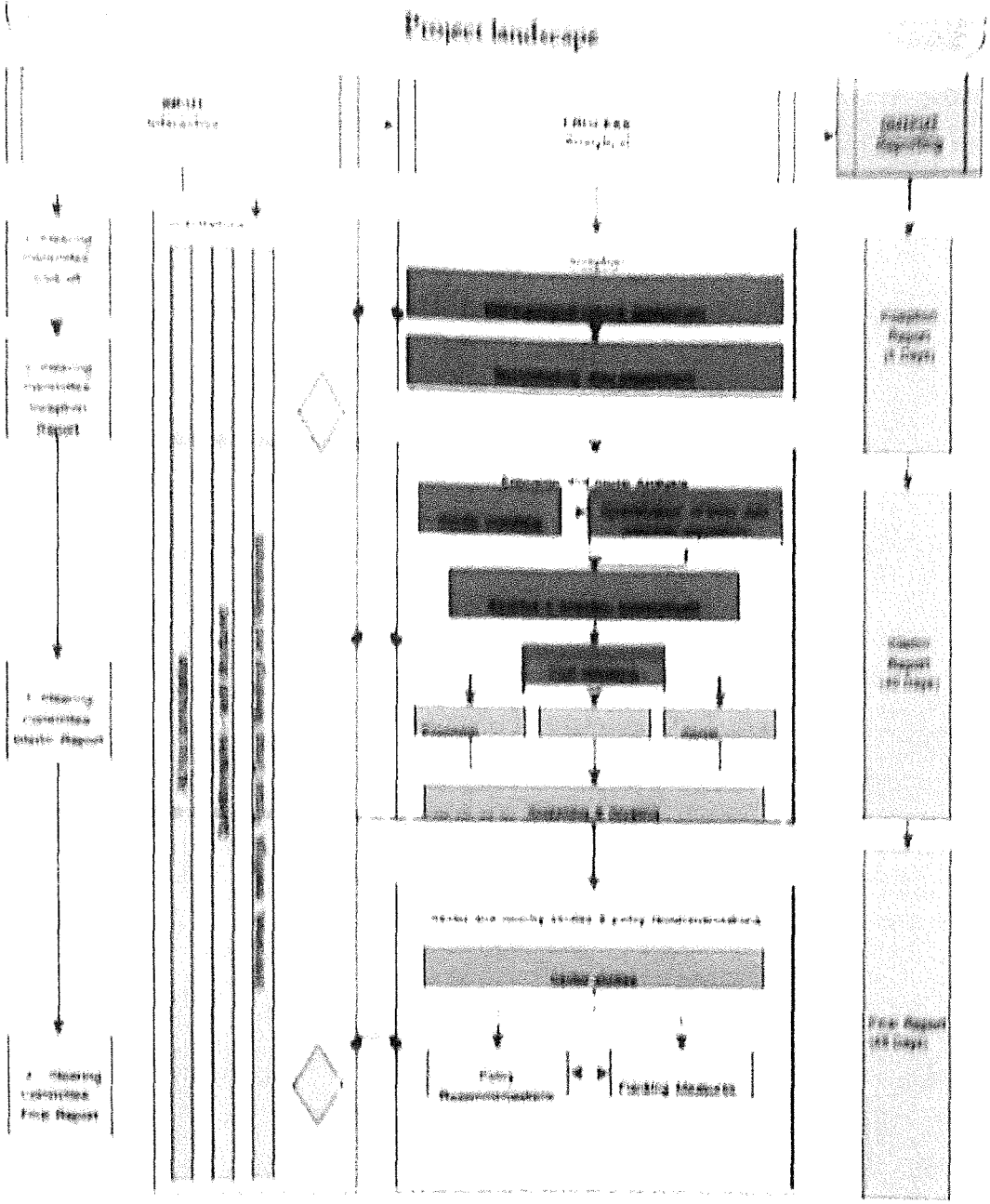

Figure 1.2: Project framework

1.5 Overall Study Methodology

In order to conduct an analysis that fulfilled the requirements as detailed in the Terms of Reference (ToR) guiding the study, a methodological approach was used comprised of the following specific tasks as captured in Table 1.1

Table 7.1; Overall Study Methodology

No	Thematic Area	Objective	Assessment Approach
1	Impact on Road truckers	To assess the impact of SGR operationalization on the road truckers who term goods to and from Mombasa	• Identified key stakeholders in the trucking sector • Sampled selected participants to attend a stakeholders engagement forum • Used a pre-prepared tool to collect data on the expected impacts • Analyzed the trucker's socio-economic effects on Port City of Mombasa • Analyzed the trucker's revenue contribution to CGM • Possible impact on revenue collection as result of SGR operations was analyzed
2	Impact on warehouse business	To analyze the impact on warehousing business cognizant that upon clearance importers would usually require storage space as they plan to ferry the cargo to respective destinations	• Obtained data from the warehousing operators and analyzed it through ✓ List of warehousing operators in Mombasa ✓ Analyses of warehousing operators key activities, and contribution to county socio-economic activities ✓ Sampling selected participants who attended stakeholders forum ✓ The use of pre-prepared tool for collecting data on possible impacts

3	Impact on Roadside Business	To assess the possible impact of SGR on the road side businesses in Port City of Mombasa. It is premised that majority of the road side business directly thrive on cargo operations within the county	• Identified roadside business directly impacted by the cargo business • Analyses of the socio-economic contribution to Port City of Mombasa • Sampled participants to attend a stakeholders engagement forum • Used a pre-prepared tool to collect data on possible impacts
4	Impact on Clearing and Freight agents	To assess the impact of SGR on activities undertaken by clearing and freights agents. As the goods land at the Mombasa port of destination, the clearing agents prepare the necessary paperwork's to facilitate clearance, and arrange for freighting to destinations	• Obtained the list of clearing and freight agents • Identified activities undertaken by the clearing agents • Analyzed the jobs creation capacity of the clearing and freight agents • Assessed the possible socio-economic contribution of the sector to the Port City of Mombasa economy. • Sampled participants who attended a stakeholder's forum. • Use of pre-prepared tool for collecting data on possible impacts as result of SGR operationalization in Port City of Mombasa.
5	Impact on Container Freight Stations	To assess the impact of SGR on Container Freight Stations. Currently, the CFSs play a key role in supporting the port handle cargo clearance through provision of additional storage capacity	• The CFSs currently in operation in Port City of Mombasa were identified. • Analyses of major activities and job creation capacity. • Analyses of revenue generation to County Government of Mombasa. • Assessment of socio-economic impact within Mombasa as result of SGR operationalization.

			• [illegible]
			• [illegible]
			[illegible]
6.	Impact on Drivers and People employed in related road transportation (cargo)	To assess the possible impacts on the drivers and people who directly get employment from the road transportation. The conveyance of cargo to various destination usually employs drivers and loaders.	• Assessment of employment capacity of the road transport (cargo) in Meru City of Mombasa • Analysis of possible socio economic impact • Sampled participants who attended a stakeholders engagement forum • Use of a pre prepared tool to collect data on the possible impacts
7.	Impact on County Revenue	To assess the impact of SGR on the overall county revenue.	• To evaluate the revenue contribution per thematic area • To administer a questionnaire to the county government revenue dept. to collect on revenue collection with the county

Source: Research Data (2019)

7.6 Methodological Pillars of the Analytical Process

In the overall analysis the assessment study applied an impact assessment framework consistent with the main sustainability dimensions of the study (economic and social). In order to meet the objectives of the study, all the main stakeholders were actively involved in the entire process of this study. The study analyzed data emanating from the primary sources (field work and from focus group discussion) and secondary data on revenue collection from the CGM and the industry data from KHFWA.

7.6.1 Economic Analysis

The economic analysis was developed based on the following successive steps:

a. First was the application of gravity and econometric modelling, resulting in quantified volume/cost equivalents that allowed for production of consistent mapping applicable for Economic Impact assessment (EIA);
b. Secondly, the study conducted an EIA analysis which provided the main results at micro and sectorial levels using the predetermined set of economic indicators (some of the data generated and used in the analysis was generated from the focus group discussions).

7.6.2 Social analysis

The focus of the social analysis was geared towards providing a baseline description using domestic or household food resources, working conditions (hours worked, health and safety); psychological well-being (stress levels, happiness, security, family interactions, leisure activities); social services (access to, level of provision); social well-being (attachment to place, access to social networks - often called 'social capital').

The social analysis was implemented in three steps, as follows:

a. **Baseline analysis:** Based on key social indicators, the current social situation was described. This included presenting a description of the baseline (an overview of the current situation without any impact estimations);
b. **Impact analysis:** Based on key results related to social issues and, where possible linking these results to the baseline indicators, this led to the estimation of the impacts;
c. **Focus Group Discussions:** Screening and scoping exercise was conducted based on (i) Identified social issues in the baseline, (ii) Cases of high or unexpected estimations of social changes or (iii) a combination of (i) and (ii). Through the focus group discussions relevant social issues were analyzed deeply, generating further more detailed impact assessment on specific issues.

8.0 SOCIAL IMPACT ASSESSMENT

8.1 Introduction

Socio-economic impact assessment (SEIA) is a useful tool to help understand the potential range of impacts of a proposed change, and the likely responses of those impacted if the change occurs. SEIA is a tool used to guide social and economic sustainable decisions especially through the identification of potential impacts of the proposed project. The primary function of a SEIA study is to identify, predict and quantify where possible the magnitude of impacts, and also evaluate and assess the importance of the identified changes and formulate plans to monitor and mitigate actual changes. This understanding can help design impact mitigation strategies to minimize negative and maximize positive impacts of any change.

It is important to determine not only the full range of impacts, such as changes to levels of income and employment, access to services, quality of life, but also the implications of each particular change. Impacts of a certain proposal or policy are also distinct from, though influenced by, other activities which may be occurring. It is important therefore to identify the key source of impact and to separately identify impacts arising from other sources.

Primary data was collected between 27th August, 2018 and 14th September, 2018 with a further field work review and subsequent verification exercise taking place between 04th February, 2019 and 15th February, 2019 with on port city of Mombasa targeting the specific zoned areas. Five (5) supervisors and twelve (12) enumerators were recruited and trained to undertake the survey assignment distributed among the targeted study regions within the county in the first phase. Data entry was done by two (2) trained data entry clerks into a statistical software package. In addition, the consultants also reviewed literature, particularly published reports and scientific papers including the results of social-economic impact assessment of similar resultant projects and developments.

Figures 8.1 - 8.3 shows some of the enumerators collecting data from roadside businesses truckers, loaders and drivers during field data collection exercise at various locations in Port City of Mombasa.

Figure 8.1. Fieldwork Data Collection

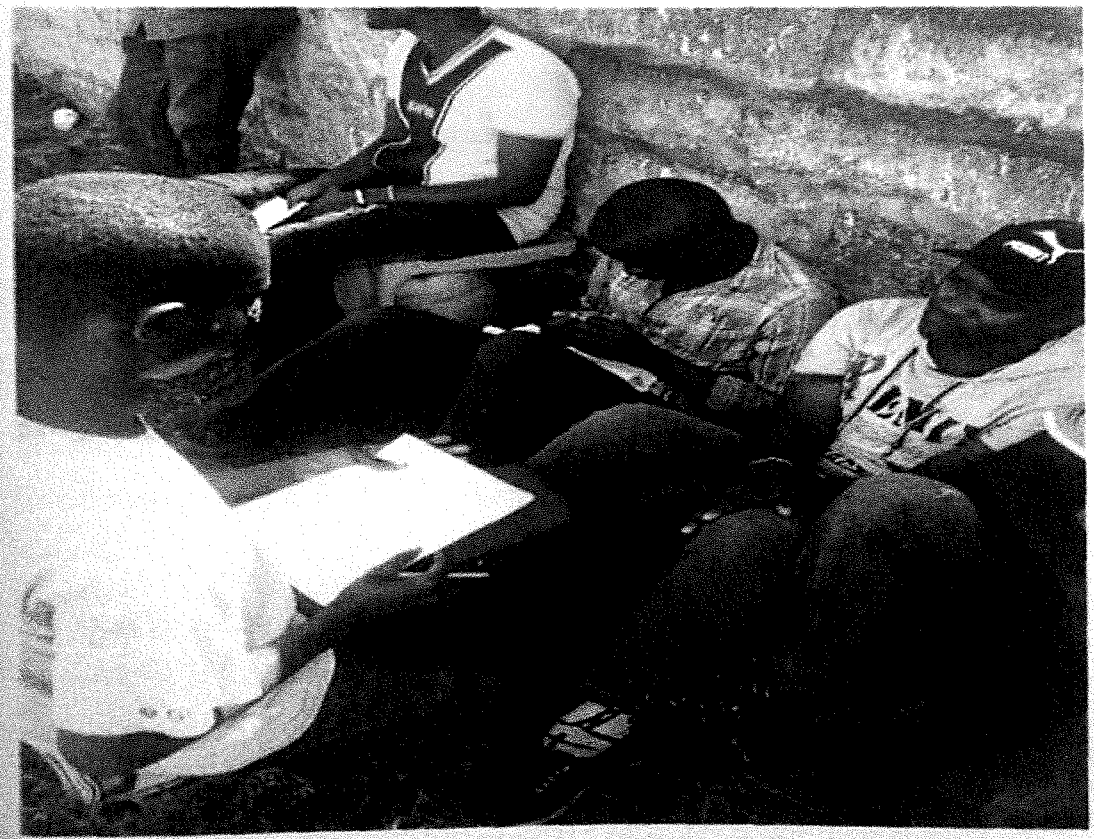

Figure 8.2. Enumerators with a Roadside Business Owner

Figure 8.3. Enumerators with a Roadside Business Owner

Three separate Focus Group Discussions (FDGs) were held with stakeholders from the Kenya International Freight and Warehousing Association (KIFWA), Kenya Transport Association (KTA), Kenya National Chamber of Commerce and Industry (KNCCI), Container Freight Stations and Truckers (CFS/T) and the Executive arm of the County Government of Mombasa (CGM) respectively to augment the findings of quantitative research.

The focus group discussions took place on 9th August, 2018, 16th August, 2018 and 17th August, 2018 at Bahari Beach Hotel in the Port City of Mombasa. Figure 8.4 - 8.7 Shows some of the proceedings during the FGDs.

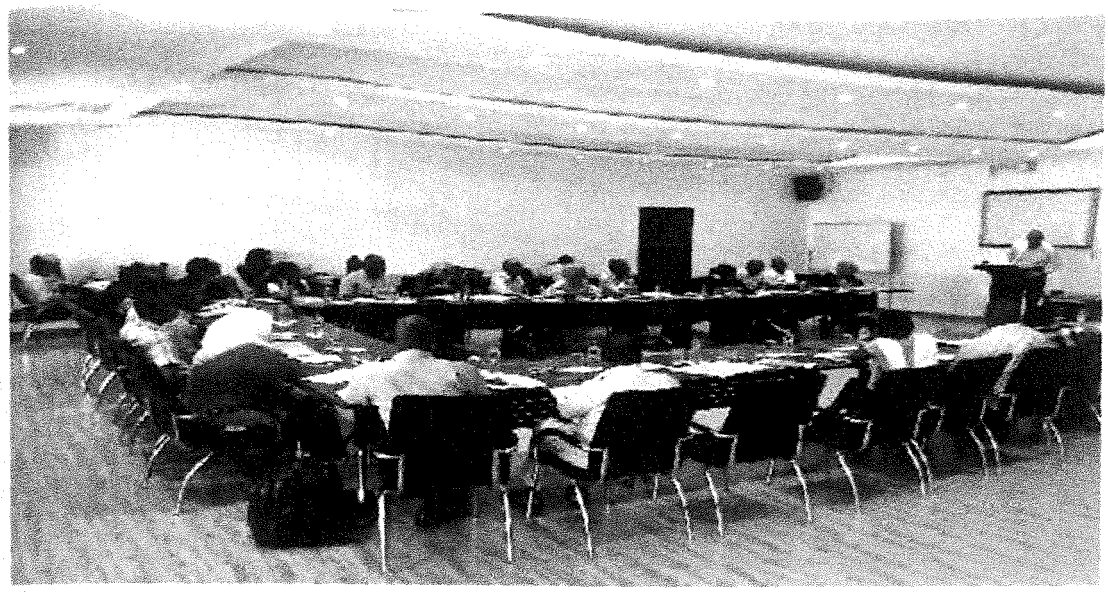

Figure 8.4. Focus group Discussions in Session - CGM

Figure 8.5. Focus group Discussion attendees Group Photo - CGM

Figure 8.6. Focus group Discussions in Session - KTA and Truckers

Figure 8.7. Focus group Discussion Group Photo - KTA and Truckers

Figure 8.8. Focus group Discussions in Session - CFSA/KIFWA and Others

Figure 8.9. Focus group Discussion Group Photo - CFSA/KIFWA

While social impact assessment and economic impact assessment are often undertaken separately and employ specific methods, they are complementary and sometimes overlap. An integrated approach such as was adopted in this assessment study can provide a comprehensive and cost effective outcome, providing information on potential economic impacts as well as important social values attached to the activity which inform likely attitudes and responses to the proposed change. The toolkit approach used in this study emphasizes the importance of both qualitative and quantitative data, however recognizes the difficulty in data collection which can comprehensively cover the relevant issues.

This chapter presents the analysis of the data on social issues and facilitates identification of both their positive and negative impacts subsequent to operationalization of the SGR on the County of Mombasa so far, and also the impacts if/if not the situation continues to exist. Since it can be expected that, apart from investment and operating costs, only few (if any) other impacts are possible to monetize at this stage, it is important to provide qualitative assessments of as many impacts as possible. Of interest is to find out more about the linkages between the research infrastructure (findings) and societal benefits.

The social issues identified are discussed subsequently within two framework areas of FGDs and Field data analysis and these have been collapsed into six themes namely:

a) Employment Opportunities
b) Security Concerns
c) Psychological and Related Issues
d) Breakup of Societal Bonds
e) Health Services in Port City of Mombasa
f) Housing Situation

8.2 Focus Group Assessment on Social Impact

The main purpose of focus group research is to draw upon respondents' attitudes, feelings, beliefs, experiences and reactions in a way which would not be feasible using other methods, for example one-to-one interviewing or questionnaire surveys. Focus groups provide multiple views within a group context and can be particularly useful in exploring the degree of consensus on a given topic or option. Focus groups are a data gathering technique involving organized group discussions with selected individuals, usually six (6) to ten (10) to gain information on their views and experiences of a particular topic.

8.2.1 Employment Opportunities

Stakeholders offered multiple perspectives concerning the link between the directive on the operationalization of the SGR and unemployment levels in the County of Mombasa, both directly and by implication. The directive would lead to job losses both in the formal and informal sectors. The direct reasons for unemployment include "downsizing" and labour mobility.

The operationalization of the SGR has occasioned the relocation of businesses from Port City of Mombasa which has had an almost instant impact on job opportunities. Indirectly, though gradually, services offered by casual workers, internet bureaus, mechanics, spare parts stockists, turn boys, drivers and roadside vendors are starting to collapse, implying huge redundancies.

Specifically, stakeholders from KIFWA, CFS and KTA reported the following issues:

a. There is ongoing retrenchment targeting 60% of the 4000 workers in CFSs in Mombasa;
b. About 100 drivers and several turn boys recognized by the Truckers Association have already been laid off as at the time of the consultation with more to follow if situation was to persist;
c. KIFWA intimated that Clearing and forwarding registered members had reduced in the past year from 600 to 400, thereby potentially indicating reduced job opportunities; and,
d. KTA alluded to significant reduction on the uptake petrol and related products by 30%. This has instigated jobs losses in the related service areas with possible multiplier effect in future.

The FGDs participants reported a picture of the consequences of the evacuation by highlighting on the port activities. It was that out of over 340,000 people who crossed daily to the island from South coast had over the years exhibited a social tendency behavior whereby majority turned to the left from the Ferry headed to areas of Mbaraki, Shimanzi, and High level among others.

However, through the directive this traffic has dropped and there may be need to establish exactly how many people continue to cross on the ferry per day as activities had slowed down to a ***"slump"*** in the last 3-4 months. This is an indicator of the reduced opportunities available in Shimanzi and surrounding areas due to declined economic activities near port.

8.2.2 Security Concerns

The workshop participants during the FGDs were generally of the view that the operationalization of the SGR as a result of leading to increase in unemployment levels is going to resultantly occasion an increase in crime rates. The increase of crime rates was understood from two main dimensions – at the micro level arising out of personal loss, and at a macro level also viewed as the group level are witnessed criminal activities borne out of feelings of continued marginalization.

At the macro level, an upsurge of crime has been observed in residential areas such as Kisauni where most young people who used to work in Port-related activities including drivers and machine operators reside. It was also noted that some people who depended on SGR-related services in Mombasa had taken up small loans which would be difficult to service with reduced activity. The loss of economic livelihoods by young people ***"who must still eat"*** is leading to an upsurge in petty crime like muggings.

At the macro or group level, stakeholders had concerns that the SGR loan was not being proportionately borne by all Kenyans, but instead Mombasa was being pushed to bear the burden. Stakeholders strongly felt that the SGR directive was a continuation of historical injustices and marginalization that the people of the Coast region have been subjected to and has potential in due time to lead to the re-emergence of secession calls. The rising negative sentiment due to loss of jobs would shortly have major security implications. Stakeholders from the CGM also noted that the County has been heavily investing in social welfare programs including sports aimed at keeping youth away from undesirous activities. With reduced revenues, youth who previously participated in sports, and whose livelihoods are gone, are more likely to turn to crime.

8.2.3 Psychological and Related Issues

The participants reported that there are increased incidences of psychological and related issues. Notable was the concerns on high levels of desperation and hopelessness among the youths and within family set ups. ***"Real life depression"*** has increased among young people who are no longer able to support their families. This is most evident among former Makuli (loaders). Stakeholders noted that due to drastic reduction in people's incomes, family budgets inevitably go down.

This is forcing families to and/or to eventually settle for lower rental houses and also face challenges of being able to adequately support their children's education and upkeep. As noted by one stakeholder from the CGM, the current divorce incidents reported within the County are partially attributed to low incomes because the man ***"cannot put food on the table"*** and general low standards of living. Cumulatively, stakeholders were concerned of the inevitable family breakups as a result of financial strain.

8.2.4 Breakup of Societal Bonds

The participating stakeholders noted that Mombasa is a cosmopolitan County with people from all regions. It is essentially ***"the face of Kenya"***. However due to the operationalization of the SGR and subsequent developments, it is anticipated that Kenyans of upcountry origin will have to move to Nairobi and other areas due to lack of opportunities in Mombasa.

Additionally, stakeholders decried the strains on the family especially among children who will have to break away from their normal lives, close friends, school mates and homes they have known all along as their parents relocate. Stakeholders also pointed out the inevitable increase in family break ups because of financial strain.

The other notable concern was on the issues of prostitutions whereby the participants had two perspectives in that some felt this had reduced especially along the roads leading to the Port as people had less disposable income, whereas other felt that low end prostitution has gone up with people trying to gain income by all means especially in the estates.

8.2.5 Health Services in Port City of Mombasa

The county hosts the Coast Level Five Hospital which is a referral facility serving the entire coast region. Other notable private hospitals include the Aga Khan Hospital, the Mombasa Hospital and Pandya Memorial Hospital. Other lower level hospitals include the Tudor and Port Reitz level four hospitals. These are further complemented by fifteen private hospitals, four nursing homes, nine health clinics of which two are public and seven privately managed. There are 27 dispensaries out of which 25 are public and two private. Additionally, there are 106 private clinics, some specializing on particular ailments while others being general clinics.

It was observed that Port City of Mombasa as such therefore bears the ***"huge burden"*** in supporting the other counties namely Kilifi, Kwale and Tana River counties as far as referral cases are concerned. Given that health and its related activities is a fully devolved function, the CGM ends up funding most services from revenues it collects which are being affected by the operationalization of the SGR.

Accordingly the participants indicated that the CGM has ended up ***"carrying a burden that is bigger than us"***. Barring any further funding from the Exchequer it is anticipated that services especially related to health are expected to go down as a result of the operationalization of the SGR.

8.2.6 Housing Situation

The County Government of Mombasa has the responsibility of providing affordable housing to meet the increasing housing needs. To this extend there is increased pressure to rehabilitate the already existing housing units that are low cost and increase the housing units. However, the participants during the focus group discussions observed two aspects related to housing especially with reference to occupation.

First, it was observed that the CGM provides 3000 housing units at affordable rates for residents. It was noted though that with reduced revenues, the CGM may need to increase house rents. This has the potential of burdening already strained residents whose gainful abilities are already compounded by the operationalization of the SGR. Secondly the private developers are also reporting increase in vacancies in terms of occupations of their

houses due to relocations and low spending ability of the populace around the county. The stakeholders' expressed their biggest fear as having a ***"ghost town"*** in the short term because of lack of opportunities. The directive spells the ***"verge death of urbanization"*** in the County.

8.3 Field Data Analysis

Qualitative or quantitative information collected via surveys and/or focus groups is useful to identify the interest groups in which to undertake social and economic activities, the nature and scope of economic and social activities of those directly impacted in associated groupings (allowing a detailed analysis of flow-on social impact and sometimes economic impact, although this approach may not allow impact as a proportion of total regional activity to be identified), key changes occurring in relevant groupings which may make them more or less vulnerable to changes due to altered access to and/or use of the port.

In order to achieve the above objective, the assessment study adopted the use of questionnaires as the preferred instruments for collecting primary data during the field work. Both qualitative and quantitative information and data was collected. Surveys with a more qualitative focus generally seek to obtain more descriptive information through a less structured approach, including the use of open-ended questions. This allows a much broader range of detail to be gathered than surveys where more structured questions are framed to allow numerical coding and description of responses.

Quantitative surveys provide descriptive and analytical statistics to provide general background context and describe a particular situation, but usually little explanation of why the situation has occurred. Qualitative survey results identify key themes among the issues of concern, some of which are able to be quantified.

The instrument used in conducting the primary data from this study in the field targeted three groups namely: trucking firms, roadside businesses (kiosks, small traders and small hotels) and drivers, loaders and other road side business employees. The analysis of the primary data is discussed subsequently in the next section.

8.3.1 Roadside Businesses

For the purposes of this study, a total of 230 questionnaires were distributed to roadside business and only 201 respondents got involved in the actual study. The road side businesses respondents (Kiosks, Small Traders and Small Hotels) were requested to fill in a questionnaire through a research assistant help. The respondents were requested to indicate how they would describe the number of social issues in the society the face of operationalization of SGR in Port City of Mombasa.

The respondents rated the social issues in a scale of 1 – 5 where 5 indicated Best Ever, 4 Good, 3 Somewhat, 2 Worse, 1 Worst Ever. Data on social issues was collected using the roadside businesses instrument to capture and measure the attitudes responds hold on these social issues (unemployment, crime, prostitution, desperation and Hopelessness amongst youth, Drugs and alcohol abuse and family issues). The analysis and presentation of their responses are presented in the following sections

On rating of employment opportunities in Port City of Mombasa since operationalization of SGR in Mombasa (Table 4.1), 47.5 percent of the respondents felt that the situation is "worst ever", whereas 39.3 percent indicated that it is "worse" compared to the situation before. 9.5 percent indicated that employment rate was "good" with another 3.5 percent remaining "neutral"

Table 8.1: Employment Opportunities

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Worst Ever	104	47.5	47.5	47.5
	Worse	86	39.3	39.4	87.2
	Somewhat	16	7.3	7.3	94.5
	Great	12	5.5	5.5	100.0
	Total	218	99.5	100.0	
Missing	System	1	.5		
Total		219	100.0		

Source: Research Data (2019)

When requested to rate the security concerns and crime prevalence in the Port City of Mombasa the respondents indicated that the situation had gotten worse since operationalization of SGR in Port City of Mombasa as shown in Table 8.2.

Table 8.2: Security Situation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Worst Ever	56	25.6	25.7	25.7
	Worse	67	30.6	30.7	56.4
	Somewhat	50	22.8	22.9	79.4
	Good	42	19.2	19.3	98.6
	Best Ever	3	1.4	1.4	100.0
	Total	218	99.5	100.0	
Missing	System	1	.5		
Total		**219**	**100.0**		

Source: Research Data (2019)

From Table 4.2, 25.6 percent of the respondents felt that the security situation was "worst ever" and 30.6 percent of the respondents felt that the security situation was just "worse". 22.94 percent stated that it was "somewhat" the same as before the operationalization of SGR, with a further 19.27 percent indicating that it was "good". Finally 1.38 percent stated that the security situation was "best ever". Cumulatively, the general feeling from the majority of the respondents (56.2 percent) was that the security situation had generally plummeted post operationalization of SGR in Port City of Mombasa.

On social issue of 'prostitution', majority of the respondents (33.8 percent) were "neutral" as to whether the situation has become worse or improved, 32.9% said the situation is "worse" and 21.5 percent stated the prostitution situation is "worst ever" since operationalization of SGR in Port City of Mombasa (Table 4.3). 10.9 percent of the total respondents indicated decrease in prostitution since operationalization of SGR in Port City of Mombasa. The findings here when read with the employment situation findings, one can then say the employment situation has with increasing unemployment has contributed to spike in the prostitution situation within Port City of Mombasa.

Table 8.3: Prostitution Situation Post SGR

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Worst Ever	47	21.5	21.7	21.7
	Worse	72	32.9	33.2	54.8
	Somewhat	74	33.8	34.1	88.9
	Good	22	10.0	10.1	99.1
	Best Ever	2	.9	.9	100.0
	Total	217	99.1	100.0	
Missing	System	2	.9		
Total		**219**	**100.0**		

Source: Research Data (2019)

When requested to rate the levels of desperation and hopelessness amongst the youth in Port City of Mombasa, 45.2 percent of the respondents indicated that the situation is "worse" while 28.8 percent described the situation as "worst ever" since operationalization of SGR in Port City of Mombasa. 19.2 percent were "neutral" and only 4.7 per indicated an improvement in the situation of desperation and hopelessness amongst the youth in Port City of Mombasa. The findings on the issue are presented in Table 8.4.

Table 8.4: Desperation and Hopelessness amongst the Youth

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Worst Ever	63	28.8	29.6	29.6
	Worse	99	45.2	46.5	76.1
	Somewhat	41	18.7	19.2	95.3
	Good	10	4.6	4.7	100.0
	Total	213	97.3	100.0	
Missing	System	6	2.7		
Total		**219**	**100.0**		

Source: Research Data (2019)

Table 8.5 presents the results on analysis of the drug situation in Port City of Mombasa since operationalization of SGR. 34.7 percent of the respondents indicated that drug and alcohol abuse situation was "worst ever" since operationalization of the SGR. 31.1 percent felt that the situation is now "worse" than it was before while 22.8 percent of the respondents were "neutral". 11% of the respondents indicated that the situation had actually improved.

Table 8.5: Drugs and Alcohol Abuse

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Worst Ever	76	34.7	34.9	34.9
	Worse	68	31.1	31.2	66.1
	Somewhat	50	22.8	22.9	89.0
	Good	23	10.5	10.6	99.5
	Best Ever	1	.5	.5	100.0
	Total	218	99.5	100.0	
Missing	System	1	.5		
Total		**219**	**100.0**		

Source: Research Data (2019)

Table 8.6 displays the results of analysis on family stress post SGR operationalization in Port City of Mombasa. 42.5 percent of the respondents indicated that family stress was "worst ever" following operationalization of SGR, while 31.5 percent indicated that it is now "worse". The respondents who were indifferent on whether there was a change in the family stress were 16.4 percent, while 8.3% of the respondents felt that family stress situation had improved.

Table 8.6: Family Stress Post SGR Operationalization

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Worst Ever	93	42.5	43.1	43.1
	Worse	69	31.5	31.9	75.0
	Somewhat	36	16.4	16.7	91.7
	Good	17	7.8	7.9	99.5
	Best Ever	1	.5	.5	100.0
	Total	216	98.6	100.0	
Missing	System	3	1.4		
Total		**219**	**100.0**		

Source: Research Data (2019)

8.3.2 Drivers, Loaders and Roadside Business Employees

During fieldwork, respondents representing the drivers, loaders and roadside business employees were requested to respond to some social issues, just like in the case of roadside businesses. Social issues in this study which included employment opportunities, security concerns and crime prevalence, prostitution, desperation and hopelessness amongst youth, drugs and alcohol abuse and family stress in the society in the advent of operationalization of SGR in Port City of Mombasa were rated on a scale of 1 - 5 where 5 indicated Best-Ever; 4-Good; 3-Somewhat; 2-Worse; 1-Worst Ever.

The results of that analysis are presented in Table 8.7. It shows that 91.3 percent of the respondents indicated that employment situation had gotten "worse" since operationalization of SGR, while only 1 percent felt that it was "good". It was also reported that 6.0 percent of the respondents were neutral. This seems to generally suggest that unemployment could be increasing within the Port City of Mombasa as consequence of job losses occasioned by transfer of cargo to SGR.

Table 8.7: Employment Situation

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Worst Ever	112	55.7	56.6	56.6
	Worse	72	35.8	36.4	92.9
	Somewhat	12	6.0	6.1	99.0
	Good	2	1.0	1.0	100.0
	Total	198	98.5	100.0	
Missing	System	3	1.5		
Total		**201**	**100.0**		

Source: Research Data (2019)

Table 8.8 shows that 47.8 percent of the respondents indicated that security situation had gotten "worse" since operationalization of SGR, while 22.4 were neutral and 28.4 percent indicated an improvement, suggesting that the unemployment occasioned by downsizing could be a contributory factor to the perceived overall deteriorating security situation.

Table 8.8: Crime Rate

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Worst Ever	40	19.9	20.2	20.2
	Worse	56	27.9	28.3	48.5
	Somewhat	45	22.4	22.7	71.2
	Good	53	26.4	26.8	98.0
	Best Ever	4	2.0	2.0	100.0
	Total	198	98.5	100.0	
Missing	System	3	1.5		
Total		**201**	**100.0**		

Source: Research Data (2019)

The drivers, loaders and roadside business employees reported in their response to concerns on prostitution as follows. 66.7 percent of them indicated that prostitution had gotten "worse" since operationalization of SGR, while 17.4 percent were neutral and 23.9

percent felt that there was an improvement (Table 8.9). The escalation of this social challenge could be as consequence of job losses, thus alternative means of survival are being considered.

Table 8.9: Prostitution Levels

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Worst Ever	48	23.9	24.4	24.4
	Worse	66	32.8	33.5	57.9
	Somewhat	35	17.4	17.8	75.6
	Good	48	23.9	24.4	100.0
	Total	197	98.0	100.0	
Missing	System	4	2.0		
Total		**201**	**100.0**		

Source: Research Data (2019)

Table 7.10 shows that 72.7 percent of the respondents felt that desperation and hopelessness had increased amongst the youth while 19.9 percent were neutral with 4.0 percent stating that the situation was good post SGR operationalization in Mombasa. This could be as result of depleted incomes, hence parents may be experiencing challenges to adequately meet social obligations due to their children negative effect.

Table 8.10: Desperation and Hopelessness amongst Youth

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Worst Ever	58	28.9	29.9	29.9
	Worse	88	43.8	45.4	75.3
	Somewhat	40	19.9	20.6	95.9
	Good	8	4.0	4.1	100.0
	Total	194	96.5	100.0	
Missing	System	7	3.5		
Total		**201**	**100.0**		

Source: Research Data, 2019

When asked to respond to rate the situation on drugs and alcohol abuse, majority at 64.7 percent indicated that situation had escalated following operationalization of SGR, while 23.9 percent were neutral. 10.0 percent indicated an improvement as shown in table 8.11.

Table 8.11: Drug and Alcohol Abuse

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Worst Ever	71	35.3	35.9	35.9
	Worse	59	29.4	29.8	65.7
	Somewhat	48	23.9	24.2	89.9
	Good	19	9.5	9.6	99.5
	Best Ever	1	.5	.5	100.0
	Total	198	98.5	100.0	
Missing	System	3	1.5		
Total		**201**	**100.0**		

Source: Research Data (2019)

On family stress post SGR operationalization in Port City of Mombasa, majority of the respondents 77.7 percent indicated that family stress levels had gotten worse on operationalization SGR (Table 8.12). 14.4 percent were indifferent and 6.5 felt that there was an improvement. Again this could be consequences of depleted income due to job losses.

Table 8.12: Family Stress

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Worst Ever	91	45.3	46.0	46.0
	Worse	65	32.3	32.8	78.8
	Somewhat	29	14.4	14.6	93.4
	Good	12	6.0	6.1	99.5
	Best Ever	1	.5	.5	100.0
	Total	198	98.5	100.0	
Missing	System	3	1.5		
Total		**201**	**100.0**		

Source: Research Data (2019)

9.0 ECONOMIC IMPACT ASSESSMENT

9.1 Introduction

An economic impact analysis (EIA) examines the effect of an event on the economy in a specified area, ranging from a single neighborhood to the entire globe. It usually measures changes in business revenue, business profits, personal wages, and/or jobs. The economic event analyzed can include implementation of a new policy or project, or may simply be the presence of a business or organization. An economic impact analysis is commonly conducted when there is public concern about the potential impacts of a proposed project or policy (Glen & Weisbrod, 1997).

An economic impact analysis typically measures or estimates the change in economic activity between two scenarios, one assuming the economic event occurs, and one assuming it does not occur (which is referred to as the counterfactual case). This can be accomplished either before or after the event (ex ante or ex post).

Each impact can be decomposed into different components, depending on the effect that caused the impact. *Direct effects* are the results of the money initially spent in the study region by the business or organization being studied. This includes money spent to pay for salaries, supplies, raw materials, and operating expenses. The direct effects from the initial spending creates additional activity in the local economy. *Indirect effects* are the results of business-to-business transactions indirectly caused by the direct effects. Businesses initially benefiting from the direct effects will subsequently increase spending at other local businesses. The indirect effect is a measure of this increase in business-to-business activity (not including the initial round of spending, which is included in the direct effects).

Induced effects are the results of increased personal income caused by the direct and indirect effects. Businesses experiencing increased revenue from the direct and indirect effects will subsequently increase payroll expenditures (by hiring more employees, increasing payroll hours, raising salaries, etc.). Households will, in turn, increase spending at local businesses. The induced effect is a measure of this increase in household-to-business activity.

Finally, *dynamic effects* are caused by geographic shifts over time in populations and businesses. The total economic impact of the introduction of a proposed change is the sum of direct effects and the flow on effects to other sectors of the regional economy. Flow-on effects can be divided into two components: indirect (production) and induced (consumption) effects.

9.2 Focus Groups Assessment on Economic Impact

Three separate Focus Group Discussions were conducted in a Mombasa Hotel with stakeholders from the Kenya International Freight and Warehousing Association (KIFWA), Container Freight Stations (CFS), Kenya National Chamber of Commerce and Industry (KNCCI), Kenya Truckers Association (KTA) and the County Government of Mombasa (CGM).

The participating stakeholders presented diverse perspectives concerning the implications of the directive on evacuation of unallocated cargo to the Inland Container Depot in Nairobi which followed the operationalization of the SGR. The Stakeholders' overwhelming negative perception of the directive was borne of three concerns:

First, the stakeholders reported that they had no prior knowledge before the directive was given. The general expression of the participants was that no meaningful engagement was undertaken before the directive, with some of the participants indicating that what they knew about the directive was only to the extent of the reports on media.

Secondly, they felt that it was the move was unfair, intimidating and not business friendly since it deviated from the willing buyer-willing seller model. Indeed one participant was quoted as saying;

"The directive is unfair and beats the principal of competition; the clients should be allowed to choose the best method of transportation".

Finally, whereas the initial directive was on specific cargo, it was later varied to cover all unallocated cargo destined for upcountry. There was therefore concerns as to the true meaning at the time of ***"unallocated cargo"*** with some participants expressing frustrations

that the directive was meant to facilitate payments of the loans for the SGR project at the expense of the port community members. Discussions centered on the extent to which stakeholders expected the directive to impact the County and region economically. The findings indicate more negative than positive perceptions of the directive.

Five themes that are discussed in the ensuing sections emerged out the analysis of the FGDs on the economic impact of the operationalization of the SGR on the Port City of Mombasa. These included;

1) Business Growth for stakeholders (Profits)
2) County and Regional Business Growth (Revenue)
3) Job Implications (Personal gains)
4) Financial Obligations on the County Government
5) Future Prospects

9.2.1 Business Growth for Stakeholders

Participants noted that one of the most immediate and direct effects of the operationalization of the SGR in Port City of Mombasa was drastic reduction in business. For instance, stakeholders from KIFWA noted that petrol vendors had reported reduction in sales volumes by 30%. This had severely impacted on the profits of the individual members of KIFWA. Additionally, CFS intimated that scaling down of warehousing was unavoidable with the expected relocation of many businesses to Nairobi, and the subsequent reduction of cargo volumes delivered to warehouses.

Further deliberations with participants representing the stakeholders from KIFWA, CFS and KTA indicated that poor business growth was due to two major underlying reasons. First, the directive and operationalization of SGR had increased the cost of doing business due to excessive demurrage, logistical challenges and delays in accessing cargo. It was noted that the cost of ferrying a container from Mombasa to Nairobi had increased. The high cost of business was attributed to:

i. The capacity to handle the delivered volumes at the ICD was understated, thus the facilities at the depot are currently overstretched.

ii. Management and return of empty containers is a nightmare to industry players. Their handling is poorly coordinated resulting in huge demurrage charges that only benefit shipping lines.

iii. The problem of container transfers for misdirected cargo that is initially destined for Mombasa but ferried to Nairobi increases cost to importers.

iv. Delays at ICD that have resulted in slow movement of cargo. It was pointed out that normally, several trains are held at ICD awaiting discharge, resulting in what industry refers to as **"train waiters"**. Whereas the maximum free time allowed at ICD is 14 days, the average dwell time is upwards of 14 days. This state has resulted to increased cost to importers, increased demurrage to shippers as well as increased customs warehouse rent.

Secondly, stakeholders pointed out that there is insufficient cargo at the Port of Mombasa to satisfy the capacities of both SGR and road transporters. Consequently, the directive is viewed as unfair competition by a government monopoly; and an attempt at unfair competition by the Government.

Stakeholders were of the opinion that the directive was gradually affecting other sectors, and would manifest on a larger scale in the middle and long term. The hotel sector is anticipated to experience reduction as importers may not need to travel to Mombasa to follow up on their cargo. Currently, food vendors are experiencing a slump in business because of reduced port-related activities. Real estate business would decline due to relocation of business. For instance, it was pointed out that Cannon Towers, a once vibrant office block is already experiencing low occupancy and reduced activity.

It is noteworthy to note that this development have decomposed economic impacts on the activities of the County Government of Mombasa at all the four levels of direct, indirect, induced and dynamic impacts.

9.2.2 County and Regional Business Growth

Through Flow-on effects that is indirect effects (production) and induced (consumption) effects, both the County Government and the regional devolved units are expected to experience some economic impacts. The participants in their deliberations registered both potential positive and negative economic impacts. Some of the key highlights from content analysis of the FGDs are as subsequently discussed.

Decongestion and roads maintenance: Participants from KIFWA, CFS and KTA all agreed that the operationalization of the SGR and the directive therein would help decongest the Port City of Mombasa and in the long term mitigate the cost of roads maintenance. Separately, KIFWA stakeholders suggested that the directive would boost business by:

a) Increasing the speed of evacuation of cargo because SGR takes an average of 8 hours from Mombasa to ICD;
b) Reducing trucks on the roads with resulting decline in road accidents;
c) Providing a safe and secure method of cargo evacuation from Mombasa to Nairobi.

Tourism: The participants were of the general opinion that the operationalization of the SGR with specific reference to passenger trains was likely to promote tourism through fast and cost-effective carriage of passengers; and in the long term increase environmental protection through reduction in Greenhouse Gas Emissions. Similarly, participants expressed optimism that the SGR will establishing a safe, rapid and comfortable traveling channel, raising the tourism service level as well as promoting the rapid development of the tourism industry in the region and along the line. The tourism sector will thus be positively impacted in the short and long term as a result of improved passenger connectivity and volumes via SGR.

Indirect benefits: Additionally, the CGM stakeholders were hopeful that the resulting improved efficiency in operations at the Port of Mombasa may only have indirect benefits to the CGM because there is currently no revenue sharing arrangement between the parties. However, they remained pessimistic on any direct economic benefits that would accrue from the SGR directive as all cargo will be transited to Nairobi. To this extend the County Government of Mombasa will have to consider initiating policy frameworks so as to benefit from the proceeds of the port directly.

Manufacturing: In the manufacturing, the participants observed that a positive impact was expected where operationalization of the SGR will facilitate access to markets in the hinterland. However, should some manufacturers opt to reposition closer to sources of raw materials and markets, reduced activity will be seen in the service oriented industries in Mombasa.

9.2.3 Job Implications

Participants and stakeholders across the board were in agreement that the operationalization of the SGR and directive had already cost jobs and the effect would multiply in the middle and long term. The enforcement of the directive would lead to job losses both directly and indirectly. It was noted that "downsizing" and labour mobility would be the primary reasons. All stakeholders observed that such job losses would be occasioned by the transfer of clearing and forwarding businesses to Nairobi.

Indirectly, services offered by casual workers, internet bureaus, mechanics, spare parts stockists, turn boys, drivers and roadside vendors are becoming increasingly untenable. In addition, reduction in truckers will negatively impact roadside businesses including food vendors. Participants observed that in the short term that up to 60% of the 4000 workers employed in 20 CFSs in Mombasa will be sent home in the ongoing retrenchment. It was also reported that about 100 drivers and an unknown number of turn boys recognized by the Kenya Truckers Association (KTA) had already lost their jobs. Additionally, clearing and forwarding (C&F) stakeholders reported a drastic reduction in membership from 600 to 400 in the past year, indicating job losses.

Stakeholders from the CGM were clear that the reduction of revenue at the CGM occasioned by relocation of business would also lead to further job losses within the County. In the SMEEs sector, loss of revenue is already being experienced in the short term with the possibility of closure in the long term. From the foregoing, it is clear that all stakeholders were in agreement that job opportunities will reduce due to ongoing retrenchment and the effect will be felt across gender.

There is a real likelihood of collective redundancy due to relocation of business and staff downsizing. It was also noted that wages are likely to decline due to the expected workforce glut and ensuing low demand for labour; and direct wage cuts resulting from constrained activity and low cargo volumes across all sectors are inevitable.

9.2.4 Financial Obligations

The County Government of Mombasa is by law expected to mobilize resources for its operations. Several strategies are ear-marked in the CIDP to be employed to raise the revenue for the County to ensure that its plan implemented; The County Government responsibilities in Public Finance is guided by Section 102(1) and 107 of the Public Finance Management Act which stipulates that each County Government shall ensure adherence to (a) The principles of public finance set out in Chapter Twelve of the Constitution; (b) The fiscal responsibility principles provided in section 107 of the PFM Act.

Based on the above requirements, participants and stakeholders from the CGM lamented that one of the most immediate impacts of the directive was reduced revenue to the CGM. This came in the form of reduced rate payers in the year (land rates and Single Business Permits) and closure of businesses. The decrease was regarded as very significant.

It was observed that reduction in revenue collected from the Single Business Permits and other levies would in effect reduce overall revenue collected by the CGM. For instance, the CGM was unable to collect the Ksh. 1.5 Billion already budgeted for in the 2018/19 financial year partially as a result of reduced activities for firms repositioning in preparation of SGR operationalization. Additionally, reduced liquidity arising out of forced redundancies among CFS and transporters would directly slow down economic activity in the County.

9.2.5 Future prospects

The FGDs participants and stakeholders went out of their way to indicate that if strong mitigation measures are not put in place then a bleak future for business, to the extent that the very existence of Mombasa as a city will be under threat. In line with these thoughts the following specific aspects emerged and were deliberated upon:

9.2.5.1 Divesting

It was noted that there is a possibility of divestiture on the business that are being undertaken by the participants who represented varied stakeholders in the FGDs. This however was viewed as likely to depend on emerging new business opportunities that are expected to arise in the long term.

Stakeholders representing the CFS and the transporters were not committal on divestiture as they felt there was room for engagement to allow for a market-driven business environment where importers are allowed to choose their mode of delivery and handling of cargo. Truckers also noted that they would be constrained to divest in the short term due to financing commitments thereby indicating fears of foreclosure.

9.2.5.2 Downsizing

All the participants and stakeholders were of the opinion that firms were already restructuring in view of the reduced levels of business operations and cargo volumes in the short term. In the long term, they observed that collective redundancy, transfer of workers to other companies or service providers and early retirement were expected. This they attributed to operationalization of the SGR and directive which requires that cargo be transferred directly from the Port of Mombasa to the ICD.

Logistics, CFSs and warehousing sectors were projected to experience redundancies both in invested assets and human capital. In aligning with the new dynamics, the participants indicated that companies and businesses operating within their spaces will have no option but to retrench, divest or relocate with implications on employment opportunities in Port City of Mombasa.

9.2.5.3 Relocation of Warehousing

Participants and stakeholders from CFS and the transporters association noted that their members are less optimistic of the future. On the one hand, the members who felt that they have the capacity in terms of resources were categorical that they are considering relocation of their businesses to Nairobi.

It is worth noting that there were also participants who accepted that they had the ability to move their businesses to Nairobi, but observed that the cost of doing business in Nairobi is generally higher than in Mombasa and therefore in their case their direct options being explored currently included divesture or wind up.

Additionally, they also observed that the cost of relocation is high due to high rental rates and cost of land in Nairobi, and so far they noted that there has been no incentive offer.

9.2.5.4 Reduced Activities

During the focus group discussions, KIFWA, KTA and CFS stakeholders noted that evidence already existed whereby companies are experiencing a significant downturn with the increased reduction in activities at the port. Several participants confirmed that they had started the process of downsizing and even options to close down their operations in the long term. This is supported by sentiments that most CFSs had recorded significant reduction in their operations and a good number of them shared that their operations had virtually stalled due to lack of cargo.

Maritime logistics including warehousing, CFSs and clearing and forwarding sectors players reported that the experience of reduced activity in the short term spelt a complete closure and divestiture in the long term option imminently. It is likely that companies will tend towards downsizing and rightsizing to align to the new reality occasioned by SGR directive. With this potential attribute of reduced activities the FGDs participants strongly agreed that the biggest long term blow to Mombasa due to relocation of businesses to Nairobi would be the impact on investor confidence. This would ultimately inhibit future investment in the City and generate ripple effects on the functions and mandate of the County Government of Mombasa.

9.2.5.5 "Flow-on" for CGM and other Stakeholders in Port City of Mombasa

There is expected overall revenue reduction for the CGM both in Single Business Permits and other licenses. There is also the likelihood of reducing tariffs to attract business thus further reducing revenues in the short term for the County Government of Mombasa. The cumulative effect of these moves is the inability to execute the CGM's mandate. The resultant effect is that CGM may also experience failure in meetings its staff concerns

which may eventually lead to increased industrial actions or retrenchments worsening the level of unemployment in the County of Mombasa There was also the fear that increased rent defaults are likely to be observed within the 3000 housing units it owns forcing the CGM to consider lowering of their current rental fees. This means that the level of living will deteriorate worsening the situation for the residents in Port City of Mombasa.

Although participants observed that for the tea auction, using the SGR to transport tea to Mombasa potent a positive impact due to improved efficiency, there are certain flips to it that may end up being negative in the long run. It was for instance pointed out that there are suggestions on the possibility of relocating the Tea Auction Centre upcountry. The resultant effect of this possibility is that if the tea is ferried by SGR directly to the Port of Mombasa then there will be no direct benefit to the CGM.

Participants also noted that increased usage of SGR will impact the County of Mombasa along the food chain distribution channels especially relative to the markets. Mombasa is historically known for its famous trading at Kongowea and Mackinnon Market (Marikiti), it is envisaged that the operationalization of SGR may induce reduced activity in both the short and long term due to constricted cash flows and low disposable cash among residents. This has potential impacts on the operations of the County Government in relations to the collection of revenue and final mandate of delivery to the citizenry.

Lastly the participants observed that most trucks are secured on credit. The resultant economic impact of this is likely to be seen in the Banking and other financial institutions especially in the lending business as their portfolio of Non-Performing Loans (NPLs) is envisaged to increase with serious effects on commercial banks. This was also expected to affect insurance agencies and forex bureaus.

9.3 Field Data Analysis

The study targeted an initial sample size of 500 respondents distributed between road truckers, drivers and loaders, and other road side businesses within the County of Mombasa and the relevant operations zones. At completion of the data collection exercise, 452 respondents completed the questionnaires that were administered representing a response rate of 90.4 percent as presented in table 9.1.

Table 9.1: Response Rate

Sector	Target Respondents	Actual Respondents
Trucking firms	40	32
Road Side Businesses	230	219
Drivers, Loaders, Mechanics	230	201
Total	**500**	**452**

Source: Research Data (2019)

9.4 Trucking Firms Data Analysis

For the purposes of this study, a sample of 40 trucking firms was targeted with questionnaires but only 32 of them filled and returned. The questionnaire was custom made to collect a varied degree of data in order to address the objectives of this study. The questionnaire had a total of 14 statements and the results of the analysis of the responses generated are presented in this section.

9.4.1 Truckers Years of Operation

When requested to indicate the year their trucking firms started operating, it was established that majority of the trucking companies representing 44.44 percent were in operation between 13-18 years, whereas, 33.33 percent of the trucking firms were in operation for more than 18 years as shown in figure 4.2. Averagely, 11.11% of the sampled firms were in operation between 8-12 years and a further 7.41 per-cent have been in operation for the last 3-7 years. Only a few trucking firms (less than 3%) of the trucking firms were relatively new with less than three years of operations.

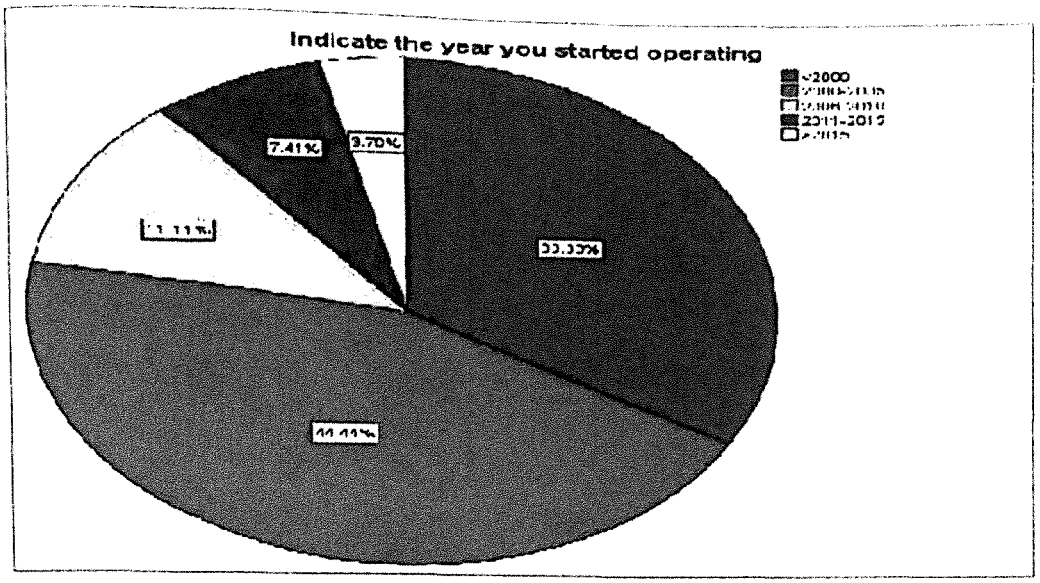

Figure 9.1. Trucking Firms Years of Operation

Source: Research Data (2019)

9.4.2 Truckers Number of Employees

The respondents in trucking firms were requested to state the number of employees recruited in their firms. Combining the trucking firms that employs 0-50 and those with 51-100 employees resulted with 58.62 percent who are the majority, while 41.38 percent indicated that they employed more than 100 employees, suggesting that most companies operate fairly small fleets. Going by measure of the number of employees, it also confirms that most of the trucking firm can be classified as small and medium sized companies.

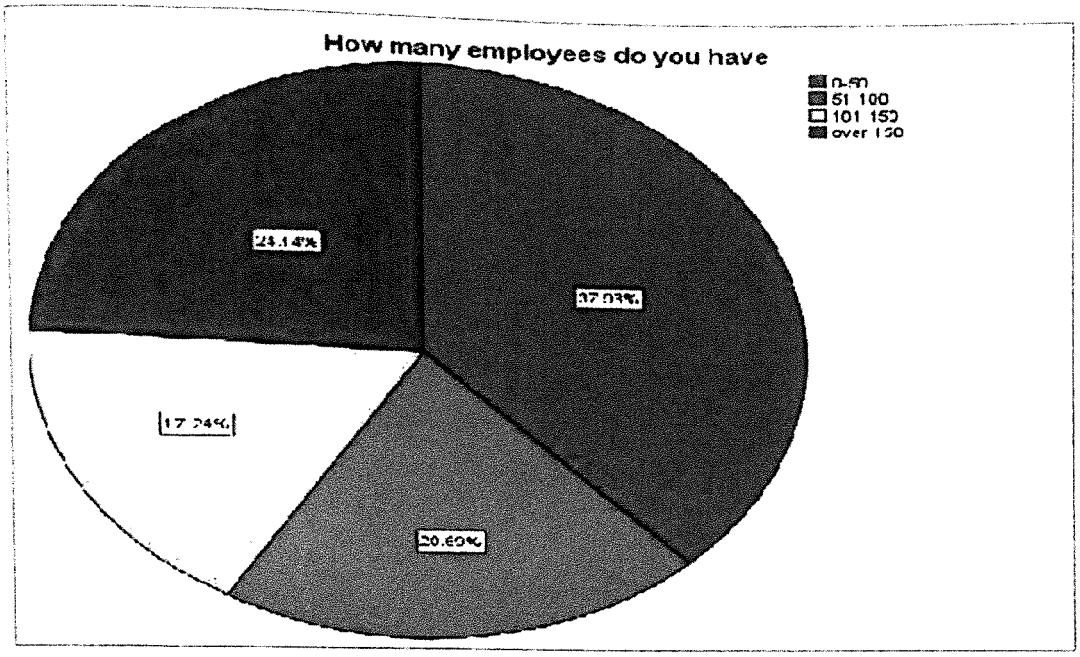

Figure 9.2. Truckers Number of Employees

Source: Research Data (2019)

9.4.3 Comparative Number of Employees

According to results in table 9.2, only 25 percent of the trucking companies in Mombasa currently employee more than 100 employees. The remaining 75 percent indicate they have less than 100 employees.

Table 9.2: Number of Persons Currently Employed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-20	7	21.9	25.9	25.9
	21-40	2	6.3	7.4	33.3
	41-60	4	12.5	14.8	48.1
	61 - 80	1	3.1	3.7	51.9
	81-100	5	15.6	18.5	70.4
	>100	8	25.0	29.6	100.0
	Total	27	84.4	100.0	
Missing	System	5	15.6		
Total		**32**	**100.0**		

Source: Research Data (2019)

In order to establish if the operationalization of the SGR has had any impact on the levels of employment by the trucking companies in the county of Mombasa, the respondents were asked to state the levels of employment within the same period a year prior to the period of data collection. The results are in table 9.3 represents that data which is reflective of period in the prior year.

40.6 percent respondents indicated that they had more than 100 employees whereas 59.4 percent indicated that they had less than 100 employee, suggesting a significant reduction on number of employees by 15.6 percentage points (from 40.6 to 25 percent for more than 100 persons employed).

Table 9.3: Number of Persons Currently Employed (A Year ago)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-20	6	18.8	22.2	22.2
	21-40	3	9.4	11.1	33.3
	41-60	1	3.1	3.7	37.0
	61 - 80	2	6.3	7.4	44.4
	81-100	2	6.3	7.4	51.9
	>100	13	40.6	48.1	100.0
	Total	27	84.4	100.0	
Missing	System	5	15.6		
Total		**32**	**100.0**		

Source: Research Data (2019)

9.4.4 Associations to which Trucking Firms Belong

When requested to state their membership in existing associations the respondents provided the following information; KTA (28 percent), KIFWA (16 percent), Mombasa Chamber of Commerce – MCC (9%) and Shippers Council (3 percent) as shown in Figure 9.3. Those who did not belong any association were 44 percent, shunning away from associations out of a perception that they did not champion their welfare or their subscription was not put into appropriate use.

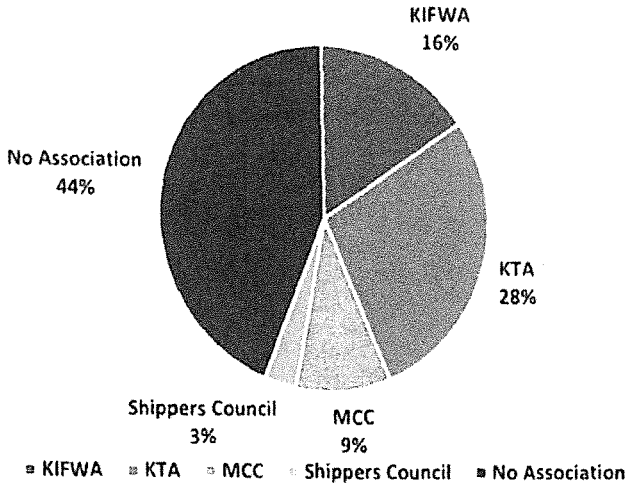

Figure 9.3. Trucking Firms Membership in Associations

Source: Research Data (2019)

Figure 9.4 displays the volumes transported by the truck companies categorized into imports and exports during the period that the assessment was undertaken. Kenya recorded the highest number of fleets Uganda was second. Apart from Rwanda, all other regional countries did not report any fleet.

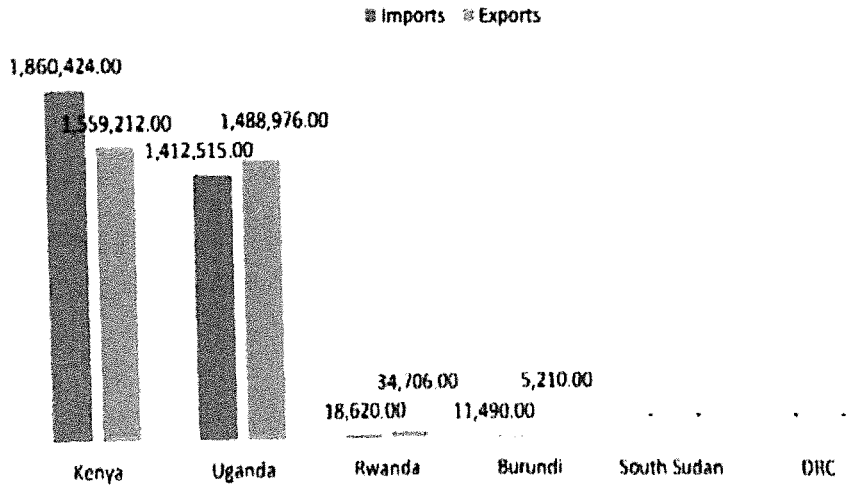

Figure 9.4. Cargo Volumes to/from Various Destinations

Source: Research Data (2019)

9.4.5 Number of Containers Transported

Figure 9.5 shows that for the last six (6) months 59.1 percent of the trucking firms stated that they transported less than 1000 containers whereas 40.9 percent indicated they ferried more than 1000 containers. The results of the containers transported in a similar period in the previous year indicate that 45.46 percent of the respondents transported less than 1000 containers whereas more than 54.54 percent transported more than 1000 containers, suggesting that comparatively there has been a significant reduction on the number of containers ferried with a variation of 25 percent (from 54.54 to 40.9 percent).

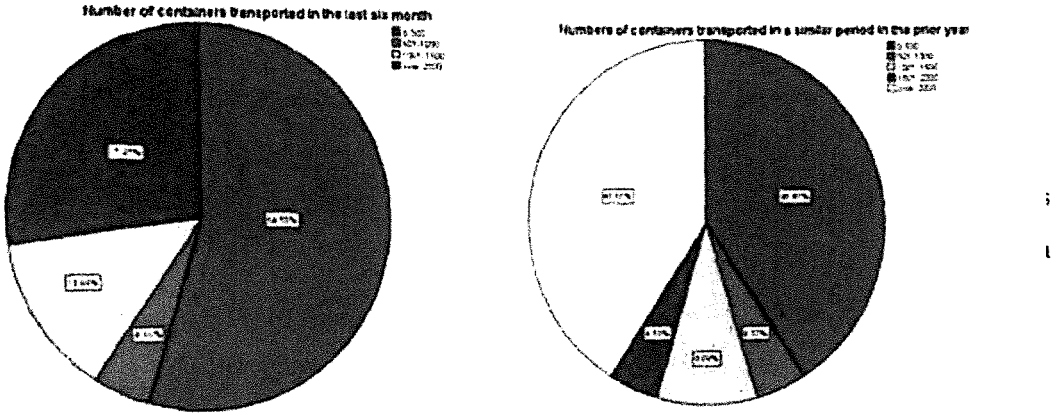

Figure 9.5. Number of Containers Transported

Source: Research Data (2019)

5.4.6 No of Trucks in Operation

When asked to confirm the number of trucks currently operating in their firms, 20.8 percent indicated that they had more than 100 trucks whereas 79.2 percent indicated they had less than 100 trucks as indicated in table 9.4.

Table 9.4: Trucks Currently in Operation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-20	6	18.8	25.0	25.0
	21-40	4	12.5	16.7	41.7
	41-60	5	15.6	20.8	62.5
	61 - 80	4	12.5	16.7	79.2
	>100	5	15.6	20.8	100.0
	Total	24	75.0	100.0	
Missing	System	8	25.0		
Total		**32**	**100.0**		

Source: Research Data (2019)

The number of trucks owned was then compared to the period a year before in order to establish the trends. When compared to a year ago (Table 9.5), there was a decrease of 8.4 percent of the respondents who indicated that they had more than 100 trucks. On the other hand, there is now a growth of the truckers with <40 trucks by 4.2 percent. There is evidence from the results to suggest that progressively the number of trucks owned is declining and the percentage of truckers with over 100 trucks has reduced by 8.4 percentage points.

Table 9.5: Trucks in Operation (Year Ago)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-20	6	18.8	25.0	25.0
	21-40	3	9.4	12.5	37.5
	41-60	2	6.3	8.3	45.8
	61 - 80	6	18.8	25.0	70.8
	>100	7	21.9	29.2	100.0
	Total	24	75.0	100.0	
Missing	System	8	25.0		
Total		**32**	**100.0**		

Source: Research Data (2019)

9.4.7 Loan Servicing by Trucking Firms

A large percentage of the respondents (89.29 percent) indicated that some of their trucks had been purchased on loan while only 10.71 percent of the respondents did not purchase any of their trucks on loans (Figure 9.6). When asked if they were up to date with their loan obligations, 53.57 percent of the respondents indicated that they were in arrears while 46.43 percent responded that they were up to date. Failure to keep up with loan obligations could be an indication of distressed businesses due to decreased activity.

This results partially offer explanations to the reasons why some of the truckers have been having the number of their trucks declining. In a separate report the Central Bank of Kenya (CBK, 2019) and the Association of Auctioneers have reported increase in rate of default

"The ratio of gross non-performing loans to gross loans increased from 9.5 percent in March to 9.91 percent in June. The increase in the gross non-performing loans was mainly attributable to a challenging business environment,"

(Credit Survey Report - CBK, 2019)

It is worth noting that the acreage of published auctions seem to point increasing to heavy trucks and land especially owned by trucks and CFS.

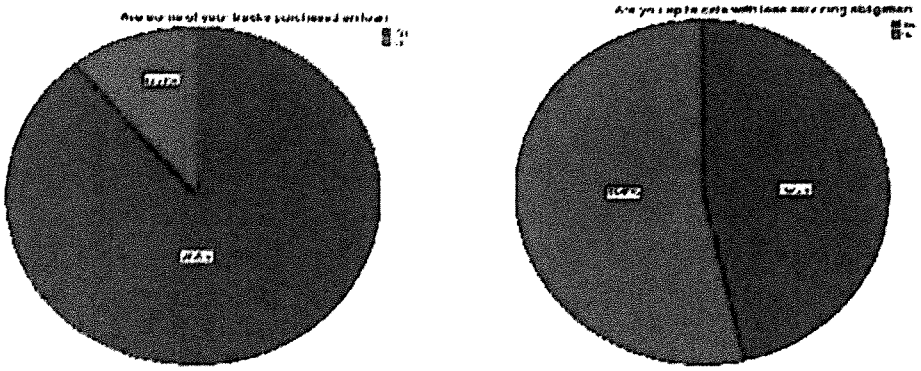

Figure 9.6. Loan Servicing by Trucking Firms

Source: Research Data (2019)

9.4.8 Contracting with Third Party Firms

The respondents were asked to indicate if they had any contractual engagement in operating their businesses. Majority of the respondents (72 percent) indicated that they had not entered into any contract with freight forwarders while 28 percent indicated that they

had existing contractual agreements (Figure 9.7). With respect to the Shipping lines, 68 percent of the respondents affirmed existence of contracts while 32 percent reported to the negative.

88 percent of the responded that they had not entered into any contract with cargo owners, while 12 percent indicated that they had. The firm contracts tend to guarantee cargo availability but the analysis shows that only a small proportion of the truckers have entered into contracts, consequently as SGR cargo uptake continues to increase, the truckers will experience decreased volumes of business.

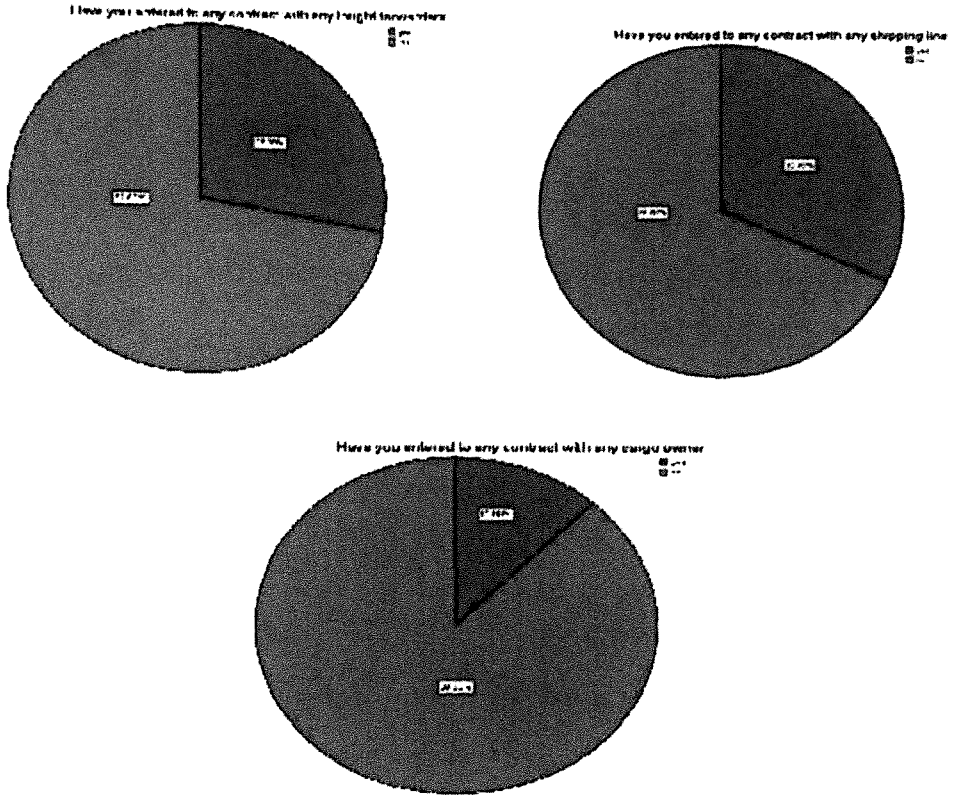

Figure 9.7. Contracting with Third Party Firms

Source: Research Data (2019)

9.4.9 Opportunities for Collaboration with SGR

When asked whether the respondents saw any possible opportunities for collaboration with the SGR, 72.41 percent indicated that there were opportunities while 27.59 percent did not see any opportunities as shown in Figure 9.8. There is therefore scope to explore the nature of opportunities for collaboration to ensure that all stakeholders interact to support SGR for the mutual benefits of all parties in the logistics.

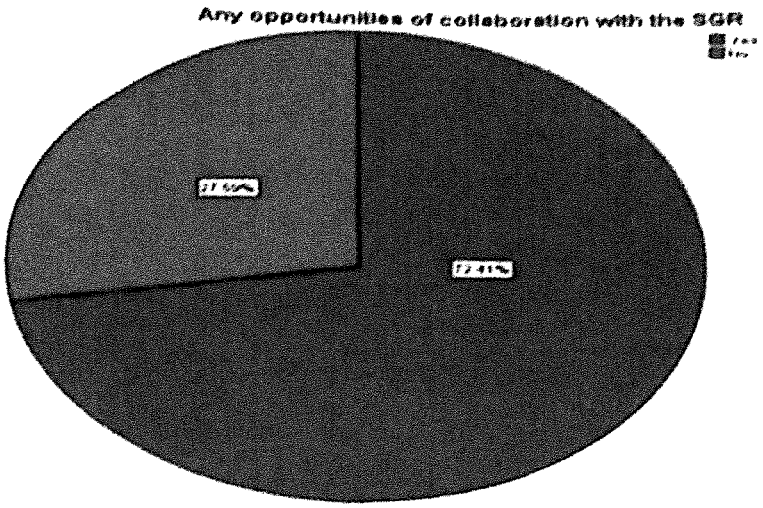

Figure 9.8. Opportunity for Collaboration with SGR

Source: Research Data (2019)

9.4.10 Widening the Market for Road and other Modes of Transport

The respondents were requested to state whether EAC and other regional Free Trade Areas (FTAs) provided an opportunity to widen the market for the road and other modes of transport in the Eastern Africa region. Majority of them (83.9 percent) felt that the EAC and FTA would widen the market for road and other modes of transport in the region, hence efforts to enhance regional market integration will go a long way to support the transport sector (Figure 9.9). Only 16.13 percent thought otherwise.

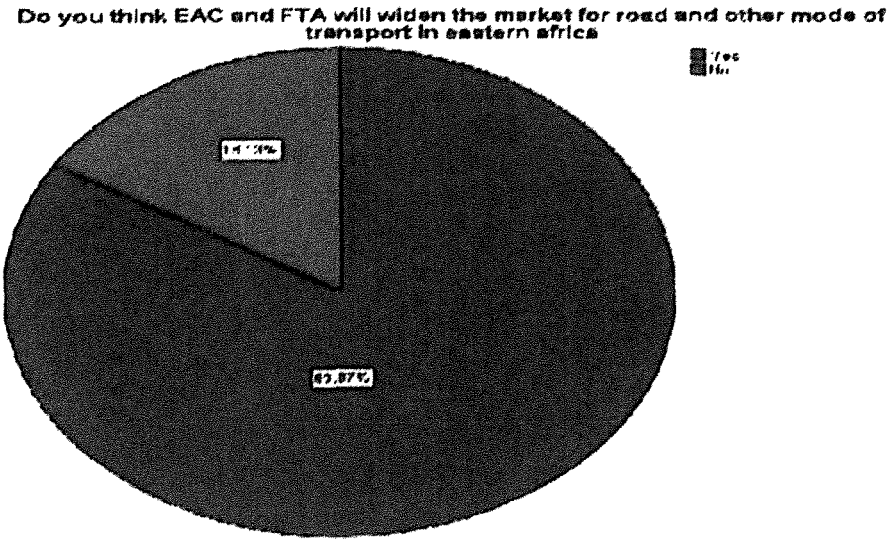

Figure 9.9. Widening of Market for Road Transport

Source: Research Data (2019)

9.5 Roadside Businesses Data Analysis

For the purposes of this study, a total of 230 questionnaires were distributed to roadside businesses and 219 responded to and returned. The road side businesses respondents were requested to fill in a questionnaire which comprised of 17 statements in relation to economic analysis of roadside businesses.

9.5.1 Years of Roadside Businesses Operation

The respondents were requested to state the number of years their businesses have been in operation and majority of them (68.22 percent) indicated that their business have been in operation for 7 years since 2011 (Figure 9.10). 23.84 percent of the respondents stated that they started their businesses in the period 2000-2010, and only 7.94 percent of the business have been operation for more than 18 years, suggesting a high failure rate of roadside businesses.

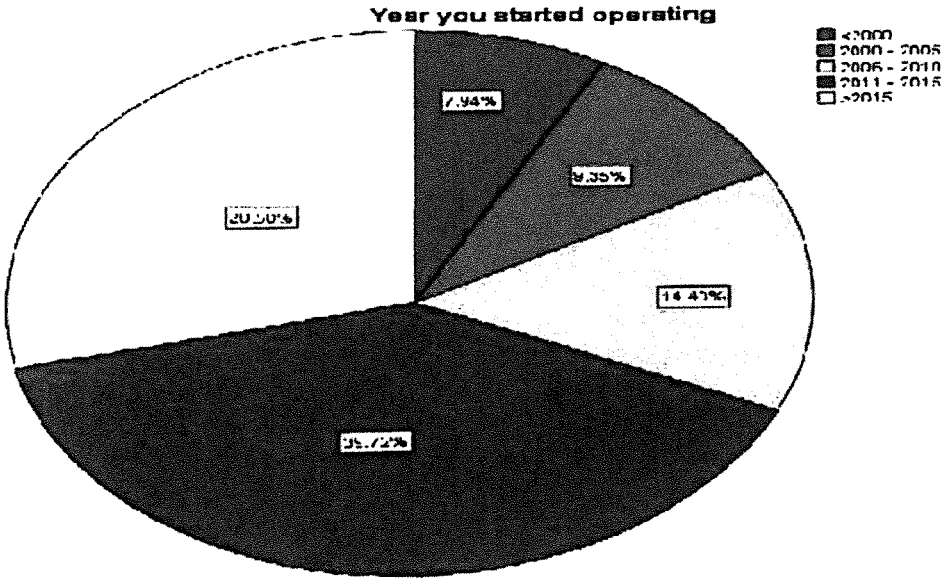

Figure 9.10. Years of Operation

Source: Research Data (2019)

9.5.2 Number Employees by Roadside Businesses

When requested to state the number of workers they employed in their roadside businesses, 90 percent of the respondents indicated that they employed less than 5 persons while only 3.4 percent employ more than 6 persons (Table 9.6). The business are usually run at small scale, and more like family ventures. They qualify based on numbers of employees to be classified as micro and small businesses.

Table 9.6: Number of Employees by Roadside Businesses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 - 5	197	90.0	96.6	96.6
	6 - 10	7	3.2	3.4	100.0
	Total	204	93.2	100.0	
Missing	System	15	6.8		
Total		**219**	**100.0**		

Source: Research Data (2019)

9.5.3 Percentage Turnover in Roadside Businesses

The respondents were asked to indicate the turnover percentage achieved based on their business capacity. Figure 9.11 shows that before SGR operationalization, 51.2 percent of the respondents indicated that they were achieving less than 40 percent of their target turnover volumes, and 48.8 percent were recording turnovers of more than 40 percent. Being micro businesses and operating at such low turnover performance, it is worth noting that any slight change induced on their activities will register very profound effects on them.

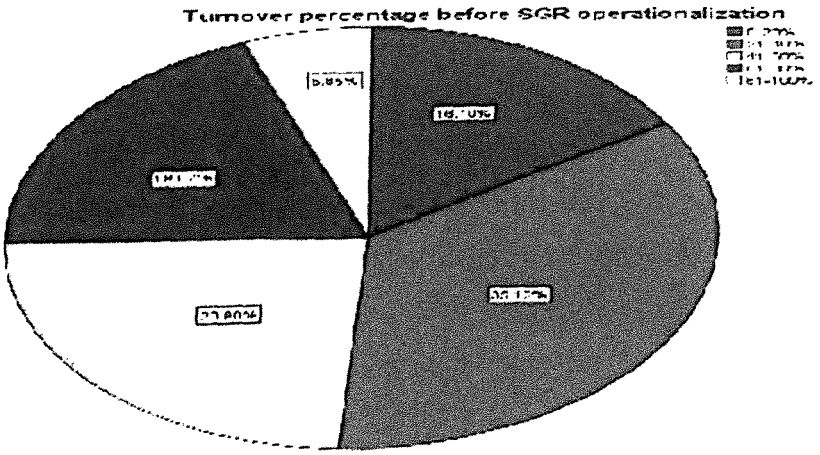

Figure 9.11. Turnover Performance

Source: Research Data (2019)

9.5.4 Impact on Roadside Businesses Performance if SGR Continues to Operate

Majority of the respondents (93.2 percent) indicated that their business volume could not increase if SGR continues to operate and only 6.8 percent of respondents stated that their business volumes could increase if SGR continued operating under the current set up

(Figure 9.12). 74 percent of the respondents indicated that business could decrease if SGR continued operating the way it was operating and 26 percent of the respondents stated that business could not decrease if SGR continued operating the way it was operating. There is a perceived general negative impact of SGR on road side businesses, as per the responses received.

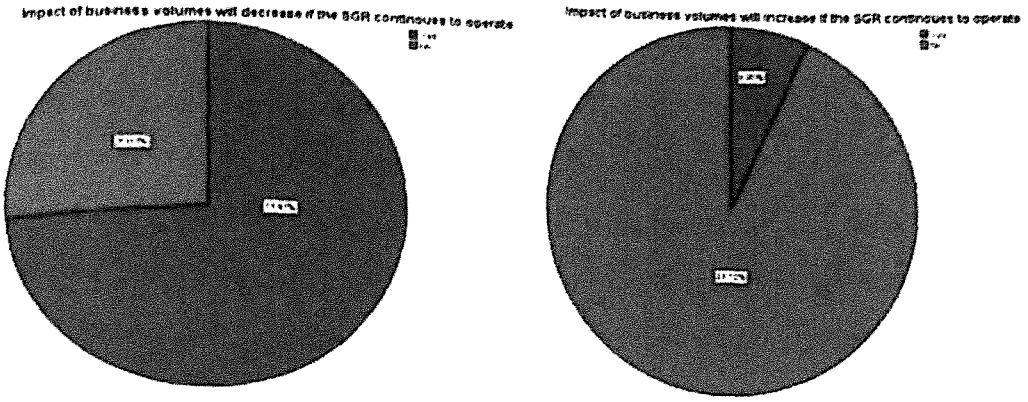

Figure 9.12. SGR Impact on Performance

Source: Research Data (2019)

9.5.5 Closure of Business

Figure 9.13 shows that 79 percent of the respondents indicated that they would not close their business if SGR continued operating while 21 percent felt that they would close their business if SGR continued operating under the current set up. The desire to continue operating, even when business is not sustainable, could be driven by fear to lose a source of income, hence would rather continue operating. But in a matter of time, the cash flows would not be able to support the operations resulting in a forced closure.

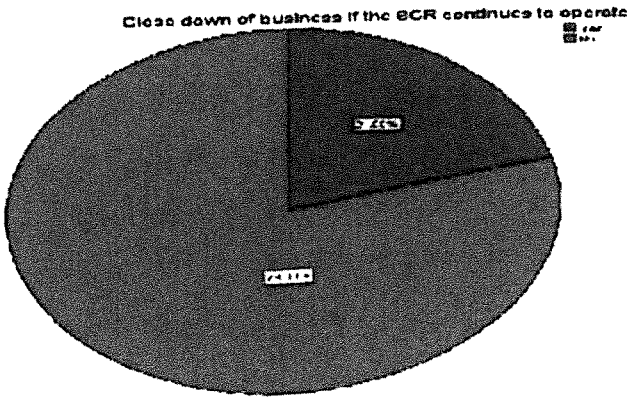

Figure 9.13. Potential of Business Close Down

Source: Research Data, 2019

9.5.6 Effect of SGR Operationalization on Roadside Businesses

In this section the respondents were requested to state their level of agreement or disagreement with issues relating to the performance of their roadside micro businesses in relation to the operationalization of SGR in Port City of Mombasa. This was captured in an attitude scale of between 1 – 5 with 5 representing Strongly Agree; 4-Agree; 3-Sometimes; 2-Disagree and 1-Strongly Disagree.

On the assertion that roadside businesses have not been affected in any way since the operationalization of SGR in Port City of Mombasa, 90.4 percent of the respondents disagreed that their businesses had not been affected while only 5.5 percent agreed with the statement (Table 9.7). 4.1 percent of the respondents remained indifferent as far as the issue is concerned. There is a general perception that SGR operationalization has adversely affected roadside businesses in Port City of Mombasa.

Table 9.7: Effect of SGR Operationalization on Roadside Businesses

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	128	58.4	58.4	58.4
	Disagree	70	32.0	32.0	90.4
	Sometimes	9	4.1	4.1	94.5
	Agree	12	5.5	5.5	100.0
	Total	**219**	**100.0**	**100.0**	

Source: Research Data (2019)

When requested to indicate the extent to which their roadside businesses' sales largely remained unchanged since the operationalization of SGR in Port City of Mombasa, majority of the respondents (82.9 percent) disagreed that their businesses had remained unchanged since the operationalization of SGR (Table 9.8). A further 10.1 were neutral while 6.8 percent agreed that their businesses had remained unchanged. Generally, the responses indicate that there has been a level of impact on roadside businesses operating within Port City of Mombasa.

Table 9.8: Changes to Business Due to SGR

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	95	43.4	43.8	43.8
	Disagree	85	38.8	39.2	82.9
	Sometimes	22	10.0	10.1	93.1
	Agree	15	6.8	6.9	100.0
	Total	217	99.1	100.0	
Missing	System	2	.9		
Total		**219**	**100.0**		

Source: Research Data (2019)

When requested to rate the statement that roadside businesses have been growing as planned for the last eight (8) months since the beginning of operationalization of SGR in Port City of Mombasa, majority of the respondents (86.3 percent) disagreed with the statement (Table 9.9). 9.1 percent were neutral and 4.1 percent agreed that their businesses have been growing according to plan since operationalization of SGR in Port City of Mombasa.

Table 9.9: Roadside Businesses Growth since SGR Operationalization

		Frequenc y	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	115	52.5	52.5	52.5
	Disagree	74	33.8	33.8	86.3
	Sometimes	20	9.1	9.1	95.4
	Agree	9	4.1	4.1	99.5
	Strongly Agree	1	.5	.5	100.0
	Total	**219**	**100.0**	**100.0**	

Source: Research Data (2019)

On assertion that the future prospects of roadside businesses in terms of turnover and survival was positive and promising, 87.6 percent of the respondents disagreed with the statement (Table 9.10). 6.4 percent and 5.9 percent of the respondents were neutral and in agreement to the statement that future prospects of their business in terms of turnover and survival is promising following operationalization of SGR respectively.

Table 9.10: Roadside Businesses Future Prospects

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	101	46.1	46.3	46.3
	Disagree	90	41.1	41.3	87.6
	Sometimes	14	6.4	6.4	94.0
	Agree	9	4.1	4.1	98.2
	Strongly Agree	4	1.8	1.8	100.0
	Total	218	99.5	100.0	
Missing	System	1	.5		
Total		**219**	**100.0**		

Source: Research Data (2019)

On that the revenue growth of roadside businesses have been affected for the last eight (8) months since operationalization of SGR in Port City of Mombasa, majority of the respondents (68.8 percent) agreed that the revenue growth of their business had been affected for the last 8 month (Table 9.11). Of the sampled respondents, 11.93 percent were neutral while 19.3 disagreed that the revenue growth of their business had been affected.

Table 9.11: Revenue Growth

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	25	11.4	11.5	11.5
	Disagree	17	7.8	7.8	19.3
	Sometimes	26	11.9	11.9	31.2
	Agree	76	34.7	34.9	66.1
	Strongly Agree	74	33.8	33.9	100.0
	Total	218	99.5	100.0	
Missing	System	1	.5		
Total		**219**	**100.0**		

Source: Research Data (2019)

On existence of a positive linkage in change in turnover in roadside businesses to the operationalization of SGR in Port City of Mombasa, 54.8 percent of the respondents disagreed with this statement (Table 9.12). 33 percent indicated that there was a positive link while 11.9 percent were neutral on whether they could make a positive link in change in turnover to the operationalization of SGR in Mombasa.

Table 9.12: Change of Roadside Businesses Turnover

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	55	25.1	25.2	25.2
	Disagree	65	29.7	29.8	55.0
	Sometimes	26	11.9	11.9	67.0
	Agree	45	20.5	20.6	87.6
	Strongly Agree	27	12.3	12.4	100.0
	Total	218	99.5	100.0	
Missing	System	1	.5		
Total		**219**	**100.0**		

Source: Research Data (2019)

On rating the statement on possibility of roadside businesses meeting all their financial obligations (e.g. rent, rates, loans, and salaries) in the near future at current level of business operations, 81.7 percent of the respondents largely disagreed with this assertion while 9.1 percent were indifferent (Table 9.13). Only 8.7 percent were agreeable that they will be able to meet their financial obligations moving into the future.

Table 9.13: Meeting Financial Obligations

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	122	55.7	56.0	56.0
	Disagree	57	26.0	26.1	82.1
	Sometimes	20	9.1	9.2	91.3
	Agree	17	7.8	7.8	99.1
	Strongly Agree	2	.9	.9	100.0
	Total	218	99.5	100.0	
Missing	System	1	.5		
Total		**219**	**100.0**		

Source: Research Data (2019)

9.6 Drivers, Loaders and Roadside Business Employees

For the purposes of this study, a total of 230 questionnaires were distributed to Drivers, Loaders and Roadside Business Employees and 201 responded to the questionnaires. The respondents were requested to fill in a custom made questionnaire through the help of research assistants. The instrument contained a total of 15 statements addressing issues related to operationalization of SGR in Port City of Mombasa.

9.6.1 Respondents Job Categories

Figure 9.14 shows that majority of the respondents (45.27 percent) were engaged as drivers, while 27.86 percent and 16.42 percent of the respondents were engaged as mechanics and loaders respectively, while other related occupations such as car wash and welders represented 10.45 percent of the respondents, suggesting that road related businesses are key source of employment within Port City of Mombasa.

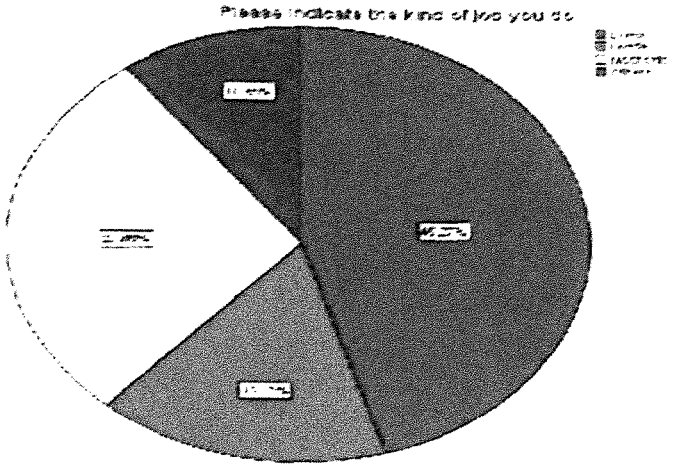

Figure 9.14: Respondents Jobs by Category

Source: Research Data (2019)

Figure 9.15 shows that 45 percent of the respondents had held their current job for less than 5 years while 65 per had held their current job for more than 5 years, suggesting that road related business are providing long term job opportunities.

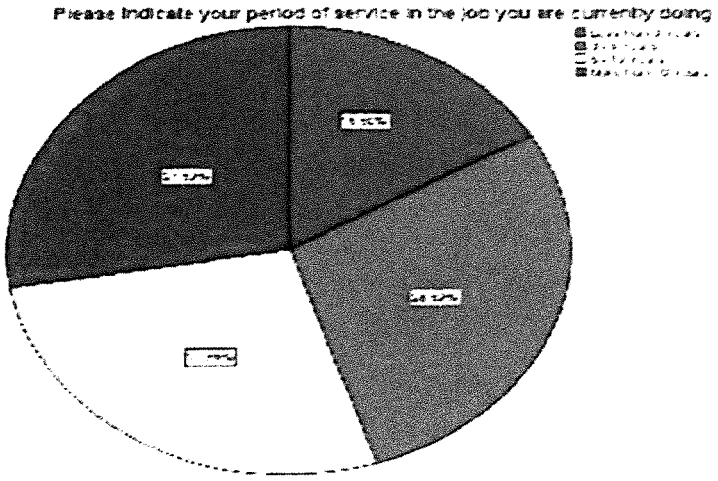

Figure 9.15. Job Duration

Source: Research Data (2019)

9.6.2 Daily Income (Loaders, Drivers, Mechanics)

The respondents were requested to state the amount of money they earned for a day's work before and after SGR operationalization in Port City of Mombasa. The results in Figure 9.16 shows that Majority (53.8 percent) of the respondents indicated that before introduction of SGR they used to make above Kshs 1000 for a day's work, while 46.2

:rcent responded that they used to earn less than Kshs 1000 for a day's work. After troduction of SGR, majority of those interviewed (85.95 percent) responded that after ıe introduction of the SGR they now make less than Kshs 1000 in a day's work, while nly 14.05 percent stated making more than Kshs 1000 for a day's work, suggesting a gnificant reduction in earnings, most likely due to decreased work activity.

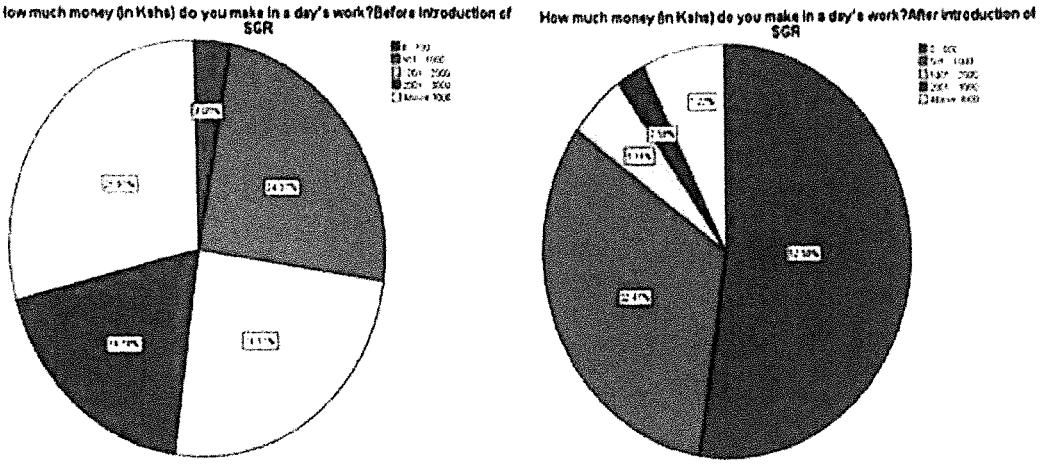

Figure 9.16. Daily Income Distribution

Source: Research Data (2019)

9.6.3 Effect of SGR on Current Jobs in Port City of Mombasa

Figure 9.17 shows that majority of the respondents (97.51 percent) indicated that there has not been any increase in workload since SGR began its operations in Port City of Mombasa while 2.49 percent agreed that there had been an increase on workload. When asked on whether there had been a reduction on workload, 71.14 percent on the respondents indicated that there had been a reduction in workload, while 28.86 percent responded that the work had not changed.

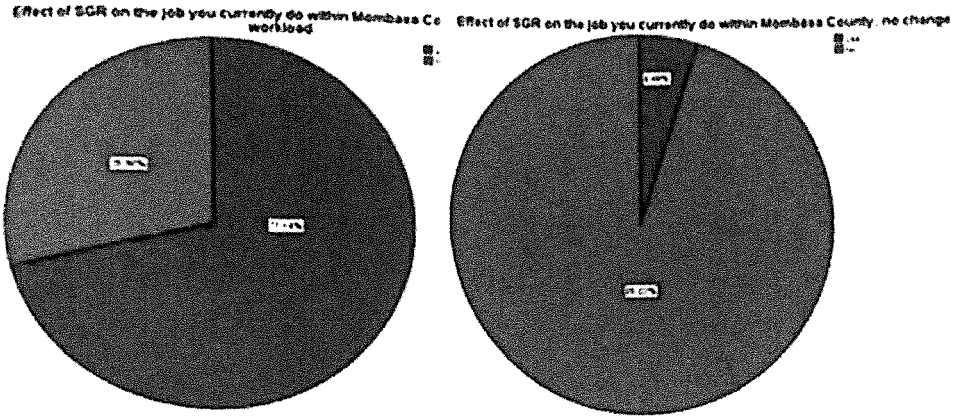

Figure 9.17. Effect of SGR on Current Jobs

Source: Research Data (2019)

Figure 9.18 shows that 4.98 percent of the respondents agreed that there has been no change since the operationalization of SGR in Port City of Mombasa while 95.02 percent were neutral on this question. On whether SGR operationalization had resulted loss of their current job, 39.8 percent answered in the affirmative while 60.2 percent indicated that they had not experienced job losses. Despite this finding, it should be noted that SGR is in the initial stages of operationalization, and the full effect of its impact on jobs is yet to crystallize.

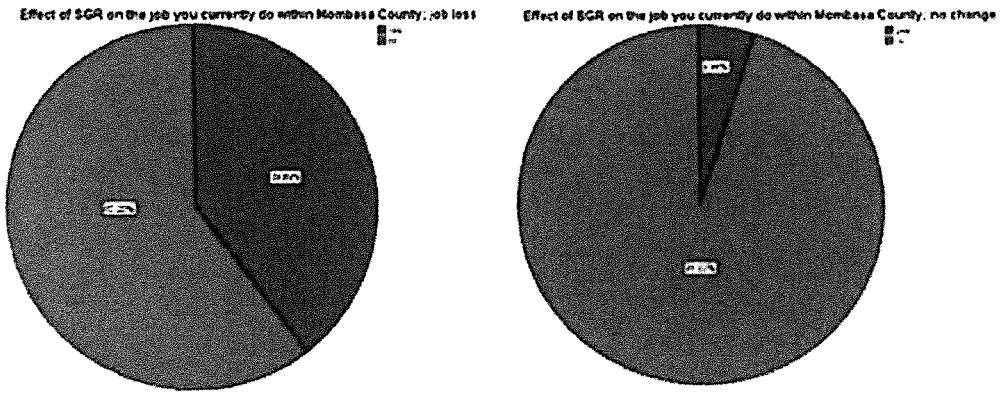

Figure 9.18. Amount of Money Made per Day

Source: Research Data (2019)

Table 9.14 shows that 87.1 percent of the respondents disagree that SGR has not affected their job, while 7.5 percent agree and 5.5 percent are neutral, suggesting that indeed SGR has had some level of effect on the jobs in Port City of Mombasa.

Table 9.14: SGR Effect on the Current Job

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	124	61.7	61.7	61.7
	Disagree	51	25.4	25.4	87.1
	Sometimes	11	5.5	5.5	92.5
	Agree	11	5.5	5.5	98.0
	Strongly Agree	4	2.0	2.0	100.0
	Total	**201**	**100.0**	**100.0**	

Source: Research Data (2019)

Tables 9.15 shows that 73 percent of the respondents disagree that income from their jobs had remained unchanged since operationalization of SGR, while 18.5 per agree, and 10.5 percent are neutral.

Table 9.15: SGR Effect on the Current Job(s)

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	86	42.8	43.0	43.0
	Disagree	60	29.9	30.0	73.0
	Sometimes	21	10.4	10.5	83.5
	Agree	26	12.9	13.0	96.5
	Strongly Agree	7	3.5	3.5	100.0
	Total	200	99.5	100.0	
Missing	System	1	.5		
Total		**201**	**100.0**		

Source: Research Data (2019)

When asked on the future prospects of their jobs, 88.0 percent of the respondents disagreed that it was positive while only 3 percent agreed, and 8.5 percent remained neutral (Table 9.16). The responses indicate a huge uncertainty among the respondents with respect to job security.

Table 9.16: Future Prospects of the Job

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	107	53.2	53.5	53.5
	Disagree	69	34.3	34.5	88.0
	Sometimes	17	8.5	8.5	96.5
	Agree	6	3.0	3.0	99.5
	Strongly Agree	1	.5	.5	100.0
	Total	200	99.5	100.0	
Missing	System	1	.5		
Total		**201**	**100.0**		

Source: Research Data (2019)

Table 9.17 indicates that 65 percent of the respondents agreed that the employer consistently pays on time, while 14.3 percent disagreed, and 20.8 percent indicated that payments were infrequent. This suggests a possible distress on company's cash flows due to reduced business activity.

Table 9.17: Payments of Wages and Salaries

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	70	34.8	35.5	35.5
	Disagree	58	28.9	29.4	65.0
	Sometimes	41	20.4	20.8	85.8
	Agree	21	10.4	10.7	96.4
	Strongly Agree	7	3.5	3.6	100.0
	Total	197	98.0	100.0	
Missing	System	4	2.0		
Total		**201**	**100.0**		

Source: Research Data (2019)

Table 9.18 shows that 49.3 percent the respondents disagreed that there no positive link between changes of opportunities and job prospects as a result of SGR operationalization, while 13.4 percent were neutral, and 37.3 percent were agreed. The SGR operationalization is still in the formative stages, hence the full impact of the changes on opportunities and job prospects will be known once a clear framework of operation is in place.

Table 9.18: Linkage of opportunities to introduction of SGR

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	47	23.4	23.4	23.4
	Disagree	52	25.9	25.9	49.3
	Sometimes	27	13.4	13.4	62.7
	Agree	38	18.9	18.9	81.6
	Strongly Agree	37	18.4	18.4	100.0
	Total	**201**	**100.0**	**100.0**	

Source: Research Data (2019)

Table 9.19 shows that 87 percent of the respondents disagreed that at the current levels of operating employers will be able to maintain employee and pay salaries, while only 6.5 percent agreed, and 6.5 percent were neutral. There are fears of potential job losses as employers may not be able sustain their current manning levels due to reduction of activity.

Table 9.19: Maintaining of Employees and Salaries Payment

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	114	56.7	57.0	57.0
	Disagree	60	29.9	30.0	87.0
	Sometimes	13	6.5	6.5	93.5
	Agree	8	4.0	4.0	97.5
	Strongly Agree	5	2.5	2.5	100.0
	Total	200	99.5	100.0	
Missing	System	1	.5		
Total		**201**	**100.0**		

Source: Research Data (2019)

9.7 Economic and Econometric Analysis

Primary data was collected between 27th August, 2018 and 14th September, 2018 with a further field work review and subsequent verification exercise taking place between 04th February, 2019 and 15th February, 2019 within the port city of Mombasa targeting the specific zoned areas. Data collected during the survey was subjected to analysis to compile descriptive statistics using SPSS statistical module. The results of the analysis are summarized in the following sections.

9.7.1 Quantitative Analysis - Revenues Trends

The study sought to evaluate the relationship between cargo modals and revenue trends. It was postulated that there was a direct relationship between cargo transportation by road and revenue generated by County Government Mombasa. This presupposition was informed by the fact that there were myriad of commercial activities that were influenced by use of road transport including accommodation, parking, vehicles repairs, car wash, clearing and forwarding etc. These activities directly support revenue generation for the County Government Mombasa, hence the up scaling of modal of carriage to SGR could reduce some of the revenue sources currently availed by virtue of conveyance through road.

9.7.2 Revenue Sources

On month wise, the year 2018 registered the highest number of business units 2,505 that contributed to the Single Business Permit (SBP) Revenue. This was followed by 2016 and 2017 at 2383 and 2042 respectively (Figure 9.19). It would appear that the county revenue enhancement initiatives, including online digital solutions, had managed to widen that revenue base. SGR operationalization became effective from January 2018, hence its impact on the business units had not become apparent.

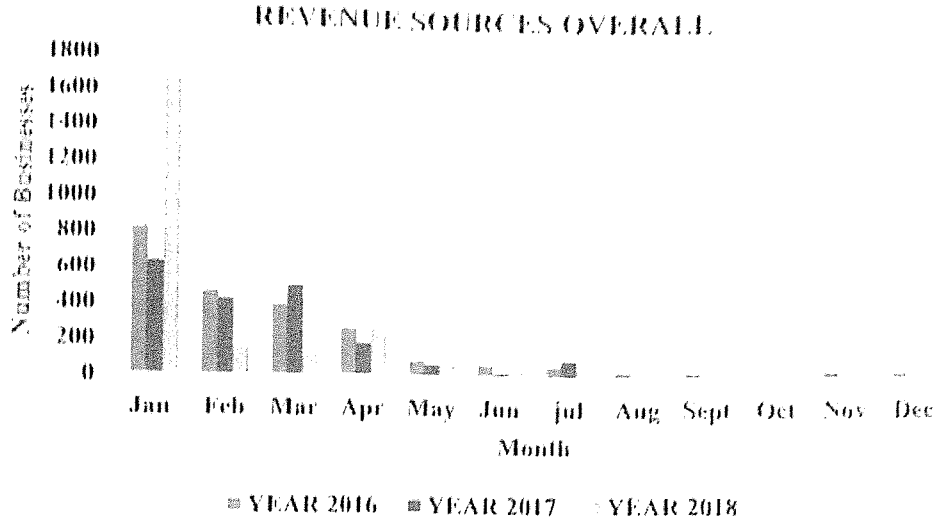

Figure 9.19. Overall Revenue Sources

Source: Research Data (2019)

The overall highest revenue source is the clearing and forwarding sector contributing on average about 65 per cent of the revenue (Figure 9.20). This is followed by warehousing which contributes 24 per cent and transit trucks 11 per cent. It noticeable that number of business for warehousing and transit had registered an increase of 6 per cent and 37 per cent respectively. The number of business units in clearing and forwarding remained almost flat.

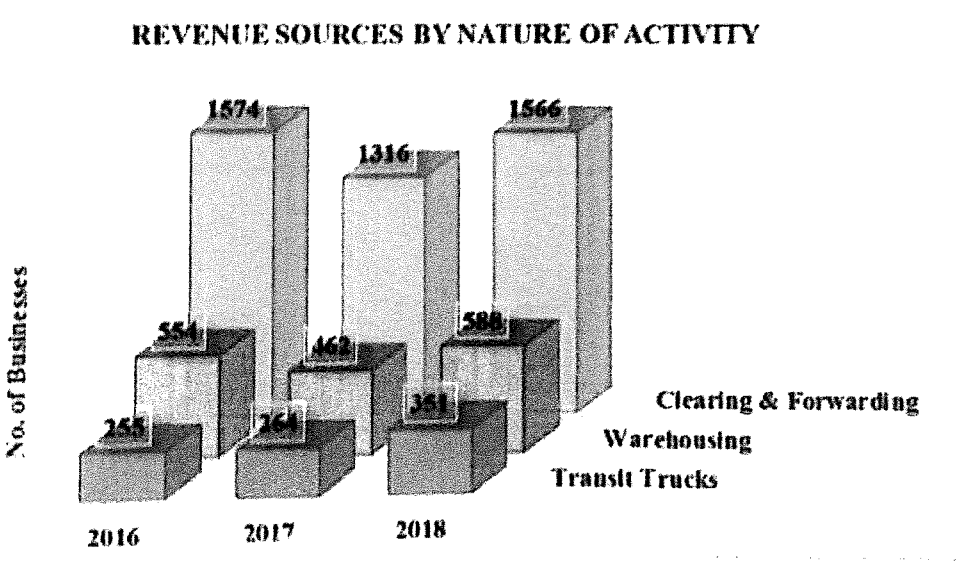

Figure 9.20. Revenue Sources by Nature of Activity

Source: Research Data (2019)

9.7.3 Revenue Generated through Business Permits

The Single Business Permits revenue performance for the CGM is analyzed in Figure 9.21. The year 2018 generated the highest revenue amounting to Kshs 113.98 million followed by the year 2016 and 2017 at Kshs 99.61 million and Kshs 59.87 million respectively. This revenue trends are in tandem with the changes in the number of business units registered. As explained, the increase of revenue in 2018 may be attributable to the revenue digital online initiatives by the CGM aimed to expand revenue.

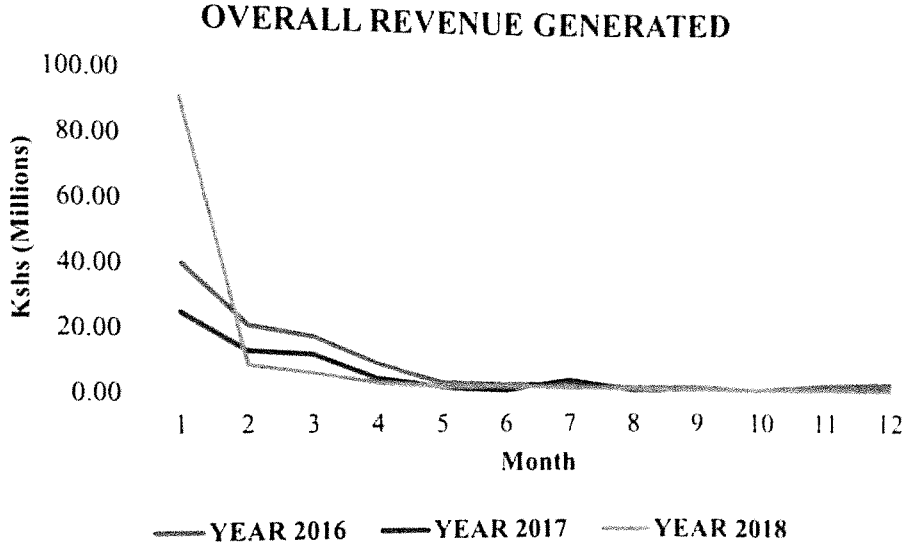

Figure 9.21. Single Permit Revenue Analysis

Source: Research Data (2019)

In line with the trends of registered business units, clearing and warehousing generates the highest revenue followed by warehousing, and transit trucks (Figure 9.22). Overall, there was an upward traction on revenue trends in 2018 attributable to the CGM digital initiative focused to expand revenue.

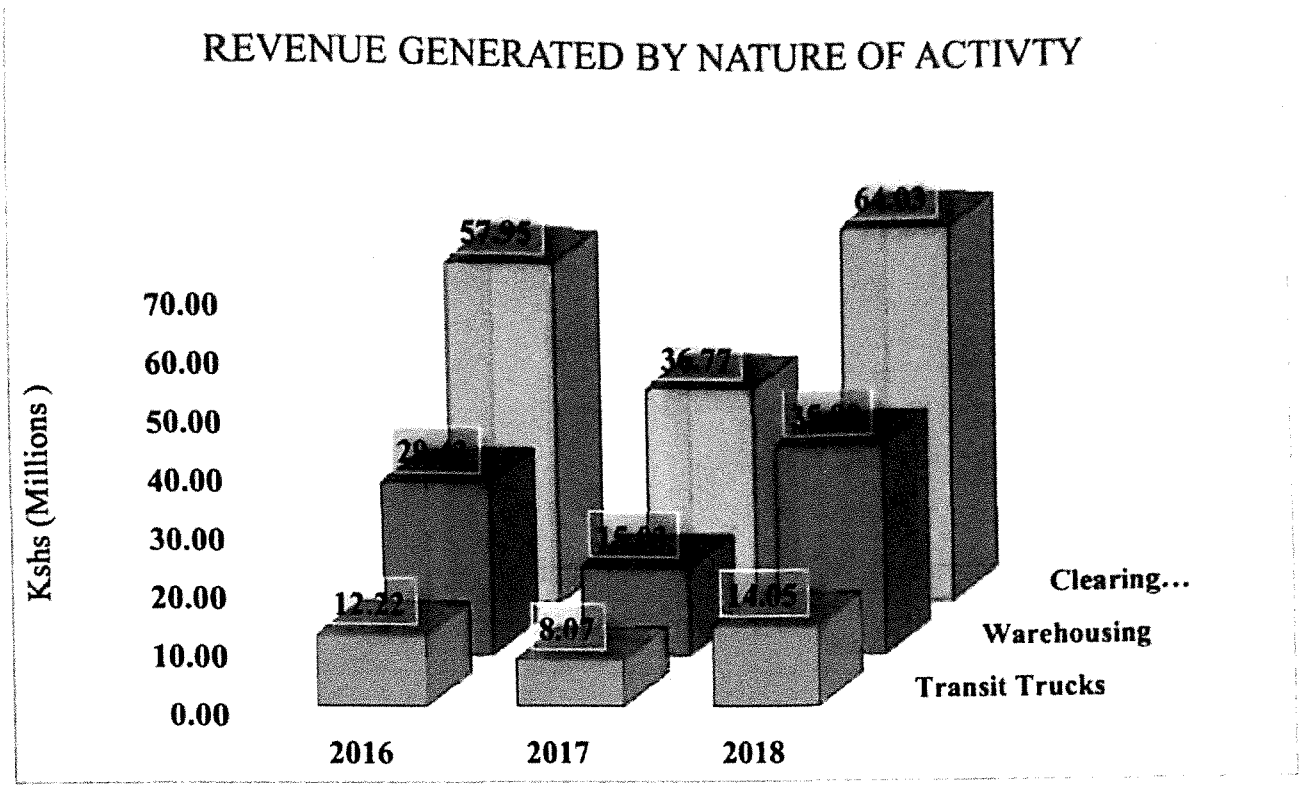

Figure 9.22. Revenue by Nature of Activity

Source: Research Data (2019)

9.7.4 Trend Analysis – Modal Split

Figure 9.23 indicates that for the periods 2016 – 2017 road transport conveyed almost 98 per cent of the container cargo ferried to upcountry destinations. Following the introduction of SGR Quarter 1 of 2018, the share of rail transport had an upscale to 26 per cent at the close of the year. The tilting of modal split from road to SGR is still experiencing an upward trajectory, and narrowing to convergence. Figure 9.35 shows the relative share of annual deliveries by road and rail.

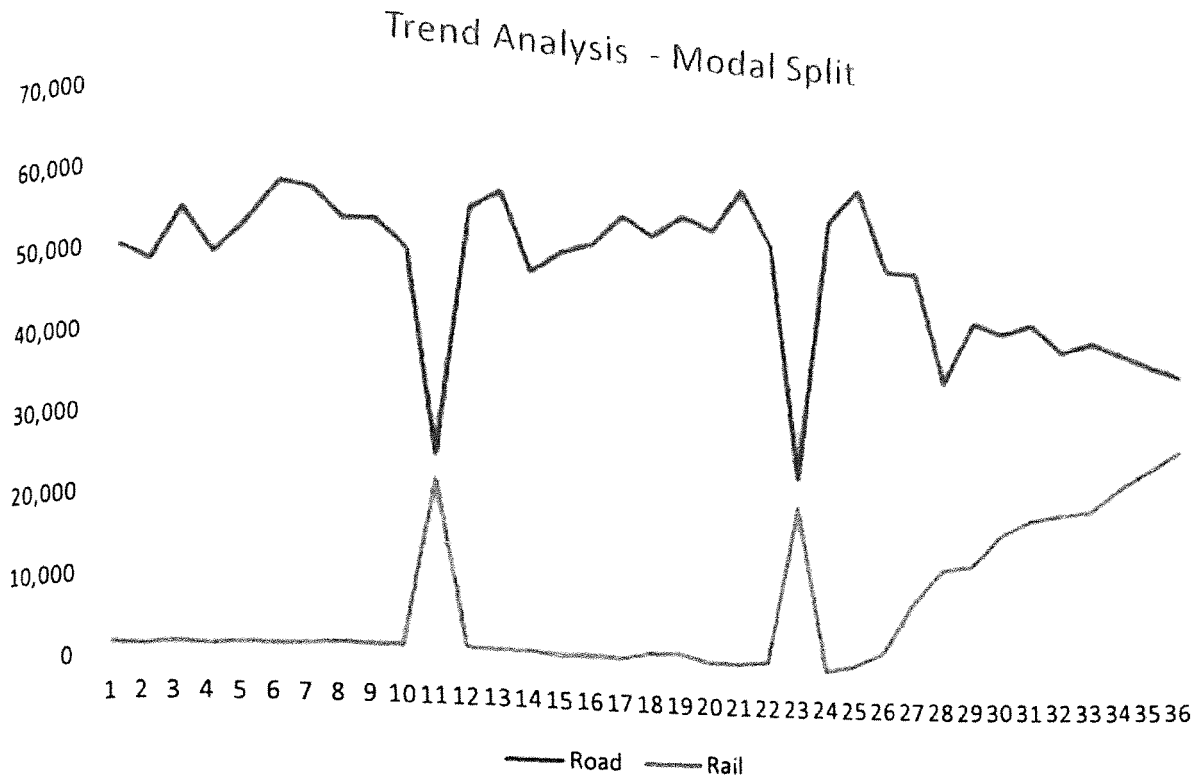

Figure 9.23. Modal Split Trend Analysis (2016-2018)

Source: Research Data (2019)

An analysis using bivariate Pearson coefficient correlation was carried, and the result showed a strong negative correlation of -0.83 between road and rail transport (Table 9.20).

Table 9.20: Correlation Coefficient - Road vs Rail Carriage

	Road	*Rail*
Road	1.00	
Rail	(0.83)	1.00

Source: Research Data (2019)

When plotted as shown in Figure 9.24, the road versus rail carriage volumes (modal split) depict a clear picture of the volume disparities over the period under investigation.

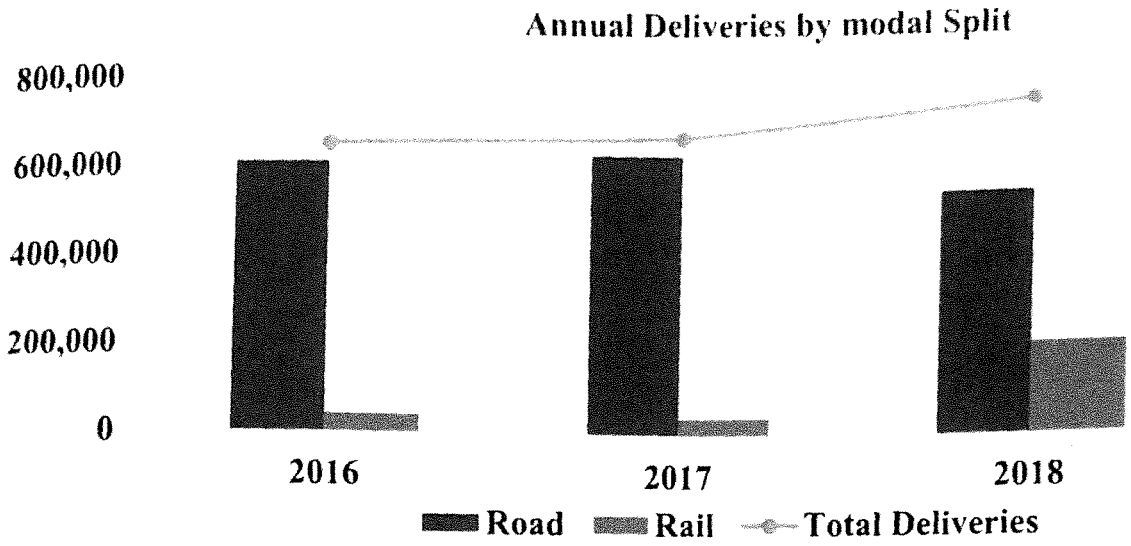

Figure 9.24. Annual Deliveries by Modal Split

Source: Research Data (2019)

9.7.5 Effect of Cargo Volumes transport by Road on Crime rate

An analysis was done to examine the effect of cargo volumes transported by road on crime rates in the Port City of Mombasa. The result of the analysis is shown in Figure 9.25. As shown, the model summary posted (R^2) value of 9.3 per cent suggesting that only a very small proportion of the variation in crime rate was explained by the changes in cargo volumes transported. There could therefore be other factors that explain the variation in crime rate. However, a predictive analysis using the best line of fit indicates that as road cargo volumes increase, the crime rate will continue to reduce and vice versa. Thus it can be concluded that in the long run, the continued reduction of road cargo may mildly result in higher crime rates at the Port City of Mombasa. However, the full effect of SGR operationalization had not settled fully in the duration of the study, hence the findings may not be fully conclusive.

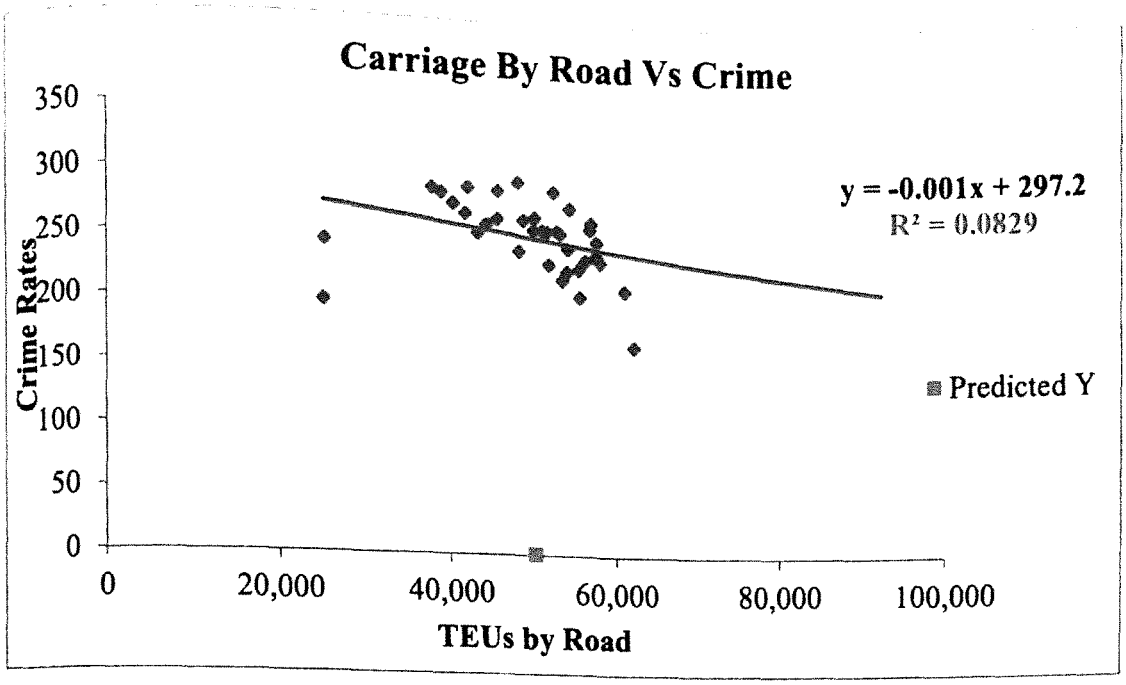

Figure 9.25. Social Impact Crime (Cargo Volumes Transported Vs Crime Rates)
Source: Research Data (2019)

An analysis of variance was run to test the significance of the relationship between cargo volumes and crime rates at $p < .05$ level. The result of the finding indicates a p-value of .08, therefore generating a conclusion that there is no significant relationship between cargo volumes and crime rates. As aforementioned, the SGR has operated for a short period (about one year), and the real impact is yet to crystallize. The finding are presented in Table 9.21.

Table 9.21: ANOVA (Cargo Volume Transported vs Crime Rates)

	df	SS	MS	F	Significance F
Regression	1	2498.2823	2498.282	3.2503	0.08028
Residual	34	26133.809	768.6415		
Total	35	28632.092			

Source: Research Data (2019)

9.7.6 Effect of Cargo volumes on Business Units

To establish the effect of cargo volumes by road on the number of business units, regression analysis was done, and the result is Figure 9.26. The model output posting (R^2) of 8.15 per cent, which is an indication that on a minimal proportion of the variation business units is explained by the changes in cargo volume. There was a recorded business

[illegible]

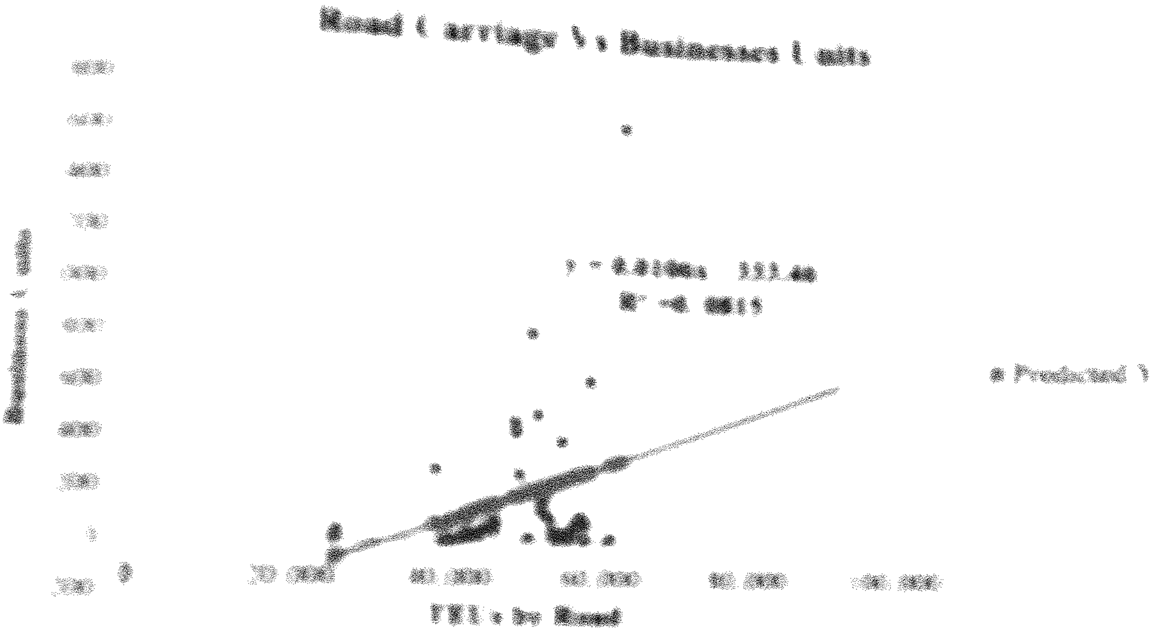

Figure 9.26: Economic Impact - Business Units (Road Carriage vs Business Units)
Source: Research Data (2019)

To examine the significance of the relationship between cargo volumes transported by road and business units at p < [illegible] level, ANOVA test was run (Table 9.22). The result of the output proved p > [illegible] and we therefore conclude there is no significance relationship between the variables under study.

Table 9.22: ANOVA (Road Carriage vs Business Units)

	df	SS	MS	F	Significance F
Regression	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Residual	[illegible]	[illegible]	[illegible]		
Total	[illegible]	[illegible]			

Source: Research Data (2019)

which shows a low correlation, and our premise is that the SGR has operated for a short period (8 months), and its real impact is yet to crystallize. The result is presented in table 9.23.

Table 9.23: ANOVA (Road Carriage Vs Revenue)

	df	SS	MS	F	Significance F
Regression	1	858.692	858.692	3.30634	0.0778323
Residual	34	8830.173	259.711		
Total	35	9688.865			

Source: Research Data (2019)

9.7.8 Cargo Trends Forecast and Impact on Revenue

The study analysed the modal possible patterns in cargo volumes based on the current trends. The findings of this analysis (Figure 9.28) indicate that there is an inverse relationship between cargo carriage by road and rail. Over the past year, cargo carriage by road has declined gradually by about 3.4 per cent per month while carriage by rail has recorded exponential growth. As per the forecast, it is anticipated that by February 2019 cargo volumes between the two modals will converge at about 35,000 TEUs per modal per month. Subsequently, if the trend were to continue, carriage by rail will take a lead as prominent means of carriage.

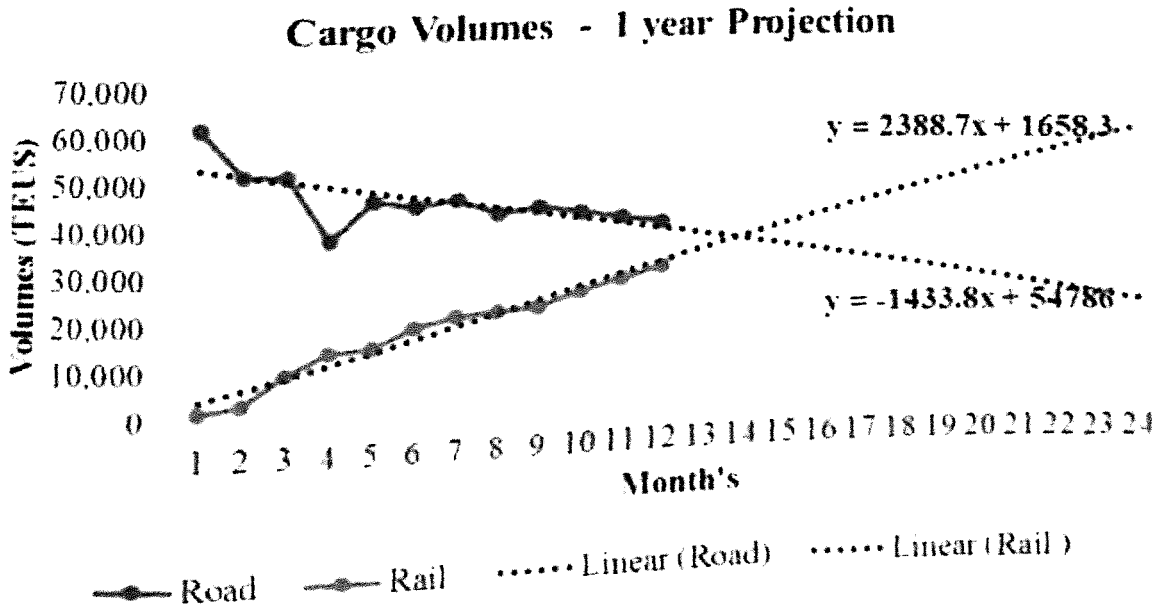

Figure 9.28. Current Trends: Cargo Carriage Analysis

Source: Research Data (2019)

However, as shown in Figure 9.29, cargo carriers have projected minimum freight cargo of about 26,000 TEUs per month to meet operational and loan obligations. It is therefore presumed that any future increases in overall cargo volumes will be ferried by road, hence by end of 2019, carriage by road will stabilize if there isn't any forcible interference in the carriage and market dynamics left into the play.

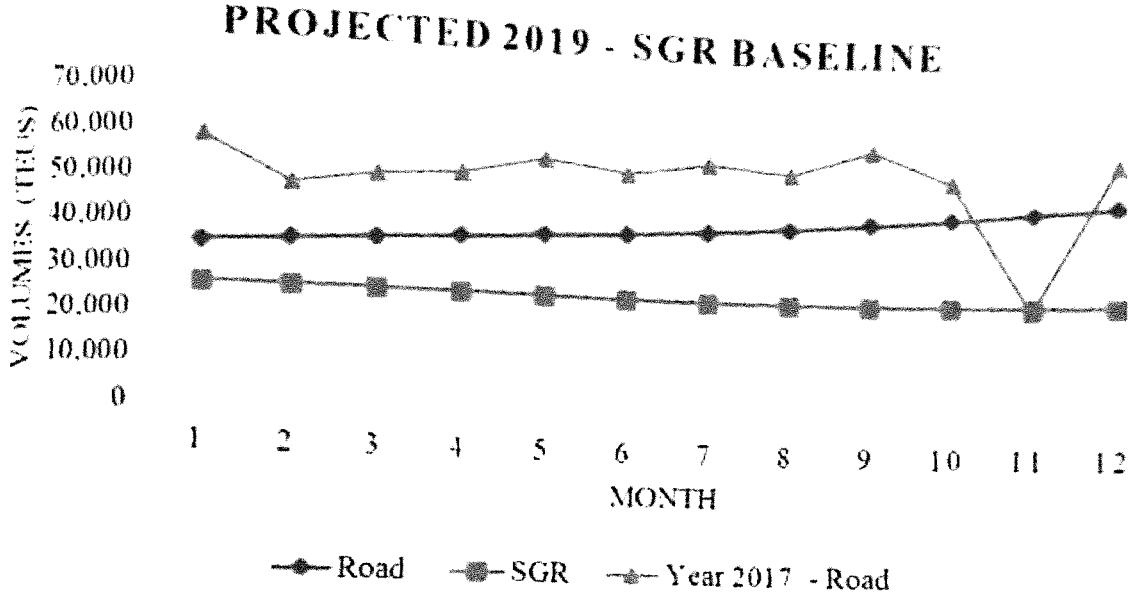

Figure 9.29. Projected Modal Split Analysis (2019)

Source: Research Data (2019)

Figure 9.30 shows that in the event cargo volumes ferried by road were to decline below 34,000 TEUs per month, this will inadvertently affect the county revenues, whether directly because of the Port City of Mombasa general economic shrink. This therefore calls for an amicable solution between the port city and the national government in regard to balancing on the two modes of carriage to mitigate on possible negative implications in the Port City of Mombasa.

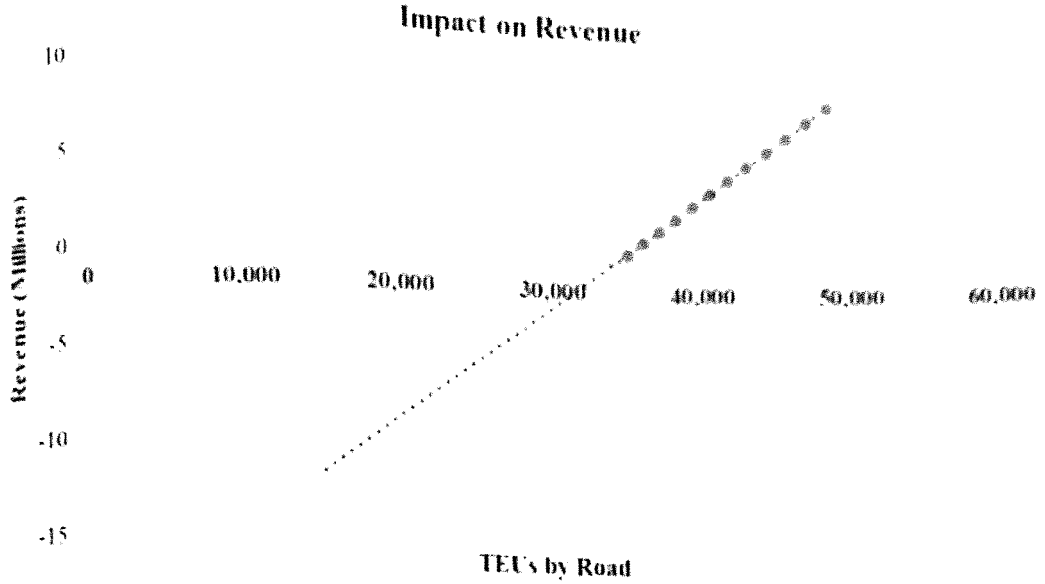

Figure 9.30. Economic Impact – Project effect on County Revenue
Source: Research Data (2019)

9.8 Port City of Mombasa Gross Domestic Product (GDP)

Following the promulgation of the Constitution of Kenya 2010, development planning is was devolved to, thus resulting in enhanced demand for county-level data. KNBS is now generating data at County to capture Gross County Product (GCP), economic growth, per capita income, sectoral growth and employment to supporting economic planning. Mombasa is the fourth (4th) largest contributor to the National GCP after Nairobi, Nakuru, and Kiambu respectively.

The KNBS GCP done for the year 2017 indicate that Mombasa County had a GCP of 332.122 billion based on current prices. The Transport sector is the highest contributor to the County's GCP at 27.4 percent, then followed by manufacturing, construction, and wholesale retail & vehicle repairs 14.6, 11.5, and 11.5 percent respectively. In total the four sector contribute a whopping 60 per cent the GCP at county level.

The study findings indicate that the impact of SGR on the Port City of Mombasa is significant impact both at macro and micro level. Table 9.24 shows a quantified estimation to loss on County GCP and jobs. The result indicates that in the event the proposal to convey all upcountry cargo through SGR, this may have serious implications to the Port City GCP and employment sustainability.

It is envisaged that between the three sectors, long distance trucks, lubricants and fuels and container freights services a total contribution of Kshs 33.3 Billion will be lost as well as 8,111 jobs. If the option to ferry all containerized cargo is immediately effected. However, if execution of the plan is done gradually, the loss will be smoothed out such that initially the loss to will be Kshs 17.382 Billion and 2,987 jobs. Overall, the hit to the County GCP will be 10.0 percent in the event all inland cargo is ferried through SGR. The CFSs fully rely on containerized cargo, hence without any spillover to Port Side town, there a high likelihood that most of them will close shop.

Table 9.24 Summary of Quantified Projected Direct Losses

	Income Loss Per Annum - Kshs	No of Employee Redundant	Actual Immediate Loss	No of Employees	% reduction
Long distance Trucks					
Accommodation	318,960,000				
Supplementary Industry	850,560,000				
Job losses - Long Distance	696,276,000	1,008			
Parking & Security	89,280,000				
Sub Total	**1,955,076,000**	**1,008**	**293,261,400**	**191**	**15%**
Lubricants & Fuels					
Transit Trucks Fuel	1,329,000,000				
Local Transport	1,326,240,000				
Job Losses - local transport	696,276,000	2,763			
Sub Total	**3,351,516,000**	**2,763**	**281,327,344**	**232**	**8%**
Container Freight Stations					
Job Losses	831,600,000	2310			
Turnover loss	26,400,000,000				
Clearing & Forwarding	781,200,000	4,340			
Sub Total	**28,012,800,000**	**4,340**	**16,807,680,000**	**2,604**	**60%**
Loss to County GDP / Job loss	**33,319,392,000**	**8,111**	**17,382,468,744**	**3,027**	
Actual GCP in 2017 - KNBS (2019)	332,122,000,000		332,122,000,000		
County Data					
Percentage of Loss	**10.0%**		5.2%		

The Mombasa-Nairobi Standard Gauge Railway project cost was reported to be $3.6 Billion. Looking at the overall long term impact of SGR on the transport and related sectors, particularly on the port city of Mombasa, there is likely to be redundancy in assets to a tune of kshs 54.5 Billion as shown in Table 9.25 The annual depletion on the County GCP is estimated to a tune of Kshs 125.2 Billion (based on GCP data 2017, KNBS, 2019) in the event the conveyance of cargo by SGR is fully operationalized as currently proposed.

Table 9.25: Summary Projected Economic Losses - Investment Cost/GCP

Sources	Per Unit	No	Total Investment	Annual GCP Likely Depletion	Total
Capital Expenditure - ICDs	1,756,942,500	22	38,652,735,000		
Trucks - Transit	8,000,000	443	3,544,000,000		
Local Trucks	6,500,000	1902	12,363,000,000		
Hit on GCP - Overall Transport - KNBS				88,308,000,000	
Wholesale, Retail & Vehicle Repairs - KNBS				36,912,000,000	
Total			**54,559,735,000**	**125,220,000,000**	**179,779,735,000**
Cost of SGR					**360,000,000,000**

10.0 IDENTIFICATION OF SOCIO-ECONOMIC IMPACT

10.1 Introduction

The section focuses to identify the socio-economic impact that have or are potentially likely to result from operationalization of SGR and their implication to the Port City of Mombasa. This study lays emphasis on the impact likely to be generated as a result of operationalization of SGR in Port City of Mombasa which took effect in January, 2018.

10.2 Impact during Operationalization

This study identified both positive and negative impact during the operationalization of SGR in Port City of Mombasa. It is critical to note that the micro-economic environment keeps on shifting and the micro-businesses' performance and growth in the county of Mombasa are in unfamiliar ground of 'operating for survival'.

10.3 Positive Impact

The study revealed some positive as a result of operationalization of SGR in Port City of Mombasa. Table 10.1, 10.2 and 10.3 present summaries of the positive impact, their magnitude, and probability of occurrence as well as the implication to the Port City of Mombasa.

10.3.1 Tourism Promotion

On tourism promotion, during the focus group discussion (FGD) it was evident that that operationalization of SGR in Port City of Mombasa will have a positive impact on tourism due to reduced cost of commuting and high passenger capacity to and from Mombasa. As a result it was envisaged that there will be some positive impetus on this sector on both local and international tourism activities.

Table 10.1: Tourism Promotion

Criteria	Category	Significance Rating
Extent	Local	Medium
Magnitude	Medium	High
Duration	Long term	High
Probability	Probable	
Confidence	Sure	
Reversibility	Irreversible	
Recommended Maximization measures	Proactively; iii. Market SGR as a means of commuting iv. Manage cost of commuting	
Implication to The Port City of Mombasa	Increased hotel occupancy and tourism related activities resulting in increased revenue for the County	

Source: Research Data (2019)

10.3.2 Decongesting Mombasa City

During Stakeholders engagement and evaluation of the data collected, analyzed and presented, it was clear that there is a notable decrease in the number of trucks carrying containers to and from the port of Mombasa. Due to the reduced number of trucks in County of Mombasa roads accessing the port through Changamwe, Port-Reitz, Docks and Shimanzi. This has seen a gradual reduction in congestion and traffic snarl-ups in the town and result in improved flow of traffic.

Table 10.2: Decongestion of Mombasa City

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Long term	High
Probability	Probable	
Confidence	Sure	
Reversibility	Reversible (due to population increase)	
Recommended Maximization measures	ii. Reroute traffic from CBD	
Implication to The Port City of Mombasa	A clean city with smooth flow of traffic, and increased productive man-hours	

Source: Research Data (2019)

10.3.3 Environmental Protection

On greenhouse Gas Emission reductions, SGR carriage is a savior in the sense that one trip can carry approximately 108 TEUs which is equivalent to almost a 60 – 80 trucks on the road. This huge reduction in road traffic will reduce distillate consumption, potentially augmenting climate change management initiatives. It will also increase safety on the roads due to reduced traffic.

Table 10.3: Environnent Protection

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	low
Duration	Long term	High
Probability	Definite	
Confidence	Certain	
Reversibility	Irreversible	
Recommended Maximization measures	ii. Enact policies to manage pollution and environmental protection	
Implication to The Port City of Mombasa	A health population with a clean environment	

Source: Research Data (2019)

10.4 Negative Impact

Analysis of the results of this study show that there is a negative effect resulting from operationalization of SGR in Port City of Mombasa. Table 10.4 to Table 10.19 summaries of the positive impact, their magnitude, and probability of occurrence as well as the implication to Port City of Mombasa. These negative effect/impact are assessed on the basis of the study objectives that guided this study.

10.4.1 Road Truckers Collective Redundancies

Critically, collective redundancies experienced by road truckers as well as job losses were predominantly identified through fieldwork and through focus group discussions. It is apparent that road truckers were already experiencing challenges due to low cargo uptake. They reported a level of idle capacity resulting into restructuring and downsizing consequently resulting into job losses.

Table 10.4: Road Truckers Collective Redundancies/Job Losses

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Long term	High
Probability	Probable	
Confidence	Certain	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively; i. Attract alternative investment options, like SEZ ii. Engage with Government to allow market forces to operate	
Implication to the Port City of Mombasa	Increased unemployment, and reduced purchasing power in the county.	

Source: Research Data (2019)

10.4.2 Closure of Trucking Businesses

The second critical negative impact of operationalization of SGR in Port City of Mombasa is the closure of once vibrant businesses. Due to low business and inability to meet their business obligations many small and small and micro enterprises have scaled down their operations or closed down altogether. The bigger firms such as trucking firms and Container Freight Stations are faced with the challenge of maintaining a healthy balance sheet in the reality of dwindling revenues.

Through the focus group discussions, it was evident that these firms have challenges in servicing of debts and meeting their payroll obligations while they remain afloat. It was apparent some financial institutions had already initiated recovery processes towards seizing the trucks for possible auctioning to recover the loans. Table 10.5 analyses this impact, recommending mitigation measures and implication to Port City of Mombasa.

Table 10.5: Road Truckers - Closure of Businesses

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Long term	High
Probability	Probable	
Confidence	Certain	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively: i. Attract more cargo to the port of Mombasa ii. Engage with Government to allow market forces to operate	
Implication to the Port City of Mombasa	Direct loss of revenue (levies and SBP), increased unemployment resulting in antecedent social ills (crime, drug use, poverty, prostitution)	

Source: Research Data (2019)

10.4.3 Impact on Warehousing Business

On the effect operationalization of SGR in Port City of Mombasa on warehousing businesses, there has been contraction in cargo volumes awaiting transportation to Nairobi as it has always been due to evacuation of cargo directly to ICD- Nairobi. Table 10.6 analyses this impact, recommending mitigation measures and the implication to Port City of Mombasa.

Table 10.6: Warehousing - Relocations

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	Medium	Medium
Duration	Short term	medium
Probability	Probable	
Confidence	Certain	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively; i. Attract alternative investments to Mombasa (like industrial parks) ii. Attract more cargo to the port of Mombasa iii. Engage with Government to allow market forces to operate	
Implication to the Port City of Mombasa	Direct loss of revenue (levies and SBP)	

Source: **Research Data (2019)**

Due to this, there has been an accelerated disuse of Warehousing capacity in Port City of Mombasa. During the focus group discussions, Kenya International Warehousing Association (KIFWA) reported that their members were already retrenching on account of reduced work activity and some relocating to Nairobi. Table 10.7 analyses this impact, recommending mitigation measures and implication to Port City of Mombasa.

Table 10.7: Warehousing - Job Losses

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Medium term	medium
Probability	Probable	
Confidence	Certain	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively; i. Attract alternative investments to Mombasa (like industrial parks) ii. Attract more cargo to the port of Mombasa iii. Engage with Government to allow market forces to operate	
Implication to the Port City of Mombasa	Increased unemployment, and reduced purchasing power at the county level.	

Source: Research Data (2019)

KIFWA recorded a membership decrease from 600 to 400 members for the last six months of reporting. Further, the reality of divesture by investors in the warehousing business in no longer a mirage but the sure way. Through the stakeholder's engagement forums, a number of investors in warehousing business indicated that they are considering options to divest to other lines of business. Table 10.8 analyses this impact, recommending mitigation measures and implication to Port City of Mombasa.

Table 10.8: Warehousing Investors

Criteria	Category	Impact score Rating
Extent	Regional	Low
Magnitude	medium	Medium
Duration	Medium term	Medium
Probability	Probable	
Confidence	Certain	
Reversibility	Reversible if modal changed	
Recommended Mitigation measures	Proactively, i Attract more cargo to the port of Mombasa ii Engage with Government to allow market forces to operate	
Implication for the Port City of Mombasa	Increased unemployment, and possible reductions in revenue	

Source: Research Data (2019)

10.4.4 Roadside Businesses – Activity Contraction

On the effect operationalization of SGR in Port City of Mombasa on roadside businesses (traders, small hotels and kiosks), contraction of business activities as a result in downsizing of direct employment provided by firms in the cargo storage and logistics sector. This sector provides a significant indirect employment creating massive ripple effect and impetus on the informal sector growth. Due to reduced activities in these micro enterprises, some have already been adversely affected, recording very low revenue growth. It is projected that the negative impact will escalate as more cargo continues to be evacuated through SGR from Mombasa. Table 10.9 analyses this impact, recommending mitigation measures and implications to Port City of Mombasa.

Table 10.9: Roadside Businesses – Business Activity Contraction

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Medium term	High
Probability	Definite	
Confidence	Certain	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively; i. Attract new investments to the county ii. Engage with Government to allow market forces to operate	
Implication for the Port City of Mombasa	Increased unemployment, and direct loss of revenue. Social ills likely to increase.	

Source: Research Data (2019)

Roadside businesses closure has been reported and this study documents this reality. Due to the dependency of the roadside businesses on the cargo storage and logistics sector, it is evident from the findings of this study that many of these businesses are headed to closure due to decreased level of activity and revenues occasioned by reduction in customers. Job losses in cargo storage and logistics sector reduces customer purchasing power deterring sustainable performance of the business. Table 10.10 analyses this impact, recommending mitigation measures and the implication to Port City of Mombasa.

Table 10.10: Roadside Businesses - Closure of Business

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Medium term	High
Probability	Definite	
Confidence	Certain	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively; i. Attract new investments to the county ii. Engage with Government to allow market forces to operate	
Implication to the Port City of Mombasa	Increased unemployment, and direct loss of revenue. Social ills likely to increase.	

Source: **Research Data (2019)**

10.4.4 Container Freight Stations Relocation/Closure

Table 10.11 analyses the impact of SGR operationalization in Port City of Mombasa on Container Freight Stations (CFSs) particularly on the possibility of their closure and relocation. A number of players during the focus group discussions indicated they are already sourcing for space in Nairobi near the ICD to relocate. This will render the CFSs facilities in Mombasa into disuse.

Table 10.11: Container Freight Stations - Relocations

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Long Term	High
Probability	Probable	
Confidence	Sure	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively; i. Engage with Government to allow market forces to operate. ii. Allow CFSs to clear cargo at Mombasa, and deliver to SGR cleared/duty paid cargo for haulage	
Implication to the Port City of Mombasa	Direct loss of revenue (SBP, levies), increase of unemployment.	

Source: Research Data (2019)

On collective redundancies in CFSs as informed by this study, it is estimated that the 20 CFSs operating in Port City of Mombasa are currently employing an estimated 4000 people. During focus group discussions, a number of CFSs reported handling 75 percent of the cargo they handled before operationalization of SGR in Port City of Mombasa. Table 10.12 analyses the impact caused by collective redundancies.

Table 10.12: Container Freight Stations – Collective Redundancies

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Medium Term	High
Probability	Definite	
Confidence	Sure	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively; i. Engage with Government to allow market forces to operate ii. Allow CFS to clear cargo and use SGR for haulage iii. Attract new investments to Mombasa	
Implication to the Port City of Mombasa	Increase of unemployment with a potential of social ills, and reduced purchasing power	

Source: Research Data (2019)

Table 10.13 analyses the impact of SGR operationalization in Port City of Mombasa on Container Freight Stations (CFSs) particularly on the possibility of their closure and relocation. Closure of business - due to low business activity, and insufficient volumes to meet operational costs, CFSs will be forced to close down their business.

Table 10.13: Container Freight Stations - Closure of Businesses

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Long Term	High
Probability	Probable	
Confidence	Sure	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively; i. Allow CFS to clear cargo and use SGR for haulage ii. Engage with Government to let market forces prevail	
Implication to the Port City of Mombasa	Increase of unemployment with a potential of social ills, and reduced purchasing power	

Source: Research Data (2019)

10.4.5 Job Losses (Loaders, Drivers, Mechanics, Shop/Hotel Attendants)

Through the findings of this study, the first culprits of operationalization of SGR in Port City of Mombasa are the loaders, drivers, mechanics and the small kiosk and small hotel stewards. There is clear evidence from the field and from focus group discussions the intensity of these job losses is spiraling. As well, The Kenya Transport Association (KTA) reported that members had already started reducing their workforce due to a decline in business activity. Table 10.14 analyses the socio-economic impact of job losses, recommending mitigation measures and the implication to Port City of Mombasa.

Table 10.14: Drivers, Loaders, Mechanics, Shop/Hotel Attendants – Job Losses

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Long Term	High
Probability	Definite	
Confidence	Certain	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively, i. Engage with Government to let market forces prevail ii. Attract alternative investments to Mombasa (like SEZ)	
Implication to the Port City of Mombasa	Increase of unemployment with a potential of social ills, and reduced purchasing power	

Source: Research Data (2019)

10.4.6 Increase in Crime Rate and Social Ills

Due to reduction or lack of purposeful employment particularly the jobs generated directly from cargo storage and container logistics operations in Port City of Mombasa. The findings of this study indicates that indeed there has been job losses amongst the small and micro enterprises in the Port City of Mombasa. This has potentially led to a marginal increase in levels of desperation amongst the youth, resulting into a spike in crime as people try hard to fend to fend off hunger and lack. Another challenge as the status quo is maintained is the increase in drug abuse which is a proven effect of unemployment largely amongst the younger generation. Table 10.15 analyses the impact caused by reduction or lack of purposeful employment post operationalization of SGR in Port City of Mombasa.

Table 10.15: Loaders, Drivers, Employees – Crime/Drug Abuse

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Medium Term	High
Probability	Probable	
Confidence	Certain	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively; i. Retrain youth for alternative employments ii. Set up advisory business incubation centers	
Implication to the Port City of Mombasa	Increase in social ills and poverty	

Source: Research Data (2019)

Another consequence of unemployment is increase in levels of prostitution. This social ill escalates with the antecedent problems, including increase in HIV infections and drug abuse. Table 10.16 analyses the impact of SGR operationalization in Port City of Mombasa on loaders, drivers and the workers in roadside businesses especially pertaining to prostitution Levels.

Table 10.15: Loaders, Drivers, Employees – Crime/Drug Abuse

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Medium Term	High
Probability	Probable	
Confidence	Certain	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively; i. Retrain youth for alternative employments ii. Set up advisory business incubation centers	
Implication to the Port City of Mombasa	Increase in social ills and poverty	

Source: Research Data (2019)

Another consequence of unemployment is increase in levels of prostitution. This social ill escalates with the antecedent problems, including increase in HIV infections and drug abuse. Table 10.16 analyses the impact of SGR operationalization in Port City of Mombasa on loaders, drivers and the workers in roadside businesses especially pertaining to prostitution Levels.

Table 10.16: Loaders, Drivers, Employees - Prostitution Levels

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Short Term	High
Probability	Definite	
Confidence	Certain	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively; i. Retrain youth for alternative employments ii. Set up advisory and business incubation centers	
Implication to the Port City of Mombasa	Increase in immorality and STI, increasing health care cost	

Source: Research Data (2019)

10.4.7 County Government Mombasa Revenue

The participants in the focus group discussions noted that an overall revenue collection was expected to decline due to a decrease in business activity and shut down of small and micro enterprises in the Port City of Mombasa. It was highlighted that this will eventually affect the County Integrated Development Plan (CIDP) by CGM as activities will have to be scaled down to align to resource constraint. Table 10.17 analyses the impact of SGR operationalization in Port City of Mombasa revenue generating potential.

Table 10.17: County Government of Mombasa Revenues - Revenue Generation

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Medium Term	High
Probability	Definite	
Confidence	Certain	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively; i. Engage with Government for increase investment in Mombasa ii. Negotiate for shared revenue with KPA based on cargo volumes iii. Attract new investments	
Implication to the Port City of Mombasa	Slowed growth rate and failure to meet the CIDP objectives	

Source: Research Data (2019)

The findings of this study indicate that there are job occasioned by into operationalization of SGR in Port City of Mombasa. Relocation of businesses and reduction in business activities by trucking firms, warehousing firms and CFSs Job losses resulting into lifestyle downgrade, relocations and house desertions. When real estate developments encounter a disturbance, the effect is further job losses and revenue losses to CGM. Table 10.18 analyses the impact of operationalization of SGR in Port City of Mombasa on CGM revenues in regard to real estate and housing uptake.

Table 10.18: CGM Revenues - Low Housing Uptake

Criteria	Category	Significance Rating
Extent	Local	High
Magnitude	High	High
Duration	Medium Term	High
Probability	Probable	
Confidence	Certain	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively; i. Engage Government to allow market forces to prevail	
Implication to the Port City of Mombasa	Stagnation in the real estate sector, and reduced rental incomes resulting in low purchasing power and poverty	

Source: Research Data (2019)

As presented in this study, the overall CGM revenues have continued to grow courtesy of the automation processes and other interventions to increase compliance levels in in revenue collection. However this should not be construed to mean there is no effect of operationalization of SGR in Port City of Mombasa. Indeed, through the focus group discussions, the evidence was presented candidly by different stakeholders that many small (micro enterprises) and big (CFSs, Trucking, Warehouses) firms are affected. The field work data also confirms as much. Closing down of businesses denies the county of a critical revenue stream through the SBP revenues. If the county in this scenario adjusts the tariff to attract investment, it will further reduce CGM revenues worsening the situation. Table 10.19 provides the impact of this critical and delicate situation.

Table 10.19: CGM Revenues - Small Business Permits Uptake

CRITERIA	CATEGORY	SIGNIFICANCY RATING
Extent	Local	High
Magnitude	High	High
Duration	Medium Term	High
Probability	Probable	
Confidence	Certain	
Reversibility	Reversible (if modal changed)	
Recommended Mitigation measures	Proactively; i. Engage Government to allow market forces to prevail	
Implication to the Port City of Mombasa	Proactively; Attract new investments	

Source: Research Data (2019)

11.0 CONCLUSIONS AND RECOMMENDATIONS

11.1 CONCLUSION

The Government of Kenya (GOK) has in the recent past invested heavily in word class infrastructure with one of the key flagship projects completed in the Second Infrastructure Medium Term Plan (MTP) (2013-2017) arrangement being the Standard Gauge Railway (SGR) Project - the most important railway channel in Kenya infrastructure. The SGR project remains indispensable, therefore, it is necessary and is determined as an "irreversible" investment in this assessment study report.

This assessment report on the SEI of the operationalization of the SGR on the port city of Mombasa identifies a series of serious and unique, positive and negative social and economic impacts that are likely to be significant (scoping) and thereafter undertaken their assessment in detail. In this screening and scoping process it has been determined that the project meets a threshold requirement of a Finding of Significant Impacts (FOSI). However, noting that a number of the established impacts can be mitigated, a major recommendation measure is the need for establishment of a comprehensive engagement and action plan (CEAP) to address the implementation of the mitigation exercise.

This study process identified the significant positive social and economic impacts as having included increase in tourism promotion, ease in congestion of traffic in the Port city (snarl ups), and increased environmental protection through reduction in distillate consumption. Similarly, the study found out existence of significant negative social and economic impacts including effects on the road truckers leading to collective redundancies and possible closure of trucking businesses and warehousing businesses. It was also established that there is evidence of road side activity contraction, relocation and even closures of container freight stations (CFS), significant job losses especially for the truck drivers and loaders, mechanics, shop, hotel and petrol attendants with a resultant increase crime and social ills (for example low grade prostitution increase). It was also evident that social services provisions by the County Government of Mombasa will be significantly affected due to loss on revenue collection, which will result mainly from poor uptake of small businesses permits and poor uptake of housing or absolute rental default by county tenants. Ultimately for the port city of Mombasa the delivery of the County Integrated Development Plan (CIDP) may not be realized.

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The consultant also undertook comprehensive focus group discussions and participation, engaging various groups of stakeholders who include among others, the County Government of Mombasa, relevant agencies who are members of the Mombasa Port Community Charter (MPCC), road truckers through their umbrella body the Kenya Truckers Association (KTA); warehousing business through the Kenya International Freight and Warehousing Association (KIFWA); the roadside businesses; Clearing and Freight (C&F); Container Freight Stations (CFS); and, individual drivers, loaders and people employed in related road businesses. The aim of this exercise was to collect information from interested and affected parties, solicit their views and consult on sensitive issues, in order to add value and create balanced considerations. The consultative processes were undertaken through focus group discussions, meetings, field interviews and use of questionnaires. This enabled documentation of the stakeholders concerns, capture of possible impacts raised and fair exploration on avoidance and mitigation options.

In response to the impacts identified, the consultant has proposed measures for enhancing the positive impacts as well as those to mitigate the negative factors. The impacts which have been identified by this study were found to be manageable through the adoption of the mitigating measures that have been listed in this report. Exhaustive consultation with all the major stakeholders holds the key to the acceleration and successful undertaking of the proposed actions.

In conclusion, the assessment was able to establish and bring out clarity surrounding the debates that have been on-going around the Government's directives on the operationalization of the SGR. To that extend the following issues have been empirically established and supported through this assessment study;

a) There is a very strong link between the Port and the City of Mombasa thus creating a situation of a "mutual inclusive" relationship;
b) The operationalization of the SGR and subsequent pronouncements to it has significant impacts on the key stakeholder and service providers;
c) There is impact on the provision of social services within the county and possible escalation of security concerns; and,
d) The operationalization of the SGR has impacted on the small businesses adversely.

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d) The operationalization of the SGR has impacted on the small businesses adversely.

11.2 RECOMMENDATIONS

In light of the assessment findings, the report proposes the following recommendations to be considered for action:

Recommendation No.1: Evacuation and Haulage of Cargo

The report has been able to establish that the operationalization of the standard gauge railway (SGR) and the subsequent pronouncements by the National Government on having all the cargo destined for upcountry to be evacuated by rails has had significant negative impacts on the key stakeholder and service providers who are members of the Mombasa Port Community Charter or operating as auxiliary businesses in the Port City.

The report therefore recommends that the County Government on behalf of its business community members engages the National Government for a policy/legislative alignment that will allow market forces to operate freely to create a sustainable environment for other sector stakeholders and SGR.

Recommendation No. 2: Port Governance

Different Models exist for the governance of Ports world over. Among the models identified during the study were the following: Management of ports through Port Authorities (PA) which are placed under respective ministries (this applies best where National Interests exceeds regional interests); Port Authorities with hybrid approach having a shared value organization model (Treated as public entity - private interests); a new institutional structure of Corporatization has also emerged whereby PA acts beyond activities of the landlord ensuring all actor's in the ecosystem create more value at the port; and lastly are the models that treat ports as a department of the local Council Government.

Given the National interest of the Port of Mombasa, the study recommends that the County Government of Mombasa considers joining the Mombasa Port Community Charter (MPCC) as a key interested party under the Landlord Policy Framework (LPF) for PA Governance and establish their clear roles in the activities of the port.

Recommendation No. 3: County Revenues

Due to the establishment of a very strong relationship link between the Port and the City of Mombasa herein referred to as a "mutual inclusive relationship", the study was able to determine that the revenue stream for the CGM has a clear connection with the rail haulage. The major areas of direct negative impact if the process were to remain without mitigation as found out included the single business permits, number of business contraction and closures and increased pressure on delivery of the County's integrated development agenda. This has potential to also escalate the social impacts namely crime increase and other social ills, low grade prostitution and low housing uptakes.

The study recommends that to mitigate the eminent depletion in GCP as result of cargo evacuation, County Government of Mombasa may negotiate for additional funding from National Government during revenue allocation processes. Secondly, the CGM can also engage the port authority (KPA) and negotiate for an appropriate throughput based levy funding model.

Recommendation No. 4: Citizenry and Small Scales Traders

As demonstrated in the report the most affected if the situation persist are the citizenry of the Port City and closer counties, especially those who have been depending on the activities around the port area. As evidenced by reduced activities around Shimanzi area and reduced left turn of human traffic out of the Likoni ferry – the impacts are already evident. Garages, small kiosks and hotels, truck drivers, loaders, petrol attendants among other auxiliary services are the biggest hit with majority facing eminent economic inadequacies.

To this extend the study recommends that the National Government considers fast tracking avenues for alternative investments. The options to be consider can be categorized to vary from short term to medium term and ultimately long term mitigations. The short term measures can include small areas development for special economic zones (SEZ) which can attract local investments and/or easily facilitated projects, encourage those with yards to consider industrial parks among others to stir up employment.

Recommendation No. 5: Truckers and Road Side Businesses

As was mentioned earlier based on the study findings, the National Government of Kenya has its obligations to the people of Kenya in terms of service delivery and uptake of labour including creating enabling environment for businesses to thrive. To this extend and related to the operationalization of the standard gauge railway, the Government will need to look at some of the areas of mitigation that can support the Port city together with the residents in pursuing their economic welfare.

The study in line with that recommends the following;

5.1 In the medium and long term periods, fast tracking the Dongo Kundu SEZ project and also provision of investment incentives for uptake and development of potential industrial parks that can create immediate avenues for new employment;

5.2 Reviewing the application of the Rail levy policy especially with a view of widening the tax base for the same to include other sector players currently not included.

5.3 Special consideration in the development of passenger transport which has demonstrated very positive impacts on tourism at the local levels mainly be considered. To this effect the National Government can consider the passenger train termination to be extended to old Railway Station through inter connectivity.

Recommendation No. 6: Regional Development

The Port city of Mombasa remains a major socio-economic player in Kenya. It hosts the primary resource of the Port of Mombasa and plays a critical role in trade, investment, environmental protection, tourism, education, cultural exchange and health of the coastal region as a whole. To this extend and to support the Jumuiya ya Kaunti za Pwani (JKP) which is an economic block bringing together the six Coast counties in Kenya namely, Mombasa, Kwale, Taita-Taveta, Kilifi, Lamu and Tana River the study recommends the following;

6.1 Promoting agriculture, investing and enhancing livestock production, fisheries, manufacturing, among others.

6.2 Restoration of Mombasa as a Port City for export rather than import as is envisage in the County Integrated Master Plan; and

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6.2 Restoration of Mombasa as a Port City for export rather than import as is envisage in the County Integrated Master Plan; and

6.3 Establish a joint County and National Government development caucus to implement infrastructure and social development with a joint monitoring and evaluation (M&E) system.

11.3 RECOMMENDED AREAS FOR FURTHER ACTION

In addition to the full assessment report presented, this report proposes the following as areas for further assessment and action.

11.3.1 The socio-economic impact of the operationalization of the SGR on all towns along the Mombasa-Malaba corridor (Northern Corridor in Kenya);

11.3.2 Spatial distribution study on the port city of Mombasa post SGR operationalization;

11.3.3 Review the SEZ feasibility reports for possibility of shortening projects time-lines to create mitigation effects during transition period (now and full realization period).

11.3.4 The post SGR operationalization on the provision of social services by the County Government of Mombasa.

11.3.5 Impact of other infrastructural improvement on the socio-economic status of Mombasa

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APPENDICES

Appendix I: Questionnaire – Trucking Firms

Research Study: Assessment Study on Socio-Economic Impact of Operationalization of the Standard Gauge Railway on the Port City of Mombasa

Client: County Government of Mombasa (CGM)

Serial No.				

Location/Region of Study.....

Receive greetings from University of Nairobi and County Government of Mombasa.

We are conducting a research study on the Socio-Economic impact of the operationalization of SGR in Mombasa County. To achieve this, all the stakeholders have been identified to help in understanding the socio-economic impact of SGR operationalization in Mombasa County.

You have therefore been identified as one of the respondents to participate in this study. Your assistance in realizing the objectives of this study is highly appreciated. Your responses will be treated with utmost confidentiality.

Name.....

Respondent Phone No (optional).....

Date ...../...../2018 (dd/mm)

Keyed in by .....Date entered...../...../2018

Kindly answer each of the following questions where applicable and where choices are provided; kindly cross or tick in one of the boxes appropriately.

1. Name of company.....
2. Indicate the year you started operating.....
3. How many employees do you have (where applicable) .....
4. Please indicate the association where you are a member if any.

   a. .....
   b. .....

5. In which countries do you operate in volume and fleet?

Country	Volume		Fleet
	Exports	Imports	
Kenya			
Uganda			
Rwanda			
Burundi			
South Sudan			
DRC			

6. What is the internal cost of transporting a 20ft and 40ft from Mombasa to the following destinations?

Segment	20FT (USD)	40FT (USD)
Mombasa – Nairobi		
Mombasa – Nairobi-Kisumu		
Mombasa-Nairobi-Eldoret		
Mombasa-Nairobi-Eldoret-Malaba-Kampala		
Mombasa-Nairobi-Eldoret-Malaba-Kampala- Kigali		
Mombasa-Nairobi-Eldoret-Malaba-Kampala- Kigali-Bunjumbura		

7. Unallocated Cargo-Volumes and revenue

(i) What is the number of unallocated containers that you transport in the last six (6) months .....

(ii) What percentage of the total cargo you transport is from unallocated cargo allocated to you by KPA Number of containers in a year.....

8. Unallocated Cargo-Asset deployment and staffing

(i) How many employees do you have in your company.....

(ii) How many employees in your company deal with unallocated cargo.....

(iii) Of your total trucks, how many generally transport the unallocated cargo .....

(iv) How much do you spend annually in repairs and maintenance for your trucks.....

(v) How much do you pay for loans annually to the local banks.....

9 Operationalization of SGR How is operationalization of SGR in Mombasa County impact or not impact your business

(i) .....
(ii) .....
(iii) .....

10. Have you entered into a contract with any of the following?

- Freight forwarder [ ]
- Shipping Line [ ]
- Cargo Owner [ ]

What is the nature of agreements entered?

.....
.....
.....

11. What strategies have you adopted to remain competitive in your industry?

(i) .....
(ii) .....
(iii) .....

12. Do you foresee any opportunities of collaboration with the SGR?

Yes [ ] No [ ]

If yes, which are these opportunities?

(i) .....
(ii) .....
(iii) .....

13. Do you agree that EAC and other regional Free Trade Areas (FTAs) provides an opportunity to widen the market for the road and other modes of transport in the Eastern Africa region?

Yes [ ] No [ ]

14. What are the challenges that you feel need to be addressed in the short-term and long-term in order to provide an enabling environment for road transport along the Northern Corridor:

Short-term

(i) .....
(ii) .....
(iii) .....

Long-term

(i) .....
(ii) .....
(iii) .....

~~Thank you for taking your time to complete this questionnaire~~

Appendix II: Questionnaire –Roadside Businesses (Small Kiosks/Hotels/Traders)

Research Study: Assessment Study on Socio-Economic Impact of Operationalization of the Standard Gauge Railway on the Port City of Mombasa.

Client: County Government of Mombasa (CGM)

Serial No.				

Location/Region of Study.....

Receive greetings from University of Nairobi and County Government of Mombasa.

We are conducting a research study on the Socio-Economic impact of the operationalization of SGR in Mombasa County. To achieve this, all the stakeholders have been identified to help in understanding the socio-economic impact in Mombasa.

You have therefore been identified as one of the respondents to participate in this study. Your assistance in realizing the objectives of this study is highly appreciated. Your responses will be treated with utmost confidentiality.

Name.....

Respondent Phone No (optional).....

Date ...../...../2018 (dd/mm)

Keyed in by .....Date entered...../...../2018

Kindly answer each of the following questions where applicable and where choices are provided; kindly cross or tick in one of the boxes appropriately.

1. Name of company.....
2. Indicate the year you started operating.....
3. How many employees do you have (where applicable) .....
4. Please indicate the association where you are a member, if any.
   a. .....
   b. .....
   c. None.....
5. Please indicate the turnover in **percentage** your business is experiencing now compared to turnover before **operationalization of SGR in Mombasa County.**

   Turnover (Post SGR Operationalization): .....
6. If the status-quo remain, please explain what you think will happen in future concerning employment and jobs in Mombasa County.

a. .....
b. .....
c. .....

7. What challenges do you encounter currently in doing your job as a roadside business operator? (please explain)

(a.) .....
(b.) .....
(c.) .....

8. In your own opinion how do you think the above challenges can be mitigated in the (a.) short run and (b.) in the long-run to protect businesses in Mombasa County.

(a.) In the Short-run

i. .....
ii. .....
iii. .....

(b.) In the Long-run

i. .....
ii. .....
iii. .....

9. Please indicate your agreement or disagreement with the following statements relating your business performance and operationalization of SGR in Mombasa County. Please tick the appropriate box where 5-Strongly Agree; 4-Agree; 3-Sometimes; 2-Disagree; 1-Strongly Disagree. There are no right and wrong answers, just express your opinion.

No.	Statement	Strongly	Disagree	Sometimes	Agree	Strongly Agree
1.	My business has not been affected in any way since the operationalization of SGR in Mombasa County.	1	2	3	4	5
2.	My Business sales have largely remained unchanged since the operationalization of SGR in Mombasa County.	1	2	3	4	5
3.	Our business has been growing as planned for the last eight (8) months since the beginning of operationalization of SGR in Mombasa County.	1	2	3	4	5

4.	The future prospects of our business in terms of turnover and survival is positive and promising.	1	2	3	4	5
5.	The revenue growth of my business has been affected for the last eight (8) months.	1	2	3	4	5
6.	I can positively link the change of turnover in my business to the operationalization of SGR in Mombasa County.	1	2	3	4	5
7..	At the level my business is operating, it will be possible to meet all the financial obligations (e.g. rent, rates, loans, salaries) in the near future.	1	2	3	4	5

10. Please indicate how you would describe the following social issues in the society within Mombasa County in the face of operationalization of SGR in Mombasa County. Please tick the appropriate box where 5-Best Ever; 4-Good; 3-Somewhat; 2-Worse; 1-Worst Ever. There are no right and wrong answers, just express your opinion.

No.	**Statement**	**Worst Ever**	**Worse**	**Somewhat**	**Good**	**Best Ever**
1.	Employment Opportunity	1	2	3	4	5
2.	Security Concerns	1	2	3	4	5
3.	Prostitution	1	2	3	4	5
4	Desperation and Hopelessness amongst youth	1	2	3	4	5
5.	Drug and alcohol abuse	1	2	3	4	5
6.	Family Stress	1	2	3	4	5

~~Thank you for taking your time to complete this questionnaire~~

Appendix III: Questionnaire – Loaders and Drivers

Research Study: Assessment Study on Socio-Economic Impact of Operationalization of the Standard Gauge Railway on the Port City of Mombasa

Client: County Government of Mombasa (CGM)

Serial No.				

Location/Region of Study.....

Receive greetings from University of Nairobi and County Government of Mombasa.

We are conducting a research study on the Socio-Economic impact of the operationalization of SGR in Mombasa County. To achieve this, all the stakeholders have been identified to help in understanding the socio-economic impact in Mombasa.

You have therefore been identified as one of the respondents to participate in this study. Your assistance in realizing the objectives of this study is highly appreciated. Your responses will be treated with utmost confidentiality.

Name (optional).....

Respondent Phone No (optional).....

Date ...../...../2018 (dd/mm)

Keyed in by .....Date entered...../...../2018

Kindly answer each of the following questions where applicable and where choices are provided; kindly cross or tick in one of the boxes appropriately.

1. Please indicate the job you do
   - Driver [ ]
   - Loader [ ]
   - Mechanic [ ]
   - Others (specify) .....
2. Please Indicate the year you started doing this job.....
3. Please indicate your location within Mombasa County where you operate from. .....
4. How much money (in KShs) do you make in a day's work:

(a.) Before introduction of SGR

0 - 500 [ ]
501- 1000 [ ]
1001 - 2000 [ ]
2001 - 3000 [ ]
Above 3000 [ ] Specify.....

(b.) After introduction of SGR

0 -	500	[ ]
501-	1000	[ ]
1001 -	2000	[ ]
2001 -	3000	[ ]
Above	3000	[ ] Specify.....

5. If the status-quo remain, please explain what you think will happen in future concerning employment and jobs in Mombasa County.

   a. .....
   b. .....
   c. .....

6. What challenges do you encounter currently in doing your job as a driver/loader? (please explain)

   a. .....
   b. .....
   c. .....

7. In your own opinion how do you think the above challenges can be mitigated in the (a.) short run and (b.) in the long-run to protect businesses in Mombasa County?

   (a.) In the Short-run

   i. .....
   ii. .....
   iii. .....

   (b.) In the Long-run

   i. .....
   ii. .....
   iii. .....

8. Please indicate your agreement or disagreement with the following statements relating to the work you do and in relation to operationalization of SGR in Mombasa County. Please tick the appropriate box where 5-Strongly Agree; 4-Agree; 3-Sometimes; 2-Disagree; 1-Strongly Disagree. There are no right and wrong answers, just express your opinion.

No.	Statement	Strongly Disagree	Disagree	Sometimes	Agree	Strongly Agree
1.	My job has not been affected in any way since the operationalization of SGR in Mombasa County.	1	2	3	4	5
2.	Income from my job has largely remained unchanged since the operationalization of SGR in Mombasa County.	1	2	3	4	5

3.	The future prospects of my job in terms of employment guarantee and survival is positive and promising.	1	2	3	4	5
4.	My employer has consistently been paying me on time for the last eight (8) months.	1	2	3	4	5
5.	I can positively link the changes of opportunities and job prospects to the introduction of SGR in Mombasa County.	1	2	3	4	5
6.	I can positively link the layovers of my colleagues to changes in cargo transported by roads occasioned by operationalization of SGR in Mombasa County.	1	2	3	4	5
7.	At the level transporters are operating, they will be able to maintain employees and meet their salary demands.	1	2	3	4	5

9. Please indicate how you would describe the following social issues in the society within Mombasa County in the face of operationalization of SGR in Mombasa County. Please tick the appropriate box where 5-Best; 4-Good; 3-Somewhat; 2-Worse; 1-Worst Ever. There are no right and wrong answers, just express your opinion.

No.	Statement	Worst Ever	Worse	Somewhat	Good	Best Ever
1.	Unemployment rate	1	2	3	4	5
2.	Crime rate	1	2	3	4	5
3.	Prostitution	1	2	3	4	5
4	Desperation and Hopelessness amongst youth	1	2	3	4	5
5.	Drug and alcohol abuse	1	2	3	4	5
6.	Family Stress	1	2	3	4	5

~~Thank you for taking your time to complete this questionnaire~~

Appendix IV: Focus Group Discussion – Trucking Firms

Appendix IV (a.): Social Issues - CGM Executive

i. Familiarity with the Government Directive on Evacuation of unallocated Cargo from the port of Mombasa by SGR.

ii. Discussion on the positive outcomes of social nature from this directive.

iii. Discussion on the negative attributes or outcome of a social nature from this directive.

iv. Likely social impacts in the short, medium and long term with reference to: e.g. a) Job creation or loss; b) Age and gender groups affected; c) Transfer of workers and relocation of populations; d) Other (please specify). If possible, please distinguish between the likely impacts

v. Under the national legal framework(s) and the County CIDP – Impact of operationalization of SGR on the port city of Mombasa in term of: a) Number of jobs; b) Age and gender groups affected; c) Other specific consequences, such as collective redundancy, transfer of workers to other companies or services, re-training, early retirement, etc.

vi. Sectors affected or likely to be affected most from a social perspective in relation to the directive, with support for the suggestions.

vii. Employment situation in firms (specifics) and sectors likely to suffer from the SGR Operationalization in Port City of Mombasa, if any.

viii. Effect on budgets cuts by firms/sectors in relation to provision of services in the sector (Logistics, Warehouses, CFSs, SMEs, Truckers, etc.). Address issues such as: a) Number of jobs (demographics), and other specific consequences (e.g. collective redundancy, transfer, re-training, retirement); b) Levels and evolution of wages; c) Types of contracts and working conditions.

ix. Whether current level and structure of employment in firms in terms service delivery in the sector you are familiar with are optimal (efficient)? Social situation with continued operationalization of SGR in Port City of Mombasa.

Appendix IV (b.): Economic Issues - CGM Executive

i. Familiarity with the Government Directive on Evacuation of unallocated Cargo from the port of Mombasa by SGR.

ii. Discussion on the positive outcome of economic nature from this directive.

iii. Discussion on the negative outcome of an economic nature from this directive.

iv. Key economic drivers of the county Government of Mombasa.

v. Likely impacts in the short, medium and long term with reference to identified economic factors.

vi. Symptoms and Impact on a) Tariff collections, b) Revenue Streams, c) Mandate, d)Transfer of labour and relocation of populations, e) Others. Specifying the likely impacts.

vii. Under national legal framework(s) and the County CIDP, – Impact of operationalization of SGR on the port city of Mombasa in term of: a) economic cycles e.g. revenue collections, b) inflation, c) Other specific consequences, such as collective redundancy, transfer of workers to other companies or services, re-training, early retirement, etc.

viii. Sectors affected or likely to be affected most from an economic perspective with regards to the directive, with support for the suggestions.

ix. Effect on budgets cuts by firms/sectors in relation to provision of services in the sector (Logistics, Warehouses, CFSs, SMEs, Truckers, etc.). Address issues such as: a) Number of jobs (demographics), and other specific consequences (e.g. collective redundancy, transfer, re-training, retirement); b) Levels and evolution of wages; c) Tariff and revenue stream.

x. Is the current level and structure of employment in the companies in relation to provision of services in the sector you are familiar with are optimal (efficient)? If not, what are the reasons? Will they be affected by continued operationalization of SGR in the Port City of Mombasa?

Appendix V: Focus Group Discussion Guide – KIFWA

Appendix V (a.): Social Issues - KIFWA

i. Familiarity with the Government Directive on Evacuation of unallocated Cargo from the port of Mombasa by SGR.

ii. Warehousing, logistics and C&F activities have been cited and highlighted as a key social driver of the Port City of Mombasa economy. Highlight any positive/negative outcome of social nature in the advent of SGR Operationalization in Port City of Mombasa to clearing and forwarding firms, logistics firm and warehousing firms.

iii. Social areas of operations of CGM relative to logistics, warehousing and C&F affected in the short, medium and long term. (Need a quantifiable picture of this impact).

iv. Using national legal framework(s) and the County CIDP – Impact of operationalization of SGR on the port city of Mombasa in term of: a) Relocation of Warehousing, C&F activities; b) Reduced activities; c) Divesture; d) Downsizing/Rightsizing; e) CGM Revenue Collections and any other (please specify). Distinguish the likely impacts.

v. Impact of operationalization of the SGR in the Port City of Mombasa on Logistics, Warehousing and C&F firms with regard to: Number of jobs, Age and gender groups affected, (e.g. collective redundancy, transfer, re-training, retirement), transfer of workers and relocation of populations, levels and evolution of wages.

vi. Addressing the social perspectives identified and that affect the performance of the Port City of Mombasa and her economy. (Suggestions need be supported).

vii. Whether current level and structure of employment in firms in terms service delivery in the sector you are familiar with are optimal (efficient) and sustainable. Situation if operationalization of SGR in Port City of Mombasa continues.

Appendix V (b.): Economic Issues - KIFWA

i. Familiarity with the Government Directive on Evacuation of unallocated Cargo from the port of Mombasa by SGR.

ii. Warehousing, logistics and C&F activities have been cited and highlighted as a key economic driver of the Port City of Mombasa. Highlight any positive/negative outcome of economic nature as a result SGR Operationalization in Port City of Mombasa to Clearing and Forwarding firms, Logistics firm and warehousing firms.

iii. Likely impacts in the short, medium and long term with reference to identified economic factors.

iv. Under national legal framework(s) and the County CIDP; – Impact of operationalization of SGR on the port city of Mombasa in term of: a) Relocation of Warehousing, C&F activities; b) Reduced activities; c) Divesture; d) Downsizing/Rightsizing; e) CGM Revenue Collections and any other (please specify).

v. Economic Impact of operationalization of the SGR in the Port City of Mombasa on Logistics, Warehousing and C&F firms (Describe and support).

vi. Effect of SGR Operationalization in Port City of Mombasa on provision of services in the sector (Logistics, Warehouses, CFSs, SMEs, Truckers, etc.). Address issues such as: a) Number of jobs (demographics), and other specific consequences (e.g. collective redundancy, transfer, re-training, retirement); b) Levels and evolution of wages; c) Tariff and revenue stream.

vii. Whether current level and structure of employment in firms in terms service delivery in the sector you are familiar with are optimal (efficient) and sustainable. Paint economic situations if operationalization of SGR in Port City of Mombasa continues.

Appendix VI: Focus Group Discussion Guide – CFSA and KTA

Appendix VI (a.): Social Issues (CFSA and KTA)

i. Familiarity with the Government Directive on Evacuation of unallocated Cargo from the port of Mombasa by SGR.

ii. Discussion on the positive outcome of social nature from this directive.

iii. Discussion on the negative attributes or outcome of a social nature from this directive.

iv. Likely social impact in the short, medium and long term in relation to: a) Relocation of members; b) Reduced association activities; c) Divesture; d) Downsizing/right sizing; d) Port city of Mombasa. If possible, please distinguish between the likely impacts.

v. In reference to national legal framework(s) and the County CIDP. Consequences of operationalization of SGR in the port city of Mombasa in terms of: a) Number of jobs; b) Age and gender groups affected; c) Other specific consequences, such as collective redundancy, transfer of workers to other companies or services, re-training, early retirement, etc.

vi. With reasons, whether current level and structure of employment in firms in terms service delivery in the sector you are familiar with are optimal (efficient)? Situation with continued operationalization of SGR in Port City of Mombasa.

vii. Areas thought to be affected by social perspectives identified and discussed. Effect on the future performance of the Port City of Mombasa.

viii. Suggestions for counter initiatives - solutions and mitigation

Appendix VI (b.): Social Issues (CFSA and KTA)

i. Familiarity with the Government Directive on Evacuation of unallocated Cargo from the port of Mombasa by SGR.

ii. Warehousing, logistics and C&F activities have been cited and highlighted as a key economic driver of the Port City of Mombasa. Highlight any positive negative outcome of economic nature as a result SGR Operationalization in Port City of Mombasa to Clearing and Forwarding firms, Logistics firm and warehousing firms.

iii. Likely impacts in the short, medium and long term with reference to identified economic factors.

iv. Under national legal framework's) and the County CIDP; Consequences in terms of: a) Relocation of Warehousing, C&F activities: b) Reduced activities: c) Divesture; d) Downsizing/Rightsizing; e) CGM Revenue Collections and any other (please specify).

v. Areas thought to be affected by economic perspectives identified and discussed. Effect on the future performance of the Port City of Mombasa.

vi. Economic Impact of operationalization of the SGR in the Port City of Mombasa on Logistics, Warehousing and C&F firms (Describe and support).

vii. Effect of SGR Operationalization in Port City of Mombasa on provision of services in the sector (Logistics, Warehouses, CFSs, SMEs, Truckers, etc.). Address issues such as: a) Number of jobs (demographics), and other specific consequences (e.g. collective redundancy, transfer, re-training, retirement): b) Levels and evolution of wages; c) Tariff and revenue stream.

viii. Whether current level and structure of employment in firms in terms service delivery in the sector you are familiar with are optimal (efficient) and sustainable. Paint economic situations if operationalization of SGR in Port City of Mombasa continues.

ix. Suggestions for counter initiatives - solutions and mitigation

Appendix VII: Terms of Reference

Title: Assessment Study on Socio-Economic Impact of Operationalization of the Standard Gauge Railway on the Port City of Mombasa

Background Information

The Standard Gauge Rail (SGR) project was undertaken and completed by the Government of Kenya within schedule in mid-2017. In January 2018, a pilot container cargo trucking by road begun and in February 2018 evacuation by SGR commenced. In view of the fact that very few of the stakeholders booked cargo on SGR, a directive was issued by way of giving SGR exclusivity of evacuating none allocated container cargo from Mombasa Port.

The completion of the Standard Gauge Railway which is a flagship project is the hallmark of the country's expansion and interconnectedness strategy. It has however posed increased challenges during and after its operationalization among them the resultant effect on the County of Mombasa especially on its economic and social activities. This heightened with the Government's pronouncement requiring shipping agents to transport goods by SGR (SD, 2018) directly from the Port to the Inland Container Depot (ICD. Following this government pronouncement, stakeholders such as members of Clearing and Forwarding Warehousing Agents (KIFWA) and Container Freight Stations (CFS) and owners of Road Trucks complained of losses and inconveniences to their customers as a result of the implementation of the directive.

Mombasa County has a critical socio-economic stake in the shipping and transportation sectors due to its location. No stakeholder engagement has taken place to assess the possible downsides as a result of the Presidential directive. The County Government of Mombasa would like therefore, as the proponent and the port Landlord found it necessary to commission an assessment study on Socio-Economic Impact of operationalization of Standard Gauge Railway (SGR) on port city of Mombasa in order to fully understand its impact on the business community, individual citizens, employment opportunities and social values. This will be conducted from both the social and economic fronts and provide the essential reference and basis for negotiations with the National Government of Kenya, Foreign investors and the International lending Agencies such as World Bank, European Union, Trademark East Africa, Africa Development Bank and Donor Countries.

General Description of the Socio-Economic Impact Assessment

Socio-Economic Impact Assessment is a process of compiling and analyzing information on the impact that a specific development proposal or decision is likely to have. The assessment should consider specific socio-economic impact **on** stakeholders, the society, the beneficiaries and the business community.

General Objective of the Assessment

The assessment study will specifically relate to the socio-economic impact of operationalization of Standard Gauge Railway (SGR) on the port city of Mombasa. The

assignment should ideally include collection, compilation and analysis of data and information on the actual social-impact of SGR operationalization on port city of Mombasa and particularly on the on the following parties:

i. Road Truckers (including Transit Trucks) and air transport.
ii. warehousing businesses,
iii. Roadside businesses
iv. Clearing and Forwarding Agents,
v. Container Freight Stations (CFSs),
vi. Drivers and other people employed in the related road businesses, etc.
vii. Mombasa County financial performance (revenue streams)

Description of Tasks /Activities to Be Conducted

The Consultant shall carry out the following activities:

i. Compile data and information through a desk and/or field study on the impact of the operationalization of Standard Gauge Railway (SGR);
ii. Analyze the collected data and information, whether primary or secondary;
iii. Clearly indicate the impact of operationalization of Standard Gauge Railway (SGR) on the stakeholders indicated in paragraph above and where possible suggest mitigating or remedial actions;
iv. Mobilization of Stakeholders engagement through workshop;

Coverage: The study shall cover the entire of the port city of Mombasa, particularly the areas/regions with specific effect and assess the impact of operationalization of Standard Gauge Railway (SGR) on all the stakeholders identified. To achieve the above scope of work, the consultants are expected to employ a rigorous and tested assessment line study methodology. They will further customize this methodology to ensure that it meets all the requirements of this assignment upon project kick-off:

Duration of the Study

The Study being of socio-economic nature requires adequate time provided for Field Study and Stakeholders engagements. Total duration for the Study is 45 working days, broken down as follows:

a. **Preparations** and Desk Study	30 days
b. **Field** Study activity	60 days
c. **Compilation** of Interim Report	60 days
d. Preparation / Organization of **Stakeholder's** workshop.....	3 days
f. Final Report.....	30 days

Communication and Reporting

The deliverables should include:

i. Inception Report ;
ii. Draft Report
iii. Stakeholders engagement;
iv. Final Report.

The Final report of the consultant will provide details on:

i. The objectives of the assessment
ii. Details on activities performed the results obtained and recommendations ;
iii. Follow-up actions to be conducted
iv. Details on any overruns or delays encountered
v. Any other observations the consultant wishes to provide

Requirements

Qualifications and skills of experts

For all experts:

- Proven experience in the specific field of expertise needed;
- Experience in evaluation and monitoring the socio economic impacts of development
- Excellent communication skills, based upon written and oral fluency in the English language;
- Excellent report writing skills.

Special features:

It will be considered an advantage for experts to have proven familiarity with Kenya and Port City of Mombasa.

Specific Skills & Experience

1. Team Leader

- A Master degree in Economics or Business Administration from a recognized university with a strong background in Strategy, Management and Consultancy. Higher qualifications will be an added advantage
- At least 10 years of progressive professional experience in managing consultancy projects, monitoring and evaluation
- Experience as a Team leader and capacity to conduct research;
- List of at least 5 successfully completed/current works of similar nature and complexity;
- Proficiency in English and high level of communication (writing and presentation).

2. Transport Economist

Bachelor's degree in Economics or Transport related degree. Those with a Master's degree will have added advantage with over 10 years post qualification experience.

- Experience in Transport and Logistics or Supply Chain Studies
- Experience in stakeholder consultations
- At least 10 years of progressive professional experience;

- List of at least 3 successful completed current works of similar nature and complexity.
- Proficiency in English and high level of communication (writing and presentation.

3. **Finance expert**

- A university degree in Business, Finance, Economics, or other relevant degree.
- At least 10 years of professional experience in project financial analysis and project finance, with a proven track record in financial evaluation and financial modelling of in transport projects
- Demonstrated experience in dealing either road sector, railway or ports
- Member of a relevant professional institute.

4. **Statistician**

- A university degree in Statistics, Mathematics or any other relevant degree
- Experience in data collection and analysis
- Experience in transport sector an added advantage

5. **Port Strategy Expert and Logistics Expert**

- A Master's degree in the relevant field
- Experience in the relevant areas
- Experience in Transport and Logistics or Supply Chain Studies
- Experience in stakeholder consultations in the transport sector

Appendix VIII: Sampled Newspaper Articles on the Impact of SGR on the Port City of Mombasa

Mombasa is on Verge of Death, Give it the Kiss of Life Before it is too Late

www.standardmedia.co.ke/article/2001338741
Suleiman Shahbal 20th Aug 2019 05:15:00 GMT +0300

Although I am an overly optimistic person, I am now getting increasingly depressed over the situation in Mombasa.

The city on a sharp downwards spiral. And as it sinks, it will drag down the whole coast with it.

Last week, a private hospital fired 50 per cent of its workers. This is not because people have suddenly become healthier. It is because people cannot afford to go to hospital anymore. Unemployed people cannot afford to get sick.

Container Freight Stations have already let go of more than 3,000 people who were employed either directly or indirectly. The transport sector is dead. Thousands of trucks have no work and drivers and support staff have lost jobs. The logistics business has all moved to Nairobi.

My city is dying. Despite denials, the truth is that the port, which was the mainstay of our economy, has moved to Nairobi.

Tourism is struggling. While the big hotels are still surviving, the small ones that served the port have all lost clientele and are in deep distress. Their employees and suppliers have become collateral damage.

The recent violence in Kisauni, while inexcusable, is a reflection of the loss of hope amongst the youth. Next you might see a rise in cases of radicalisation.

Things will get worse before they get better. A global recession is surely coming. We can already see it in Germany, Europe's strongest economy. For Kenya, this will surely mean less trade, less tourists, lower commodity prices, more unemployment. Recession will lead to unemployment abroad and many Kenyans there will lose jobs and remittances will reduce. It is the remittances that are holding up the strength of the shilling. As the shilling depreciates, it will lead to inflationary pressures. Automatically our economic growth will decline. Our borrowing will increase – the classic case of the broke man borrowing to stay afloat. Political and social pressures will definitely increase.

What must we do? There is nothing unique about our situation. It has happened in other countries and history tells us what happens next. We must find solutions. The worst thing is to pretend that things will get better without taking action.

The national government must implement a Marshall Plan for Mombasa. Without such intervention, things will only get worse. Crisis is an opportunity to try creative solutions. I see opportunities in the following areas which can give some quick results.

First, the Dongo Kundu Special Economic Zone (SEZ) is finally gathering steam. However, like all government infrastructure projects, this will take long before we see results in the Mombasa economy. It is important that the government immediately starts inviting private sector to start developing the SEZ. Government, with its bureaucracy, cannot move at the required speed. Just allow and encourage private sector investment as the government finishes the required infrastructure.

Second, the closure of the CFSs creates an interesting opportunity to use them as experimental free ports. Instead of closing the CFSs, they should be turned into 10 mini free ports. Let them import various items duty free and allow foreigners to come to Mombasa to shop just as it happens in Dubai.

Set up free zones for electronics, cars, building materials and other fast moving goods. Local customers will pay duty while those re-exporting to regional countries will pay duty at their respective border points. Of course there will be problems. Kenyans will find a way of doing their normal 'magendo' and duty evasion, but these are teething problems that we must confront.

International airlines

If we turn parts of Mombasa into a free port, this will immediately create thousands of jobs and business opportunities. Let us allow our neighbours to come and shop here as a prelude to setting up a free port in Dongo Kundu.

Third, to promote tourism, we should allow international airlines to land in Mombasa. We are busy protecting Kenya Airways but the results show this monopoly is neither improving the condition of the airline nor are our tourism numbers. If more tourists come to Mombasa the entire tourism industry will improve across Kenya. The current protectionist strategy doesn't work, so why are we continuing with it?

Fourth, the fishing industry is a great opportunity. For years, foreigners have been stealing our fish. Now we have set up a coast guard. This is a good start.

Government has to put some cash into setting up a fishing fleet and hire people. Let us ensure that bureaucracy is reduced and fishing licences are quickly issued to Kenyan investors.

Fifth, we must aggressively start marketing and sending our youths to work abroad. They have better chances of getting jobs in a recession-hit Dubai or the United States than they will have when the recession tsunami hits Kenya.

Fortunately we still have an opportunity to turn things around. The Government must quickly take action.

Mr Shahbal is Chairman of Gulf Group of Companies.

Deliberate push to impoverish Coast more political than Legal

[illegible]

Maina Kiai | 11th Aug 2019 00:00:00 GMT +0300

An aerial view of the Inland Container Depot (ICD) in Nairobi. [File, Standard]

Mombasa residents must be wondering what they have done wrong to justify the tragic and immense hollowing out of their city by the Jubilee regime. I don't think there is a precedent anywhere in the world, where the state has deliberately impoverished a region to enrich even more prosperous regions—in this case Nairobi and Naivasha—as the Jubilee regime is doing with Mombasa at present.

It smacks of discrimination, contempt and perhaps open greed that will certainly have unintended and disastrous consequences such as the recent crime waves in Bamburi. Worse, the continued impoverishment of Mombasa makes it a fertile breeding ground for Al-Shabaab.

It all starts with, and revolves around, the decisions—taken dictatorially and with no heed to the adverse impacts on Mombasa—around the port. The first was the decision to take out a massive loan from the Chinese to build the SGR. Had the UhuRuto regime decided to simply upgrade the existing meter gauge railway from Mombasa to Kisumu into SGR, the cost would not have exceeded Sh100 billion, which was the original plan during the coalition government.

But perhaps motivated by the need to loot, the regime decided to build a brand-new railway line from Mombasa to Machakos (the "Nairobi" terminus is in Syokimau in Machakos) after taking a loan of more than Sh360 billion. I doubt that it actually cost that amount. Note that this loan happened soon after the 2013 elections which were incredibly expensive, and which included hiring the dubious Cambridge Analytica firm.

There was no public participation about this project, nor have we ever seen the contract even though we are the ones paying for the loan. It was simply implemented with lots of propaganda about how modern and fast the new railway would be. But alas, because there is only one railway line, with short diversions to allow opposite traffic to pass, and because the engines purchased can not be "bullet trains", it quickly became clear that the SGR could not compete with road transportation and make enough to repay the expensive loans.

So, again, with no public participation, the regime ordered all goods imported via Mombasa to be transported on the SGR to the Embakasi Inland Port Depot. Business people say that the cost by SGR is almost twice the cost by road which is why it was made compulsory, because the risk of default on the payments to the Chinese could mean that they take over a public asset. This move has been farcical in some respects, with reports of shipments slated for the Coast region being put on the SGR then transported back to the Coast by road! To keep the SGR busy, the Embakasi Inland Port was expanded and now jobs, businesses, and the informal economy that develops around ports has shifted from Mombasa to Nairobi, which is the richest county in Kenya! Talk of robbing the poor to enrich the rich.

Aggravating matters is the new inland port in Naivasha—which is the second richest county after Nairobi—reportedly on privately owned land, which will be even bigger than the one in Embakasi. It is not clear if this new inland port will be privately run or whether it will be leased to the KPA but already we have seen "donations" of land made to Yoweri Museveni of Uganda and Salva Kiir of South Sudan from the Naivasha property.

The second decision is the proposed privatisation of the profit-making Container Terminal 2 (CT2) in Mombasa and hand it over to the dormant Kenya National Shipping Line—which is supposed to be running ships not ports—and which now is 47 per cent owned by the Mediterranean Shipping Company (MSC), which reportedly also includes two other opaque companies. (Another Italian connection so soon after the Kimwarer and Arror dams' scandal!) Port insiders say that the company will make an annual payment to KPA of about Sh3 billion. Note that KPA made profits of over Sh15 billion last year, mostly on the back of operations at CT2.

Generally, privatisation arises when the state wants to dispose of loss-making companies. Yes, KPA could do with a lot less corruption and nepotism, and be more efficient, but there are many management tools available for just that, without giving away prized assets that will lead to job losses and massive profits for the owners. The sweetener that MSC will provide jobs for Kenyans is pure fiction. Just look at MSC's employment figures of the last ten years!

Because this decision to privatise was made without participation and dictatorially and because there is no transparency about anything, rumours are running wild in Mombasa that all these decisions are to benefit a particular family that wants to own Kenya, and fast.

Resentment and poverty in Mombasa are growing, and do not be surprised we start hearing that "*pwani si Kenya*".

These issues are more political than legal, and concerted efforts need to be made to challenge the "punishing of Mombasa." Critically, the ownership of KPA needs to be looked at so that the residents, the county, dockworkers and clearing and forwarding agents have a say in how it is managed, to avoid further impoverishment in future.

- The writer is former KNCHR chair.

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Rise and fall of Mtito Andei: How SGR has Affected Town's Fortunes

Thursday October 3 2019

https://www.nation.co.ke/news/Rise-and-fall-of-Mtito-Andei--How-SGR-affected-town-s-fortunes/1056-5296352-wpe8di/index.html

A truck moves past Mlgange area in Mtito Andei. PHOTO | PIUS MAUNDU | NATION MEDIA GROUP

- Mtito Andei is the latest trading centre along the corridor to suffer an economic slowdown linked to the realignment of a section of the Mombasa-Nairobi highway and the completion of the SGR.
- The town's revenue base is pegged on bars, restaurants and hotels, which largely depend on passengers in buses and lorry drivers and conductors.

Had the asbestos not been exhausted and its harmful effects publicised, Mtito Andei would probably have grown into a big industrial town along the railway line. But decades later, it is slowly dying, thanks to another train track.

Derived from *mtito wa ndei* — Kamba for forest of vultures — Mtito Andei was born in the 1800s as a barter trade station for long-distance traders. Kamba traders would travel to the Coast with ivory and other items, which they exchanged for other things with Arab merchants.

RUINS

The builders of the Kenya-Uganda Railway in the 1890s had designated Mtito Andei as a railway construction hub and later upgraded it into a railway station. Aided by the railway network, mineral prospectors descended on the region searching for minerals. The discovery of asbestos was a big boost for the nascent town.

In 1930, the colonial government issued Kenya Asbestos Company exclusive rights to mine the mineral at Kambu Hill in Kathekani on the fringes of Mtito Andei. It was also granted rights to prospect for other minerals. Another licence to prospect had been given to geologist C.G. Powell in January 1930.

With the closure of these mines, all that remains today are the ruins of what used to be a factory, a bay for loading the commodity onto trains and staff quarters. It is not clear why Kenya Asbestos Company went under. In the process dimming the ... nonetheless, Mtito Andei expanded steadily and became a stopover on the Mombasa-Nairobi highway. With that came restaurants, hotels and banks.

"The modern restaurants have made the town the biggest stopover for buses and trucks in this region," said Mr Pascal Nzule, a former Mtito Andei chief who is a businessman in the town. It is also a gateway to Tsavo West National Park.

DECLINE

But with the launch of the Standard Gauge Railway (SGR), the town is facing a decline in fortunes.

Residents are now protesting a bid by the Makueni County government to downgrade Mtito Andei to a lower tax regime that signals imminent underdevelopment in the town, according to residents.

Mtito Andei is the latest trading centre along the corridor to suffer an economic slowdown linked to the realignment of a section of the Mombasa-Nairobi highway and the completion of the SGR.

The Makueni County 2019-2020 Finance Bill proposes, among other things, to move Mtito Andei from Zone A to Zone B — a lower tax zone in urban classification — following incessant complaints that business in the town has slumped.

While traders are excited about the prospect of paying less tax, other stakeholders feel the downgrading will condemn the town to underdevelopment.

"Downgrading risks depriving Mtito Andei of mega infrastructure projects that municipalities attract," said Mr Swaleh Makumu, the chairman of an association of traders in the town.

But he admits that business and other economic activities in and around the town have declined following the completion of the SGR.

PASSENGERS

Situated midway between Mombasa and Nairobi, Mtito Andei was the headquarters of the defunct Mtito Andei Town Council. The town's revenue base is pegged on bars, restaurants and hotels, which largely depend on passengers in buses and lorry drivers and conductors.

An ambitious government project to realign the Tsavo-Mtito Andei section of the Mombasa-Nairobi highway in 2009, ostensibly to avert frequent road accidents, led to a business boom in Mtito Andei. Most of the traffic was directed to the town after the neighbouring Machinery, Kwa Kasyoki, Kwa Mutheo, Kambu and Hilltide markets were bypassed by the highway.

The good tidings changed in 2017 when the new railway line was commissioned. With the SGR, the number of buses stopping in the town dropped significantly following the introduction of the Madaraka Express, the passenger train that runs on the new railway line.

"Mtito Andei entertainment joints and eateries record low patronage following the completion of the new railway line, which has taken many buses off the highway," said Mr Nzalo Lau, a local businessman who served as the last chairman of the defunct Mtito Andei Town Council.

NIGHTLIFE

The town's nightlife glory is no more, with neighbouring Makindu and Emali now more popular with patrons and passengers.

Already, traders at Machinery and Kambu are reeling from the road realignment shock. Their colleagues at Hilltide, Kwa Kathoka and Kwa Kasyoki, which also depended almost exclusively on the busy highway, have closed shop after the markets turned into ghost towns.

Mr Nzivo Mulei, the owner of Olive Hilltide Hotel — where more than 1,000 passengers had meals, drinks and snacks daily — said the economic crunch has reduced his establishment to a shell.

Tips for bus drivers

Mr Benson Munyoki, who owns rental houses at Hilltide shopping centre, added: "Tenants have vacated all my 60 rooms."

CIGARETTES

A spot check by the Nation revealed that most restaurants tip bus drivers with a plate of food of their choice, a packet of cigarettes, a bottle of water and Sh200 to drop off passengers at their premises. This "culture", which is as old as the town, is partly to blame for the economic decline of Mtito Andei, former Kibwezi MP Onesmus Mooko said.

"Since it only takes a little motivation for bus drivers to get many clients at their doorsteps, most service providers will tend to be less bothered with provision of quality service," he said. "They are more concerned with motivating the bus drivers than satisfying the clients. This approach to business is not sustainable."

That notwithstanding, it seems the town that was born from one railway line might die because of another track.