

Socio-Economic Status of Isiolo County with COVID-19

Eldah Onsomu, Rose Ngugi, Evelyne Kihui, Mutuku Muleli, James Gachanja, Rogers Musamali, Paul Lutta, Daniel Omanyo, Hellen Chemnyongoi, Shadrack Mwatu, Nahashon Mwongera, Paul Odhiambo, Beverly Musili, Violet Nyabaro, Japheth Kathenge, Haron Ngeno and Elton Khaemba



The KENYA INSTITUTE for PUBLIC
POLICY RESEARCH and ANALYSIS

Thinking Policy Together



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**Kenya Institute for Public Policy
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Abbreviations and Acronyms

ADPs	-	Annual Development Plans
AFA	-	Agriculture and Food Authority
AI	-	Artificial Insemination
CIDC	-	Constituency Industrial Development Centres
CIDPs	-	County Integrated Development Plans
DSA	-	Drug and Substance Abuse
FAO	-	Food and Agriculture Organization
GBV	-	Gender Based Violence
GCP	-	Gross County Product
GDP	-	Gross Domestic Product
HA	-	Hectares
ICTs	-	Information Communication Technologies
ICU	-	Intensive Care Unit
KCB	-	Kenya Commercial Bank
KDHS	-	Kenya Demographic Household Survey
KNBS	-	Kenya National Bureau of Statistics
KNOCS	-	Kenya National Occupational Classification Standard
LREB	-	Lake Region Economic Bloc
LVSR	-	Low Volume Sealed Roads
M.I.C.E	-	Meetings Incentives Conferences and Exhibitions
MSMEs	-	Micro Small and Medium Enterprises
MT	-	Metric Tonnes
MTPs	-	Medium Term Plans
NGOs	-	Non-Governmental Organizations
OSR	-	Own Source Revenue
PFM	-	Public Finance Management
PPEs	-	Personal Protective Equipment
RAI	-	Rural Access Index
SDGs	-	Sustainable Development Goals
TVET	-	Technical and Vocational Educational and Training
UNICEF	-	United Nations International Children's Emergency Fund
UN	-	United Nations
WASH	-	Water Sanitation and Hygiene

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Executive Summary

Fiscal policy, planning and budgeting

The county's total revenues have been increasing steadily over the years growing by 133 per cent from Ksh 2.55 billion in 2013/14 to Ksh 5.94 billion in 2018/19, being the highest ever. The county's total revenue however declined during 2019/20 and 2020/21 to Ksh 5.03 billion and Ksh 4.58 billion respectively, following the adverse effect of COVID-19 pandemic that affected various revenue streams. Analysis of county revenues shows that the main source of revenue for the county has been the equitable share from the National Government, which averaged 88.81 per cent of the county's total revenues from 2013/14 to 2020/21. Monthly cash transfers from the National government have always had an increasing trend from January to June over the years. The share of OSR has been relatively low over the years. On average, it contributed to total revenue averaged 3.06 per cent to the total revenue between 2013/14 and 2020/21. In 2014/15 the county reported Ksh. 563.4 million in pending bills. This declined steadily to Ksh 101.3 million in 2017/18 with development spending related pending bills accounting for 87.7 per cent of this. In 2018/19 and 2019/20 the county did provide figures on pending bills. To ensure continued recovery, the county must now move quickly to tackle the problem of pending bills, mobilize more finances from OSR to increase the available revenues for budgetary operations, seek for more funding in form of grants from development partners to cater for the critical development projects in the county and ensure that the ongoing projects are completed before launching new project and clear any pending bills and arrears owed to suppliers.

Agriculture, Livestock and Fisheries

Livestock production is the predominant economic activity in Isiolo County. Key agricultural value chains commodities in the County include cattle, sheep, goats, donkeys, camels, poultry production, bee keeping (apiculture) maize, beans, tomatoes, watermelons, bananas, kales, and onions. Among the socioeconomic effects on the COVID-19 pandemic on the agri-food sector in the County included negative effects on hours worked by in agriculture related occupations. An additional effect was a slow down on trade and marketing activities due to the restrictions on movements leading to price shocks and shortages of food items. Agricultural productivity in the County is also affected by:- variable and extreme weather events Poor and inadequate infrastructure; water scarcity; low agro-processing and value addition opportunities; dependence on rainfed agriculture; low access to quality and affordable inputs; low commercialization levels and marketing opportunities; low access to major off-farm services including extension, climate and market information, and credit services; pests and livestock diseases; and farm losses and post-harvest waste. To successfully build resilience and enhance growth of the agriculture sector, the County will: explore partnerships to develop agro-processing and value addition capacities at the County; expansion of water harvesting projects and sustainable irrigation;

scale up conservation agriculture, post-harvest management, plant and keep drought-tolerant crops and livestock breeds; link farmers to diverse product markets; strengthen the County's institutional capacity in disaster surveillance and management; enhance farmers access to critical agricultural inputs and services and build their technical capacity to act on information obtained; provision of storage and cooling facilities; natural resource management; and strengthen agricultural cooperatives to enhance marketing.

Water Sanitation and Hygiene (WASH)

Clean water, proper sanitation and good hygiene remains an essential component in protecting human health in times of outbreak of infectious diseases. Frequent and correct hand hygiene has been emphasized by World Health Organization (WHO) as one of the frontline measures to curb transmission of COVID-19. This has placed a higher demand for water use in households, schools, health care facilities, marketplaces, workplaces, and public places. This therefore has necessitated the need for provision of water, sanitation, and hygiene by national and county governments to all. The county has a perennial water shortage problem and despite this, the county is dedicated in providing water to households, though also facing challenges in revenue collections since COVID-19 has resulted into reduced incomes among households and businesses, thus deferring collection of revenue from the water services it provides as well as financial support to water services providers. This in the long run could affect the development of the water and sanitation sector. Additionally, COVID-19 poses health challenges to water and sanitation officers if they get infected, they have to be self-isolated, and this may lead to disruption of services. Other constraints to the sector include, drought, water leakages and destruction of water catchment areas. To ensure continuous availability of water, the national and county government should increase water supply in households, institutions, and public places through drilling of boreholes in all the sub-counties. Partner with private sector, donor agencies, local communities, and NGOs to help develop water infrastructure.

Manufacturing, Trade and MSMEs

Manufacturing, Trade and MSMEs is an important sector in Isiolo County. However, this sector's momentum was disrupted by the COVID-19 pandemic as the containment measures associated with COVID-19 pandemic took a heavy toll on the sector. The measures that were taken, such as closure of markets, observance of health protocols in form of social distancing and handwashing served to increase the cost of production and affected access to markets for the produce. In sustaining growth in the Manufacturing, Trade and MSMEs sector, the County will: Consider an emergency rescue package for businesses and traders hard-hit by the effects of COVID-19 in the short run. The emergency Fund, supported by development partners and other stakeholders, can be used to identify and support the most vulnerable businesses and entrepreneurs affected by COVID-19. Related, the County will inject some stimulus to cushion the businesses and traders through affordable credit; waiver of some County taxes, cess, and other charges; and COVID-19 has increased demand for locally produced goods in the County, and especially Personal Protective Equipment (PPEs), sanitisers, hospital beds and ventilators. The pandemic also presents an opportunity to

spur innovation and promote manufacturing and industry development and generation of jobs for the youth while providing a foundation for further value addition in the county.

Infrastructure, housing and urban development

The main means of transport used in the County is walking followed by motorbike. The paved County Road network covers 2.67km, while the paved National roads cover 29.52km. Out of the total paved road network of 32.19km, 91.64 per cent is in good condition, 1.86 per cent in fair condition and 6.49 per cent in poor condition. The status of ICT access and use in the county is low, especially among households. The perception that individuals do not need to use the internet, lack of knowledge and skills on internet are the leading reasons that the people of in the County do not have internet connection. The housing tenure is predominantly owner occupied at 71.9 per cent, with 28.0 per cent of the households under rental tenure. Majority of the households (73.7 per cent) did not receive a waiver or relief on payment of rent from the landlord, despite inability to pay due to the pandemic. In addressing the challenges, the county will Identify a core rural road network for prioritization to improve the rural access index (RAI) from the current 22.0 per cent with a target to match the national average of 70.0 per cent; initiate support programmes in partnership with the private sector that will enable households acquire ICT assets such as smart phones and laptops and increase mobile phone ownership from 38.2 per cent to 100 per cent in line with the global agenda for Universal Access to Mobile Telephony; avail appropriate building technology for use by the public in house construction and improvement in every sub-county, that responds to local cultural and environmental circumstances.

Tourism

Isiolo County is endowed with a variety of tourism attractions which include Nature and Wildlife (Game viewing, bird watching, natural springs at aba, Buffalo Springs, Bisan Adi and 5 community conservancies); Culture, Heritage and Community Based (Cultural events and festivals, traditional music and dance); Adventure (Visits to wildlife areas, scenic viewing, mountain climbing, film shooting sites at ba, Buffalo Springs, Bisanadi. Magado crater, Lorian swamp and Ewaso Ngiro river); Eco-Tourism (Research, game viewing and cultural tours); and sports (Camel sports, local football clubs, annual Safaricom Lewa Marathon at Isiolo Central). The County receives around 20,000 tourists annually of which 61.3 per cent are domestic and 38.7 per cent are foreign. In addition, the total revenue in period 2015 – 2017 from the 3 Game reserves (Shaba, Buffalo Springs, Bisanadi.) was Kshs. 238 million. The strategies to support tourism sector recovery include mapping all the sites with tourism potential in the county and coming up with a tourism product diversification strategy; venture into other products away from Wildlife and nature-based that can appeal to the domestic tourist, e.g. cultural festivals, education tourism, community conservancies, medical tourism, setting up a cultural documentation centre and tourism information centre and ensuring high sanitation standards in the hotel facilities to deter spread of COVID-19 in line with the national guidelines for reopening of the hospitality sector.

Health

In 2019/2020, the number of health facilities in the county were 74 which comprised of 70 primary health facilities and 4 hospitals. This was an improvement from a total of 41 health facilities in the previous year, 2018. The number of beds per 10,000 population is 10 against the WHO recommendation of 30 beds per 10,000 population. In general, 7.7 per cent of the county population had some form of health insurance cover. The National Hospital Insurance Fund (NHIF) was the leading health insurance provider reported by 100 per cent of the population. Private contributions to insurance cover were reported by 6.9 per cent of the population while Employer-Non-Contributory was reported by 6.6 per cent of the population. The county had 27.6 per cent of the children aged 12-23 months were fully immunized against measles at 9 months while 15.1 per cent were fully immunized against measles at 18 months. As per the latest NAYS report of 2020, the main health problems in the county facing adolescents and youth are drug and substance abuse, STIs, HIV and AIDS, teenage pregnancies and SGBV. The health issues are common and have largely been prevalent due to parental negligence, negative cultural practices such as FGM and lack of awareness on health issues such as HIV/AIDS transmission. There is an enhanced collaboration within Frontier FCDC counties, which has resulted into training of the health officers and all the frontline staffs. . In line with the health status in the county, some of the recommendations that need attention include the following: The county should create awareness on availability and importance of free maternity services and address other constraints to access of maternal health services in the county to address risk of contracting COVID-19 in event of visiting any health facility; To reduce high burden of both communicable and non-communicable disease, the county should revamp its Community Health Strategy. This is a community based promotive and preventive health services. To make this more effective, the County should engage Community Health Volunteers (CHVs) and equip them with the relevant resources and skills.

Education and training

The Gross Attendance Rate (GAR) for pre-primary school was 85.2 per cent while that of primary school and secondary school was 92.3 and 50.9 per cent respectively in 2015/16. The Gross Primary and Secondary enrolment rates stood at 92.3 per cent and 50.9 per cent respectively in 2018 while the Net enrolment rates (NER) were 72.2 per cent and 30.9 per cent for primary school and secondary school respectively during the same period. The schools in the county had closed due to the outbreak of COVID-19 pandemic. This forced the government to offer online learning though the programme was stopped even before picking momentum. The main issues affecting education in the county is DSA, child labour, absenteeism of teachers and students, lack of school fees and inadequate schools. The high usage of drugs has been as a result of peer pressure and 'stress' while lack of school fees has been caused by poverty. The county will prioritize projects that improve school water, sanitation and hygiene facilities and management in order to reduce future effect of similar or related outbreak while promoting public health in learning institutions, promote remedial/catch up lessons for learners who might have lagged behind also schools to utilize ICT platforms and have a depository of teaching and learning materials that learners could use at their own time and while at home, provide financial or in-kind support, such as

school feeding, to help families overcome the increased costs of attending school, also provide psychosocial support to teachers and learners and fight drug and substance abuse among the youths in the county. This can be done through counseling and ensuring that they are not idle especially this period when learning institutions are locked.

Social protection

The overall poverty rates in the county stand at 53 per cent which is higher than the national average of 36.1 per cent. The county's food poverty levels are at 52 per cent and 35 per cent of the total population is multidimensionally poor. The major shock in the county was dearth of livestock and large rise in price of food which affected 32.3 per cent and 12.3 per cent of the households in the county. Droughts and floods, Death of family Member and Loss of salaried employment or non-payment of salary were also other major shocks in the county affecting 10.1 per cent, 8 per cent and 3 per cent respectively. Households in the county received various forms of social assistance or transfers or gift either in form of a good, service, financial asset or other asset by an individual, household or institution. Transfers constitute income that the household receives without working for it and augments household income by improving its welfare. Cash transfers include assistance in form of currency or transferable deposits such as cheque and money orders. Transfers constitute income that the household receives without working for it and augments household income by improving its welfare. Cash transfers include assistance in form of currency or transferable deposits such as cheque and money orders. COVID-19 exposed lack of preparedness among counties in terms of responding to the emergencies such as COVID-19 pandemic. It provided an opportunity to measure how county governments are prepared to handle the devolved functions. COVID-19 pandemic created effects with immediate and long-term economic consequences for children, PWDs, elderly and their families. To strengthen social protection response in face of a similar pandemic, the Garissa County government will conduct mass civic education among the people on COVID-19 prevention measures, how to handle an infected person and avoidance of stigmatization of the affected person, enroll more county residents in welfare programmes such as NHIF which will ensure that they access medical treatment in case of falling sick and give tax exemption for the SMES who have suffered losses in their business as result of diseases outbreak.

Human resources

The main employment and income opportunities in the county include agriculture and trade. Most of the farmers are livestock keepers while some are engaged in farming in the irrigation scheme. The traders are mainly dealing with livestock, charcoal burning and selling, selling miraa and other small businesses. However, the employment and income opportunities are affected by several challenges in the county. The major challenges pointed out in the county include lack of knowledge and skills, lack of capital among the youth, high taxation and insecurity. The unemployment has increased during the period of COVID-19, according to May 2020 KNBS COVID-19 Survey, 19.5 per cent of the county labour force worked at least for 1 hour for pay; 27.7 per cent had never worked, and 52.8 per cent worked in the informal sector. In addition, the reduction in operation hours and

restriction on movement in and outside Nairobi negatively impacted on the transport sector with many relying on it rendered jobless. The loss of jobs in the matatu and boda boda industry had directly impacted on the lives of the youth as some residents avoided public means of transport in fear of contracting the virus. The Garissa County government will promote implementation of a stronger labour market interventions and policy reforms that drive employment creation. The County shall deepen technical education, training and skills development; and invest in livestock sector in the County, promote investment and entrepreneurship through provision of loans, the county Government will improve access to finance for small and medium enterprises through lending institutions and formulate measures aimed at encouraging employment creation through corporate social responsibility (CSR), including expanding the national internship programs and promoting Information Technology (IT) enabled jobs.

1 Introduction and structure of Isiolo County Economy

1.1 Introduction

Isiolo County is one of the counties in the Frontier Counties Development Council (FCDC). The county occupies a land area of 27,500 km². The county had an estimated population of 268,002 people of whom 52.0 per cent were male and 47.9 per cent female (KNBS, 2019) as indicated in table 1. Of the population 2,699 (1.2 per cent) were persons with disabilities. The youth constituted 35.0 per cent of the population of whom 48.0 per cent were female. The County had a population density of 11 per km². About 53.1 per cent of the population live in rural areas of whom 46.3 per cent are female. The elderly population (65-years and above) make up 3.0 per cent of the total population of whom 49.3 per cent were female. The population in school going age group (4-22 years) was 51.0 per cent in 2019.

In 2015/2016, the overall poverty rate in Isiolo County was 52.0 per cent against the national poverty rate of 36.1 per cent. In addition, 34.7 per cent of the population were living in food poverty and 53.0 per cent were living in multidimensional poverty, that means being deprived in several dimensions including health care, nutrition and adequate food, drinking water, sanitation and hygiene, education, knowledge of health and nutrition, housing and standard of living, and access to information. According to KDHS 2014, 19.1 per cent of the children were stunted as compared to the average national level at 26.1 per cent.

Table 1.1: Development indicators in Isiolo County

	County	National
Estimated County Population (KNBS, 2019)	268,002	0.5% of the total population
Males	139,510	52.0%
Females	128,483	47.9%
Intersex	9	0.003%
Estimated Population Density (km ²)	11	82
Persons with disability	1.2%	2.2%
Population living in rural areas (%)	53.1.0%	68.8%
Children (0-14 years) (%)	44.8%	41.1%
School going age (4-22 years) (%)	51.0%	68.7%
Youth 15-34 years (%)	35.0%	36.1%
Labour force (15-64 years) (%)	51.8%	55.0%

Elderly population (over 65-year-old)	3.0%	3.9%
Number of COVID-19 cases (as of 11 th September 2020) (MOH); National cases were 35,232 people	58	0.17% of the national cases
Poverty (2015/2016) (%)	52.0%	36.1%
Food Poverty (2015/2016) (%)	34.7%	31.9%
Multidimensional Poverty (2015/2016) (%)	53.0%	56.1%
Stunted children (KDHS 2014)	19.1%	26%
Gross County Product (Ksh million)	33,498	0.4% share to total GDP (2017)
Average growth of Nominal GCP/ GDP (2013-2017) (%)	11.0%	15.3%

Data Source: KNBS (2019)

The age distribution of the county residents as per the 2019 Housing and Population Census is shown in table 1.2. The bulk of the County's population is in the age group of between 15-34 years comprising of 94,903 individuals. They are followed by persons aged between 6-13 years who are the primary school children comprising of 64,168 of the county population. The under 0-3 age comprise of 31,314 of the county population. This shows that the county has a general youthful population.

Table 1.2: Population distribution for selected age groups in the county (2019)

Age Group	Male	Female	Total
Under 0-3	15,791	15,523	31,314
Preprimary school age (Under 4-5)	9,169	8,967	18,136
Primary School Age (6 -13)	33,286	30,882	64,168
Secondary school age (14-17)	15,456	12,722	28,178
Youth Population (15-34)	49,392	45,511	94,903
Female Reproductive age (15-49)		58,998	58,998
Labour force (15-64)	73395	65808	65,808
Aged Population 65+	4,111	4,002	8,113

Source: KNBS (2019)

1.1 Level of Socio-economic Deprivations

In 2015/2016, 7.7 per cent of the population had health insurance cover, 19.9 per cent lived in premises with water, 33.4 per cent lived in their own homes and 49.8 per cent had access to mobile telephone (Table 1.3) and majority of the households (78.2%) had access to toilet facility.

Table 1.3: Level of deprivations for the various indicators for multidimensional poverty in the county

Indicator	Details	Percentage Distribution (per cent)
Health care	Population with health insurance cover	7.7
Drinking water (Time taken to fetch)	Zero (In premises)	19.9
	less than 30 minutes	69.1
	30 minutes or longer	11.1
Sanitation and Hygiene	Proportion of households with toilet facility	78.2
	Shared Toilet	68.2
	Not Shared	31.6
	Place to wash hands outside toilet facility	47.9
	No place to wash hands outside toilet facility	52.1
Education (Population 3 years and Above by School Attendance Status)	Ever Attended	67.3
	Never Attended	32.5
Knowledge of health and nutrition (children aged 0-59 months that participated in Community Nutrition Programmes)	Participated in community nutrition programmes	44.2
	Did not participated in community nutrition programmes	55.8
Housing and standard of living (house ownership)	Owner occupier	61.6
	Pays rent/ lease	33.4
Access to information (Population Aged 3 years and above by ICT Equipment and Services Used)	Television	29.2
	Radio	37.4
	Mobile phone	49.8
	Computer	3.9
	Internet	10.5

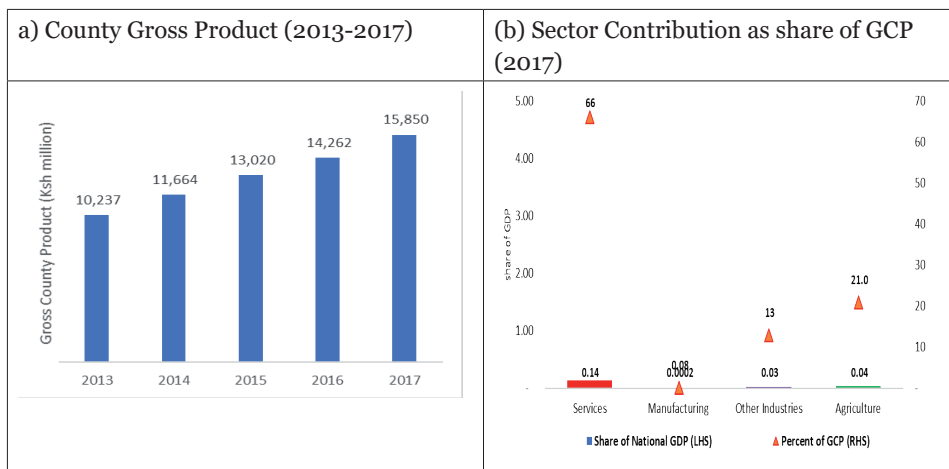
Source: KNBS (2016)

1.2 Structure of Isiolo County Economy

Isiolo County Gross County Product (GCP) accounted for 0.4 per cent of total Gross Domestic Product (GDP) as of 2017 as reported in Figure 1. The GCP increased from Ksh 10,237 million in 2013 to Ksh 15,850 million in 2017 representing an annual average growth rate of 11.0 per cent. The service sector contributed 66.0 per cent of GCP while agriculture and other industries sector shared constituted 21.0 per cent and 13.0 per cent, respectively. The services sector included such activities as wholesale and retail trade, transportation

and construction. Agriculture is mainly dominated by livestock keeping, bee keeping, and agroforestry while industries and manufacturing include small-scale production of consumer goods, such as plastic, furniture and textiles food processing.

Figure 1.1: Structure of the county economy, 2013-2017



Data Source: KNBS (2019)

1.3 COVID-19 Caseload and Implications of Mobility Restrictions

As of March 2020, Isiolo County had zero cases. However, by August 2020, the County had reported 13 COVID-19 cases with mobility stringency of 70.4. The caseload would rise to 380 by August 2021 with mobility stringency of 56.0. The mobility stringency index is a composite measure rescaled to a value from 0 to 100 (100=strictest) based on nine response mobility indicators. The nine metrics used to calculate the mobility stringency index include school closures, workplace closures, cancellation of public events, restrictions on public gatherings, closure of public transport, stay-at-home requirements, public information campaigns, restrictions on internal movements and international travel controls. An index measure closer to 100 means high incidence or severity of mobility restrictions. The County mobility stringency index implies the severity of the restrictions was moderate.

Table 1.4: Total COVID-19 cases and mobility stringency– Isiolo County

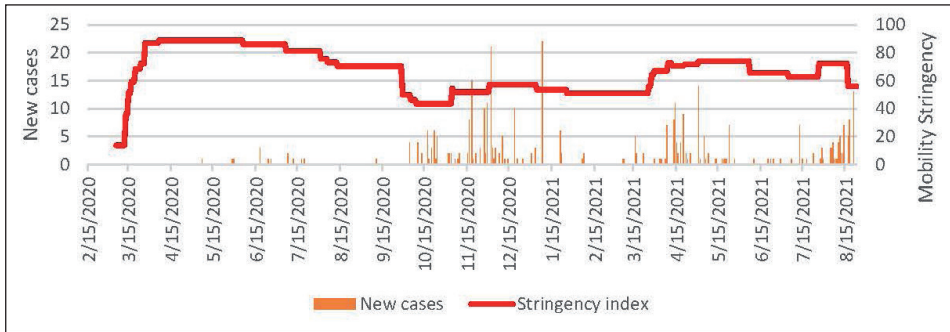
Date	Total cases	Mobility stringency (0-100)
13 th March 2020	0	36.1
23 rd August 2020	13	70.4
23 rd August 2021	380	56.0

Source: Oxford University

New COVID-19 cases in Isiolo County were highest between October 2020-January 2021, March 2021-May 2021, and July 2021-August 2021. During the three time-periods, spikes

in new cases in the County were preceded by relaxation of COVID-19 mobility restrictions. Reduction in the County's new cases was similarly preceded by tightening of mobility restrictions.

Figure 1.2: New COVID-19 cases



Source: Oxford University

The broad objective of the report is to analyze the socioeconomic effects of COVID-19 across sectors and propose interventions for mitigating the effects. The report is organized as follows. Chapter 2 focuses on fiscal policy, planning and budgeting; Chapter 3 focuses on agriculture, livestock and fisheries; chapter 4 focuses on water sanitation and hygiene; chapter 5 focuses on manufacturing, trade and MSEs; chapter 6 focuses on transport and information and communication technology; chapter 7 focuses on urban development; chapter 8 focuses on tourism, chapter 9 focuses on health; chapter 10 focuses on education and training; chapter 11 focuses on social protection; chapter 12 focuses on human resources and chapter 13 concludes the report.

2. Socio-economic effect of COVID-19

2.1 Fiscal policy, planning and budgeting

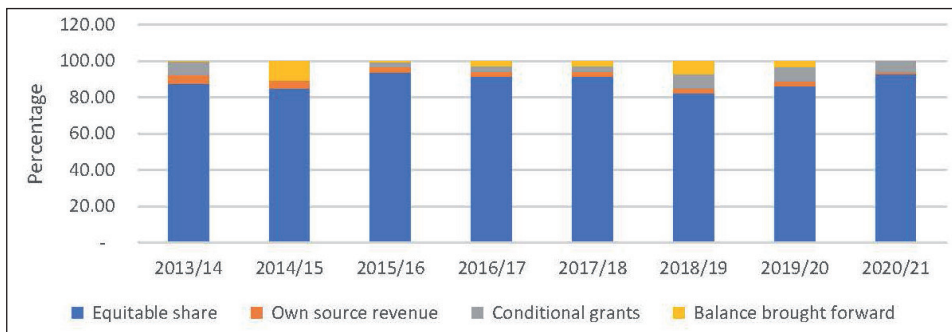
Availability of financial resources is critical in achieving the counties development plans and settling its recurrent expenditures. The County's main revenue sources comprise of the transfers from the National Government, Conditional Grants and its own source revenue (OSR).

Transfers from the National Government

The county's total revenues have been increasing steadily over the years growing by 133 per cent from Ksh. 2.55 billion in 2013/14 to Ksh. 5.94 billion in 2018/19, being the highest ever. The county's total revenue however declined during 2019/20 and 2020/21 to Ksh 5.03 billion and Ksh 4.58 billion respectively, following the adverse effect of COVID-19 pandemic that affected various revenue streams. The amount realized in 2020/21 was 79.4 per cent of the annual budget allocation, a decrease from 87.7 per cent attained in 2019/20. The decline was due to the low OSR collection realized in 2020/21.

Analysis of county revenues shows that the main source of revenue for the county has been the equitable share from the National Government, which averaged 88.81 per cent of the county's total revenues from 2013/14 to 2020/21 (Figure 2.1). Notably, equitable share grew by 89.71 per cent from Ksh 2.24 billion in 2013/14 to Ksh 4.24 billion in 2020/21. The amount received in 2020/21 accounted for 100 per cent of the annual budget allocation. This implied that the County received all expected amount from the National Government to finance its operations, underscoring its commitment to support county operations through timely financing.

Figure 2.1: Share of county revenues by source



Data Source: Office of the Controller of Budget (Various reports)

Monthly cash transfers from the National government have always had an increasing trend from January to June over the years as shown in table 2.1. A similar trend was observed in

2020 with the transfers growing by 160 per cent from Ksh 1.62 billion received in January to Ksh 4.21 billion received in June. In comparison to 2019, the total amount transferred to Isiolo County in March, April, May, and June of 2020 decreased by 6 per cent from Ksh 12.56 billion to Ksh 11.86 billion. More funds were transferred in the subsequent months to enable the county to undertake its budgetary operations as well as implement the necessary measures to curb the spread of COVID-19.

Table 2.1: Monthly cash transfers from National Government (Ksh million)

	Jan	Feb	Mar	Apr	May	Jun	Octo	Nov	Dec
2021	2,225.25	2,284.42	-	-	-	-	1,177.60	-	-
2020	1,622.26	2,003.96	2,003.96	2,464.03	3,185.02	4,210.71	1,064.52	1,489.81	1,864.75
2019	1,753.56	2,084.11	2,463.32	2,816.57	3,130.57	4,149.41	3,130.57	1,148.59	1,586.96
2018	1,256.40	1,657.19	1,959.19	2,600.94	2,635.14	3,868.56	477.19	874.59	1,361.06
2017	-	-	2,490.05	2,770.38	3,038.21	3,302.06	868.25	-	-
2016	-	-	2,071.15	2,315.68	2,820.01	2,820.01	-	-	-

Data source: Gazette Notice (Various issues)

Conditional grants

Conditional grants are also another important source of county revenue. The County receives conditional grants from the National Government and development partners mainly from World Bank and Danish International Development Agency (DANIDA) and Sweden. During 2020/21, the County received Ksh 133.34 million and Ksh 145.70 million from National Government and Development partners respectively. The share of conditional grants to total revenue exhibits a steady trend averaging at 4.53 per cent over the period under review. The county has maintained improved performance on the share of conditional grants to total revenues, increasing from a contribution of 0.18 per cent in 2014/15 to 6.10 per cent in 2020/21. Notably, in 2019/20 it contributed 8.11 per cent of the total revenues, an all-time high. The robust performance show that there is potential to raise more grants to finance the county expenditures. Maintaining good relations with the partners and adhering to the regulations of the grants is principal in securing more funding.

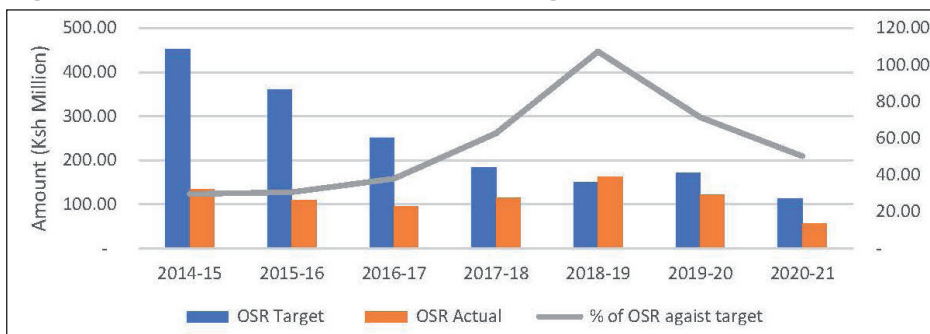
Own Source Revenue

The share of OSR has been relatively low over the years. On average, it contributed to total revenue averaged 3.06 per cent to the total revenue between 2013/14 and 2020/21 (Figure 2.1). Going forward, it would be important for the county to strengthen its OSR collection framework and policies to improve its OSR collections.

Analysis of annual County OSR performance shows an initial decline in 2014/15 to 2016/17 before maintaining an increasing trend from 2017/18. Over the years, annual OSR grew from a low of Ksh 95 million in 2016/17 to a high of Ksh. 161.77 million in 2018/19. The county has been revising its OSR target downwards from Ksh. 450 million in 2014/15 to Ksh. 113.69 million in 2020/21 (Figure 2.2). Based on its revised OSR targets, the ratio of

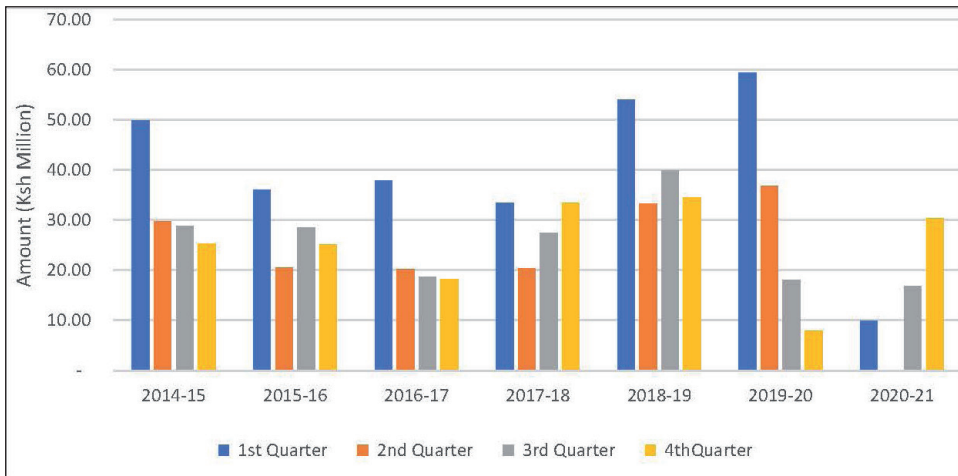
actual OSR versus target indicate that the county is closer to achieving its targets over the years implying that the targets are realistic and attainable. The performance of actual OSR versus target show that the county has registered improvements from achieving 29.53 per cent of its targets in 2014/15 to surpassing its target by 7.23 per cent in 2018/19. During the 2019/20, the county generated Ksh 122.08 million as OSR, representing a 24.53 per cent decrease compared to Ksh 161.77 million realized during 2018/19. Similarly, in 2020/21, the County generated Ksh 57.18 million as OSR, representing a decrease of 45.3 per cent compared to the amount realized in FY 2019/20. The decrease was mainly attributed to the adverse effects of COVID-19 pandemic that disrupted economic activities in the county. The main OSR streams that were majorly affected included tourism, livestock auctions, parking fees, and the small business permits.

Figure 2.2: Annual Own Source Revenue targets and actual collections



Data Source: Office of the Controller of Budget (Various reports)

Analysis of the quarterly OSR show that collections in the first quarter have been the highest in County over the years (Figure 2.3). During 2019/20, similar trend was observed with OSR collections during the first quarter amounting to Ksh 59.38 million, the highest registered over the years under review. Following the effects of COVID-19 pandemic, the county’s quarterly revenues declined by 87 per cent from Ksh. 59.38 million collected during the first quarter to Ksh. 7.92 million realized during the fourth quarter. During 2020/21, the quarterly performance remained low, with slight increase during the third and fourth quarter. The implies that the COVID-19 pandemic adversely affected Isiolo county’s economic activities hampering revenue generation and collection. Going forward, the county needs to adopt necessary measures to facilitate full recovery of the affected sectors of the economy. This is envisaged to improve OSR performance.

Figure 2.3: Quarterly Own Source Revenue collection

Data Source: Office of the Controller of Budget (Various reports)

County expenditure analysis

Economic and political crises, natural disasters (such as droughts and flooding), security challenges and health crisis (such as the COVID-19 pandemic) highlight the consequential risks and underlying vulnerabilities in national and county level budgetary and planning system. These can substantially affect public resources and in cases of weaker planning systems they may impact the nature and level of service delivery to the citizen.

The UN Sustainable Development Goals (SDGs) emphasize the productive role of targeted and strategic county level expenditure. The 2014 UN Secretary General’s Synthesis Report on the Sustainable Development Goals (SDGs) states that “many of the investments to achieve the sustainable development goals will take place at the sub-national level and be led by local authorities”¹. It is at the counties that economic activity takes place and when spending priorities and execution are done just right then the county and country will be set to the desired development trajectory.

Despite their constrained fiscal autonomy (such as inability to borrow funds) and relatively small budgets, the county government has a key role to play in promoting growth as espoused in the Kenya Constitution. This is particularly the case with development expenditure, which is within the assigned remit of county as per the PFM Act of 2012 and is key to the county’s future growth prospects given several decades of under-investment which have constrained productive capacity in the local economy.

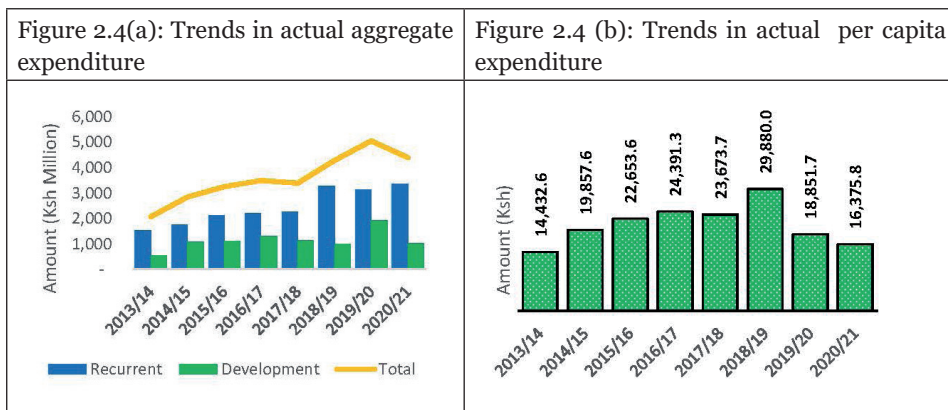
Trends and profile of county government expenditures

County expenditure has over the years been rising as the county escalates its efforts in provision of services to its residents. Total county expenditure has grown significantly since

¹ UN General Assembly (2014), p. 22, par. 94.

2013/14. With the implementation of the first full year county budget in 2013/14, actual expenditure in the county increased from Ksh. 2,068.1 million to Ksh. 4,388.7 million in 2020/21 (Figure 2.4). Cumulatively the county has spent a total of Ksh 28.7 billion between 2013/14 and 2020/21. This comprises of a cumulative Ksh 19.6 billion and Ksh 9.1 billion on recurrent and development expenditures representing 68.4 per cent and 31.6 per cent of the cumulative recurrent and development expenditure respectively. This signals that development remains low and there is even a greater opportunity to push development expenditure higher and support deepening of capital spending in the county.

Figure 2.4: County expenditure analysis



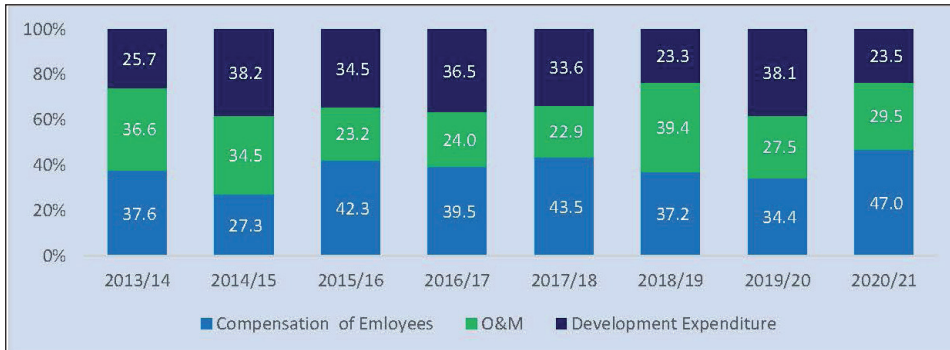
Data Source: Office of the Controller of Budget

Consistent with the nominal growth in actual county expenditures, spending on a per capita basis has shown upward growth between 2013/14 and 2018/19. In 2013/14, per capita spending in the county was about Ksh 14,432.6 compared Ksh. 29,880.0 in 2018/19. At the end of 2019/20 per capita county spending was Ksh 18,851.7 and plunged further to Ksh 16,375.8 in FY 2020/21. The average per capita spending between 2013/14 and 2020/21 stood at Ksh 21,264.5.

Utilization of public resources in the county

Analysis of expenditures by economic classification and by departments (spending priorities) reveal interesting insights. It is evident that since inception of devolution, the county government prioritized narrowing the economic and social infrastructure gaps. Much of government development expenditures has been dominant in provision of health services, public works, education, agriculture, as well as trade and industry.

Figure 2.5: County government expenditure by economic classification (% of total county government expenditure)



Data Source: Office of the Controller of Budget

County development expenditure accounted for an average of 31.7 per cent of total county spending between 2013/14 and 2020/21 as represented in Figure 2.5. The county maintained the share of development expenditure in county spending above 30 per cent for most of the fiscal years save for 2013/14 (25.7%), 2018/19 (23.3%) and 2020/21 (23.5%). On the other hand, compensation of employees between 2013/14 and 2020/21 oscillated about 27.3 per cent and 47.0 per cent. The average share of compensation of employees in total county spending over the review period was 38.6 per cent.

Reflecting on expenditures by functional classification (priority spending), the county spent a combined average of 64.5 per cent of the total expenditure during the period 2014/15 to 2020/21 on non-administrative services such county health services (25.3%); agriculture, livestock and fisheries (7.0%); roads, infrastructure, and housing (5.2%); education and vocational training (4.4%); water and irrigation (4.3%); special programs and ICT (3.7%); Tourism and wildlife (2.9%); youth, sports, culture and social services (2.1%); intergovernmental relations, aid and disaster management (1.4%); environment and natural resources (1.1%); lands and physical planning (1.1%); and trade, industries and cooperatives (0.6%).

Table 2.2: County departmental/priority spending

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Average spending	Average share of spending (per cent)
Health Services		681.1	780.0	860.0	1,274.5	1,254.9	1,190.7	1,006.9	25.3
County Treasury & Planning		427.9	439.3	317.0	292.7	966.9	505.0	491.5	12.4
County Assembly		394.6	525.0	508.8	469.9	476.9	559.8	489.2	12.3
County Executive		335.6	378.7	499.3	356.7	342.6	333.4	374.4	9.4
Agriculture, Livestock and Fisheries		232.2	248.7	209.2	198.3	357.7	417.1	277.2	7.0
Administration and Public Service Management		187.0	97.8	123.5	230.4	374.9	290.1	217.3	5.5
Roads and Infrastructure & Housing		234.9	230.7	205.7	144.4	258.9	165.0	206.6	5.2
Education and Vocational Training		161.0	222.5	68.2	210.7	217.8	159.0	173.2	4.4
Water and Irrigation		149.6	199.2	139.3	146.3	140.9	261.2	172.7	4.3
Special Programmes and ICT		-	-	129.0	418.0	282.8	49.5	146.6	3.7
Tourism and Wildlife		94.1	78.4	107.5	124.7	113.5	167.8	114.3	2.9
Youth, Sports, Culture, and social services		45.5	39.1	10.9	211.0	84.5	120.6	85.3	2.1
County Public Service Board		49.9	57.4	65.0	54.6	50.2	51.7	54.8	1.4
Intergovernmental Relations, Aid and Disaster Management		66.3	15.35	74.7	41.4	56.9	67.7	53.7	1.4
Environment and Natural Resources		80.1	74.0	38.4	34.8	28.7	13.2	44.9	1.1
Lands and Physical Planning		66.9	68.2	20.2	57.6	33.9	19.2	44.3	1.1
Trade, Industries, Cooperatives		39.5	38.7	13.5	13.3	10.3	17.8	22.2	0.6
Total	-	,246.1	,493.1	,390.3	4,279.1	5,052.3	4,388.7	3,974.9	100.0

Data Source: Office of the Controller of Budget

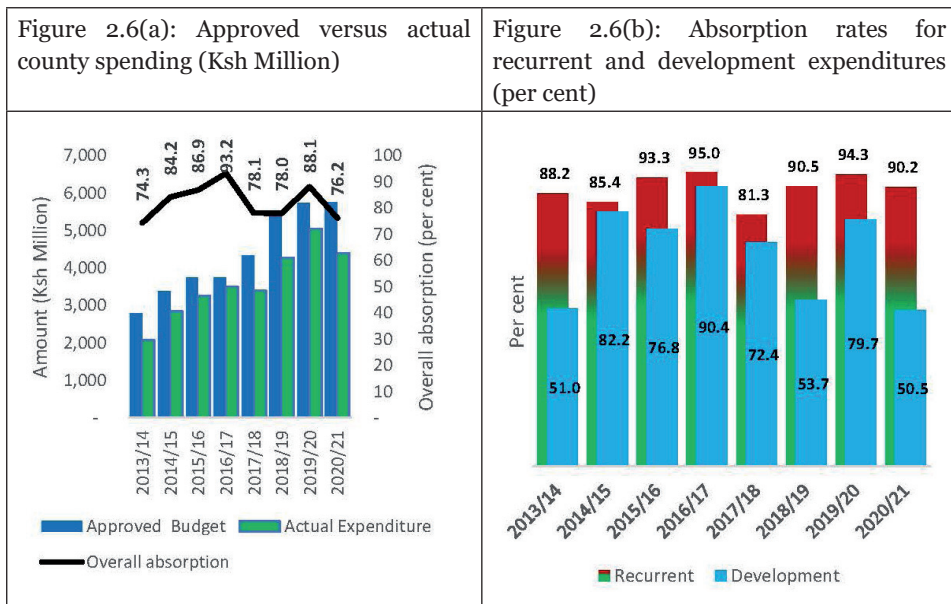
On the other hand, during the review period coordination and administrative functions accounted for a combined 35.5 per cent with county treasury and planning leading at 12.4 per cent followed by county assembly at 12.3 per cent, county executive at 9.4 per cent, administration, and public service management 5.2 per cent, while county public service board accounting for 1.4 per cent.

Effectiveness of County spending

Total budget execution averaged 82.4 per cent in the period 2013/14 to 2020/21. In 2013/14 overall total budget execution stood at 74.3 per cent. This execution improved to 93.2 per cent in 2016/17 before taking a dip in 2017/18 (78.1%) and 2018/19 (78.0%) due to election related shocks to funding from National government. At the end of 2020/21 budget absorption stood at 76.2 per cent meaning that in 2020/21 only Ksh. 4,388.7 million was utilized out of the approved budget of Ksh 5,761.6 million (Figure 2.6).

With regards to development budget execution in the county, the average absorption rate between 2013/14 to 2020/21 was 69.6 per cent (implying that on average over 30.4 per cent of the development budget is not absorbed). This implies strong development budget implementation, and the county should continue tightening budget implementation to ensure achievement of greater absorption rates to keep help achieve the targets in annual development plans (ADPs) and the county integrated development plans (CIDPs). On recurrent expenditure, the execution has been robust over the years, the average absorption rate has been 89.8 per cent leaving about 10.2 per cent of unspent recurrent budget.

Figure 2.6: County government approved expenditure and absorption rates

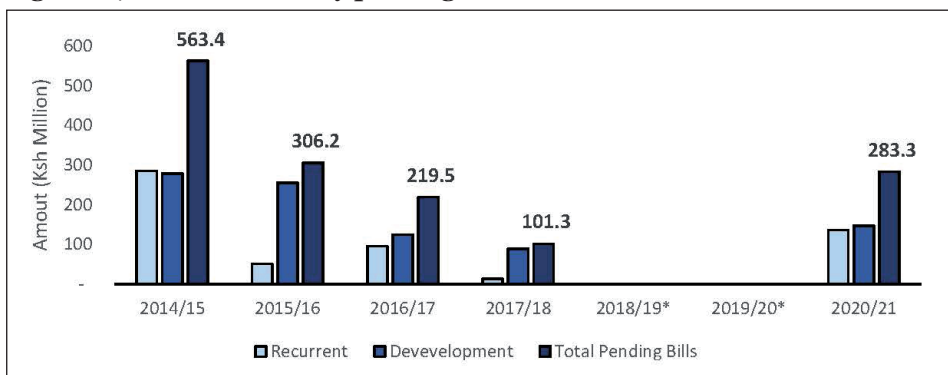


Data Source: Office of the Controller of Budget

Pending Bills

In 2014/15 the county reported Ksh 563.4 million in pending bills. This declined steadily to Ksh. 101.3 million in 2017/18 with development spending related pending bills accounting for 87.7 per cent of this. In 2018/19 and 2019/20 the county did provide figures on pending bills. However, at the end of 2020/21, the county pending bills amounted to Ksh 283.3 million with development pending bills accounting for 51.9 per cent. Generally, pending bills related to development have been greater than those related to recurrent expenditure on average accounting for 60.6 per cent of the pending bills portfolio. If pending bills for development were paid in their respective fiscal year, the execution of development budget in subsequent years would improve.

Figure 2.7: Profile of county pending bills



Data Source: Office of the Controller of Budget

In order to achieve its overall goal of improving lives and livelihoods of its residents, the county government must now move quickly to tackle the problem of pending bills. Increasing and persistent pending bills is a threat to the survival of the private sector particularly primary firms that trade with the county government. These firms are critical for employment creation as well as driving economic activity within the county. These bills have not only affected their profitability and overall performance but have also become a threat to private sector in general and the families that depend on these firms through ripple effect. If not well monitored these could grow and eat up on the county’s already thin revenue sources.

2.2 Conclusions

- i. Mobilize more finances from OSR to increase the available revenues for budgetary operations.
- ii. Seek for more funding in form of grants from development partners to cater for the critical development projects in the county.
- iii. Ensure that the ongoing projects are completed before launching new project and clear any pending bills and arrears owed to suppliers.

- iv. Ensure the ongoing infrastructure project are completed and suppliers paid within the specified timelines for optimal returns to investment and to spur private sector activity.
- v. Improve budget execution and absorption of development budget by harmonizing project implementation cycles to budgeting and fast-track exchequer releases.
- vi. Reduction of expenditure on compensation of employees within the PFM requirement since ballooning compensation of employees potentially affects execution of key development programs especially if not brought to sustainable levels.
- vii. Monitoring and prompt payment of pending bills as they limit execution of planned activities in subsequent budgets.

3. Agriculture Livestock and Fisheries

3.1 Characteristics of the Sector

Agriculture accounts for a significant share of economic activity in Isiolo County. More than a 20 per cent of the County economic activity is driven by the agriculture sector. In 2017, agriculture accounted for Ksh 3,325 million out of the total Ksh 15,850 million Gross County Product (GCP) amounting to 21% of the County's GCP.

Over 40 per cent of the households in Isiolo County practice farming. About 4.8 per cent of the households produce crops, 40.21 per cent produce livestock, 0.14 per cent practice aquaculture and about 0.36 per cent are involved in fishing. About 2.28 per cent of the households practice irrigation farming.

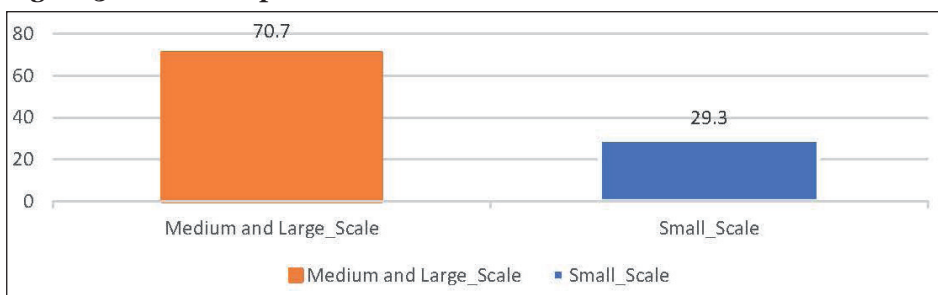
Table 3.1: Distribution of households practicing agriculture, fishing and irrigation by county and sub-county

County/ Sub County	Total Households	Farming Households	Crop Production	Livestock Production	Aquaculture	Fishing	Irrigation
Kenya	12,143,913	6,354,211	5,555,974	4,729,288	29,325	109,640	369,679
Isiolo	58,072	24,271	2,780	23,348	80	209	1,322
Garbatulla	18,661	9,264	1,016	8,990	47	75	582
Isiolo	29,853	8,600	1,485	7,989	12	55	649
Merti	9,558	6,407	279	6,369	21	79	91

Source: 2019 Kenya Population and Housing Census

On the scale of production, the FAO criterion on land size is used to identify small holder farmers as those producers that “fall in the bottom 40 per cent of the cumulative distribution” (Khalil et al., 2017). Using this criterion, about 29.3 per cent of the farming households in Isiolo County are “small-scale” farming with a land holding of 0.675 or less acres of land.

Figure 3.1: Scale of operation: Per cent of households



Source: KIHBS 2015/2016. Figures for a period of the 12 months

The County is classified as a Central ASALS agro-ecological zone as per the Agricultural Sector Transformation and Growth Strategy (ASTGS) 2019-2029. An overall analysis of the County agricultural production indicates among the top food crops produced by households in Isiolo include maize, beans, tomatoes, kales and onions.

Table 3.2: Distribution of households growing crops by type, county and sub-county

County/Sub County	Kenya	Isiolo	Garbatulla	Isiolo	Merti
Maize	5,104,967	1,983	655	1,119	209
Beans	3,600,840	1,297	206	1,059	32
Tomatoes	410,224	1,111	491	520	100
Kales	1,916,898	1,086	390	619	77
Onions	707,182	1,019	442	494	83
Watermelons	84,077	364	223	87	54
Sweet Potatoes	1,134,102	351	99	239	13
Bananas	2,139,421	307	119	176	12
Green grams	571,426	290	138	143	9

Source: 2019 Kenya Population and Housing Census

Resource productivity is another key important factor in determining the agro-processing potential (scale) of the County and would have a great impact on farmers' incomes and the County's GCP. An assessment of horticultural productivity indicates Isiolo's value of fruits production in 2019 amounted to Ksh 25.9 million. The area under fruit was 91 Ha with a production of 790 MT. The major fruits grown in order of value importance are watermelons and bananas.

Table 3.3: Fruits grown in Isiolo County

Type of Fruit	Area in Ha	Production in Tons	Value in Shillings
Watermelons	42	424	20,890,000
Banana	14	96	2,877,000
Mango	15	120	960,000
Pawpaw	10	50	600,000
Guavas	10	100	600,000
Total	91	790	25,927,000

Source: Agriculture and Food Authority, 2019

In 2019, the value of vegetables production in the County amounted to Ksh 258.5 million. The area under vegetables was 534 Ha with a production of 4,839 MT. The major vegetables grown in order of value importance are tomato and kales

Table 3.4: Vegetables grown in Isiolo County

Type of Vegetables	Area in Ha	Production in Tons	Value in Shillings
Tomato	165	2,415	147,600,000
Kales	211	1,420	63,650,000
Spinach	158	1,004	47,250,000
Total	534	4,839	258,500,000

Source: Agriculture and Food Authority (2019)

With the exception of onions and chilies, Medicinal and Aromatic plants (MAPs) remain unexploited despite the great potential to exploit this category of crops especially in agroecologies characterizing ASALs. In 2019, the value of MAPs production in the County amounted to Ksh 111.7 million. The area under MAPs was 267 Ha with a production of 2,792MT. The main MAPs grown are Bulb Onion.

Table 3.5: Medicinal and Aromatic Plants (MAPs) grown in Isiolo County

Medicinal and Aromatic Plants (MAPs)	Area in Ha	Production in Tons	Value in Shillings
Bulb Onion	267	2,792	111,680,000

Source: Agriculture and Food Authority (2019)

Being an ASAL County, animal production is a key economic activity in Isiolo County. Other than rearing the traditional livestock (i.e. cattle, sheep, goats, donkeys and camels), the County has promoted poultry production and bee keeping (apiculture) among farming households in the County. A lower percentage of farming households practice aquaculture and pig farming.

Table 3.6: Distribution of households rearing livestock and fish by county and sub-county

County/Sub County	Kenya	Isiolo	Garbatulla	Isiolo	Merti
Goats	1,898,887	20,562	8,145	6,802	5,615
Sheep	1,299,893	19,424	7,843	5,957	5,624
Indigenous cattle	2,260,439	11,953	3,653	4,767	3,533
Donkeys	500,682	11,509	5,232	2,718	3,559
Camels	167,666	6,771	2,988	1,906	1,877
Indigenous Chicken	3,337,700	6,041	1,704	3,090	1,247
Exotic cattle -Dairy	939,916	596	219	222	155
Beehives	201,406	407	53	352	2
Exotic cattle -Beef	167,625	406	171	114	121
Exotic Chicken Layers	194,517	319	42	241	36
Exotic Chicken Broilers	79,461	225	31	179	15
Fish Ponds	22,019	66	38	10	18
Rabbits	124,122	54	6	45	3
Fish Cages	3,361	13	10	1	2
Pigs	110,383	11	-	10	1

Source: 2019 Kenya Population and Housing Census

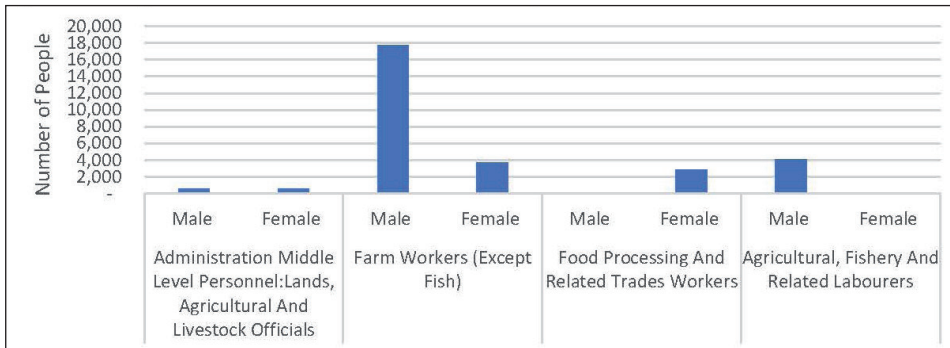
The above characterization of farming households highlights the priority value chain opportunities in cattle, sheep, goats, donkeys, camels, poultry production, bee keeping (apiculture) maize, beans, tomatoes, watermelons, bananas, kales, and onions. With majority of the households farming the identified products, the current Isiolo transformation strategy in agriculture should prioritize value chains in the identified areas to positively impact of households' livelihoods.

Agri-Food Challenges in COVID-19

i) Human capital/employment levels – by gender

Agricultural labor participation in Isiolo indicates dominance by either gender in specific agriculture related occupations. Majority of the population in Isiolo are farm workers where the group covers occupations related to: Field Crop, Vegetable and Horticultural Farm Workers; Poultry, Dairy and Livestock Producers; and Crop and Animal Producers. The classifications are based on the Kenya National Occupational Classification Standard (KNOCS).

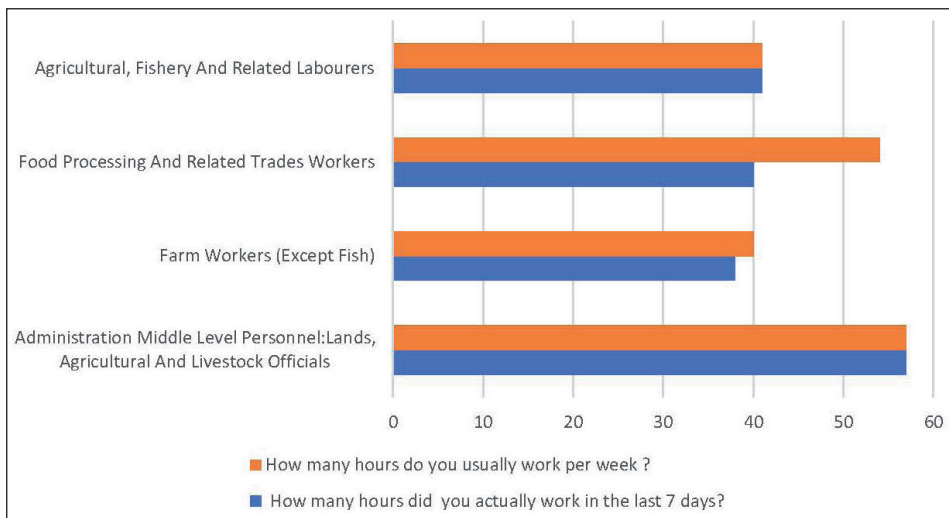
Figure 3.2: Agriculture related labour force participation



Source: KNBS Survey on Socio Economic Impact of COVID-19 on Households-Wave 2

An assessment of the COVID-19 effects on hours worked by in agriculture related occupations indicates workers in some of the identified sub-sectors worked fewer hours in the reference period as compared with the usual hours worked per week. The most affected workers are the Food processing and related trades workers who recorded the highest difference of 14 hours between the usual and actual hours worked in a week. Occupations in this sub-major group are namely: -Butchers, Fishmongers and Related Food Preparers; Bakers, Pastry-cooks and Confectionery Makers; Dairy Products Makers; Fruit, Nut and Related Preservers; Tobacco Preparers and Tobacco Products Makers; Food and Beverage Tasters; Brewers, Distillers and Related Workers; and Other Food Processing and Related Workers.

Figure 3.3: Changes in hours worked by in agriculture-related occupations



Source: KNBS Survey on Socio Economic Impact of COVID-19 on Households-Wave 2

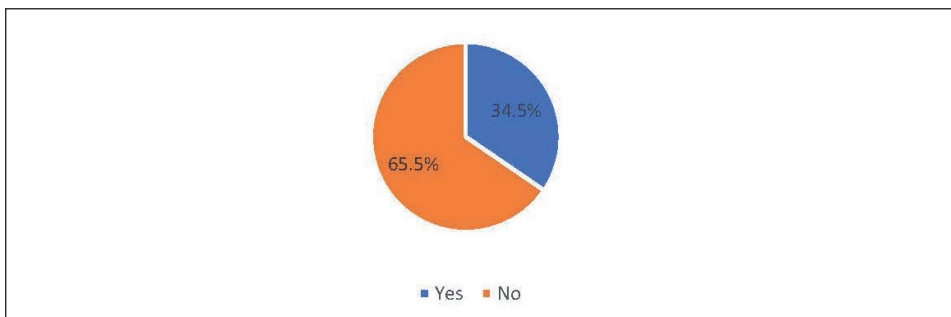
The identified COVID-19 effects on labour force participation are likely to have negative effects on output thereby increasing yield gaps. The effects are also likely to have negative effects on household’s income.

ii) Market channels and operations

Successful transformation of smallholder agricultural production in Isiolo County from subsistence to an innovative, commercially oriented and modern agricultural sector, as aspired in the national ASTGS, is dependent on the ability of the County market its commodities both in domestic, regional and international markets.

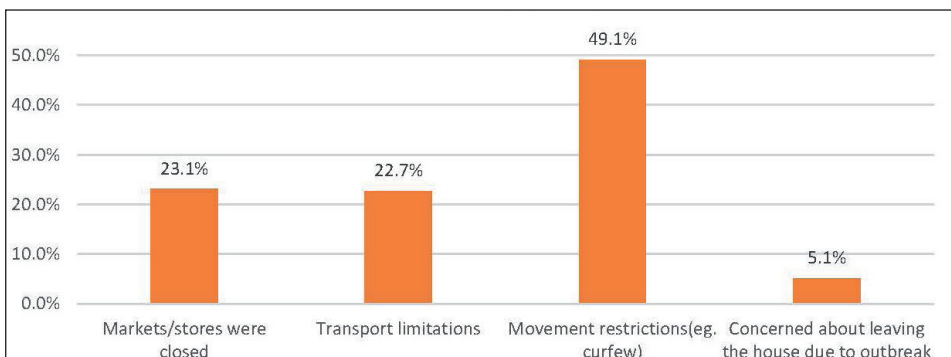
Among the marketing issues faced by the County is road access, a key indication of access to markets. Isiolo’s rural access index (RAI)- which measures “the number of rural people who live within two kilometers (typically equivalent to a walk of 20-25 minutes) of an all-season road as a proportion of the total rural population- fairs poorly at 22 per cent. This is low compared to the national average of 69.38 per cent.

As a result of COVID-19, there has been a further slow down on trade activities due to the restrictions on movements. From the KNBS conducted between 30th May and 6th June 2020, 34.5 per cent of the households in Isiolo County indicated over the past 1 week there had been instances where the household or a member of the household could not access the markets/grocery stores to purchase food items

Figure 3.4: Limited access to markets to purchase food items

Source: KNBS Survey on Socio Economic Impact of COVID-19 on Households-Wave 2

Majority of the households indicated the key reasons for not accessing the markets/grocery stores to purchase food items were movement restrictions (49.1%), closure of the markets/grocery stores (23.1%) and transport limitations (22.7%).

Figure 3.5: Reason for limited access to markets/ grocery stores

Source: KNBS Survey on Socio Economic Impact of COVID-19 on Households-Wave 2

Livestock trade has especially been majorly affected as traders are unable to take the livestock to the market. Restrictions affecting seamless movement of food commodities are likely to cause a hike in prices in non-production areas and fall in prices in production areas. 84 per cent of households in Isiolo County indicated that over the past 2 weeks from the reference period, while 15 per cent indicated that they had not experienced a change in the prices.

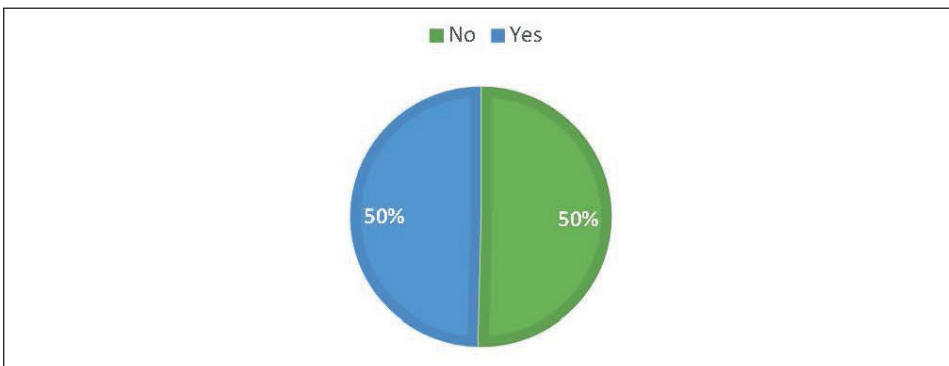
Figure 3.6: Percentage of households experiencing change in food commodity prices



Source: KNBS Survey on Socio Economic Impact of COVID-19 on Households-Wave 2

On the magnitude of the price shocks, 50 per cent of the households indicated they faced a large rise in food prices in the past two weeks from the reference period.

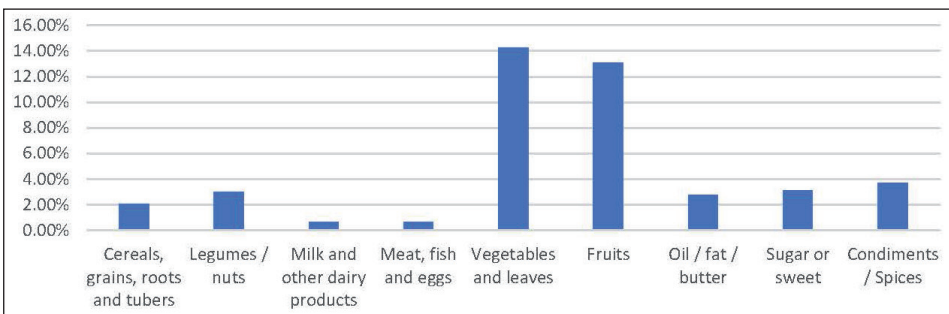
Figure 3.7: Proportion of households facing large food price shocks



Source: KNBS Survey on Socio Economic Impact of COVID-19 on Households-Wave 2

Poor access to markets also hinders the ability to supply food to the population as shown in the below figure.

Figure 3.8: Per cent households reporting that the following food items were not readily available in their locality

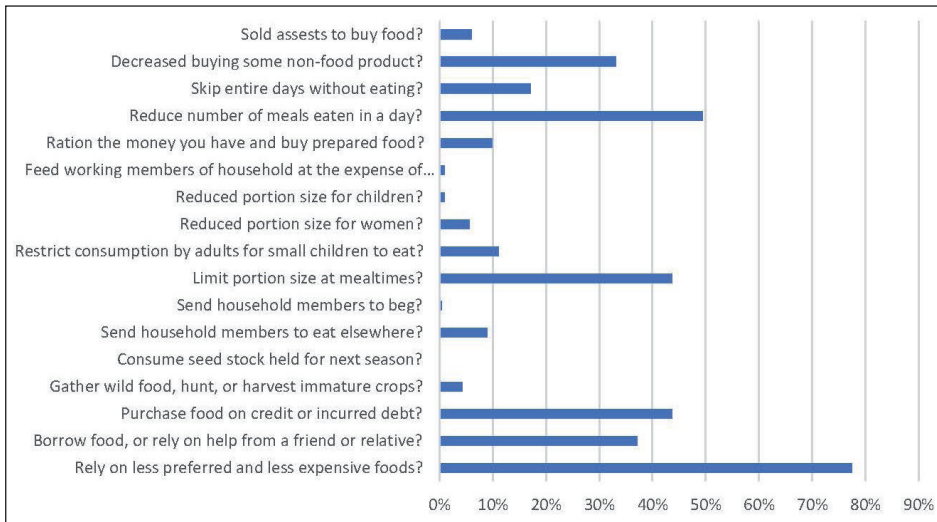


Source: KNBS Survey on Socio Economic Impact of COVID-19 on Households-Wave 2

A key concern is that the food groups affected most are the nutritious food categories-vegetables and fruits-which are necessary for boosting the immune system of the population.

Among the key strategies adopted by households to mitigate COVID-19 effects on food consumption include relying on less preferred and less expensive foods (77.4%), reduce number of meals eaten in a day (49.4%), purchase food on credit or incurred debt (43.71%), limit portion size at mealtimes (43.66%) and borrow food, or rely on help from a friend or relative (37.2%).

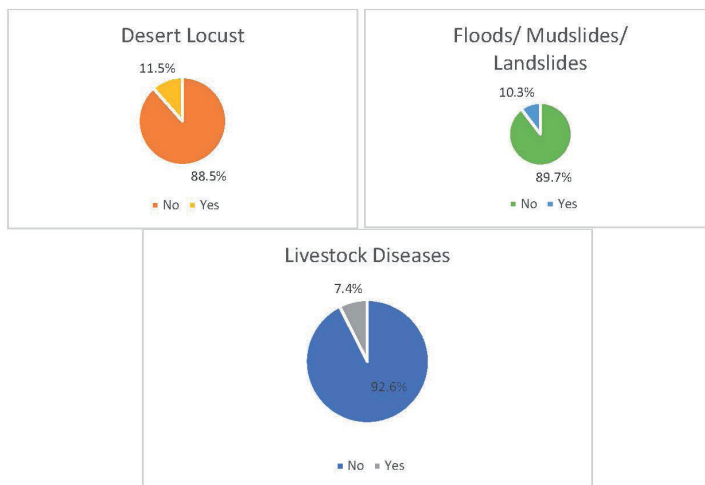
Figure 3.9: per cent of households where the following strategies were adopted for at least one day



Source: KNBS Survey on Socio Economic Impact of COVID-19 on Households-Wave 2

Additional significant challenges faced by the County during the COVID-19 pandemic include Desert locusts (11.5%); Floods/ Mudslides/ Landslides (10.3%); and Livestock Diseases (7.4%).

Figure 3.10: Percentage of households who experienced the below shocks in the past two weeks the KNBS Wave 2 survey



Source: KNBS Survey on Socio Economic Impact of COVID-19 on Households-Wave 2

Further, the County faced the following COVID effects:

- a) Marketing products to Nairobi was limited due to the lockdown and cessation of movement.
- b) Livestock is the Main source of livelihoods and due to COVID many markets were closed therefore many of the locals lost their source of livelihood.
- c) Comparatively low road networks in comparison to other counties, critical for access to input and output markets. Due to the heavy rains, the rural roads have been inaccessible, therefore getting products to the market has been a challenge.
- d) Plans were underway to process hides and skins as the ones in place are small scale and not up to the required standards.

Agri-Food Constraints Faced in the County

Among the key constraints the County faces include:

- i) Comparatively low road networks in comparison to other counties, critical for access to input and output markets.
- ii) Need to undertake livestock farming as a business and not just for cultural purposes
- iii) Farmers low access to quality and affordable inputs including certified seeds, water, animal feeds, artificial insemination (AI) services, fertilizers, livestock vaccination and mechanized ploughing services by County tractor hire services.
- iv) Dependence of rain fed agriculture despite frequency in extreme climate conditions, such as drought episodes, delayed and erratic rains, floods, and high temperatures among other climate shocks,

- v) Low productivity due to poor natural resource management
- vi) Water scarcity which is a constraining factor that limits productivity for both livestock and food crops production
- vii) Low livestock, livestock products and food crops marketing opportunities necessary for improved incomes
- viii) Low commercialization of farming where majority of farmers practice farming for subsistence purposes and as a hobby rather than a business.
- ix) Low adoption of early-maturing plant varieties, water harvesting, and post-harvest storage that would increase farmers returns
- x) Desert locusts' infestation, floods/ mudslides/ landslides, and livestock diseases
- xi) Low livestock and crops processing and value addition opportunities among small scale farmers
- xii) Slow uptake of digital platforms to market agricultural produce.
- xiii) Need to enhance/ revive extension services in the county
- xiv) Farm losses and post-harvest waste.

The above challenges combined will lead to the overall impact of reducing farm output, farmer incomes and increasing the vulnerability of households to food insecurity and climate variability particularly flood and drought episodes.

3.2 Opportunities with COVID-19 in Agriculture Sector

An assessment of the sector linkages to other sectors highlights that the sector is enabled by:

- i. Businesses/ MSMEs: Businesses and MSMEs are crucial in providing inputs and requirements to the agricultural sector. The sector would facilitate the efficient access to
- ii. Transport, Storage and ICT sectors
- iii. Financial and insurance activities
- iv. Accommodation Food services
- v. Manufacturing: The manufacturing sector plays a crucial role in agro-processing. Agricultural inputs also contribute to the processing of other manufacturing commodities

The County has opportunities in:

- a) Developing County-private partnership in enhancing agro-processing and value addition and Linking farmers to product markets
- b) Access to quality and affordable inputs including certified seedlings, water and hay for animals, AI services, fertilizers, livestock vaccination and ploughing services by County tractor hire services.

- c) In addition to agro-processing, provision of storage and cooling facilities particularly at collection points to minimize spoilage and post-harvest losses particularly for milk.
- d) Uptake of digital platforms to build capacities of farming households in modern agricultural technologies; access advisory and information services; and market agricultural produce.
- e) Expansion of water harvesting projects and sustainable irrigation in the County through partnership with development partners with the aim of increasing food productivity at the County.
- f) Scaling up conservation agriculture, post-harvest management, planting drought-tolerant, early maturing varieties and modern crop varieties, and agro-forestry.
- g) Increased livestock production through: - routine vaccination, deworming and vector control to maintain animal health; destocking and change of livestock species; decentralized veterinary services; disease surveillance; storing and conserving pastures and fodder; capacity building on animal management and training on preservation and value addition techniques; controlled movement of animals ; capacity building on stock route and market inspection ; and improved milking hygiene and animal housing.
- h) Adoption of drought resistant livestock pastures/fodder and crops and also fodder and feed conservation
- i) Rearing livestock breeds adapted to drought
- j) Livestock Production for Niche Markets
- k) Adoption of natural resource management to include soil and water conservation, tree planting, changing of crop type and water harvesting.
- l) Enhance supportive services to include early-warning systems, financial services such as insurance schemes for livestock / crop and credit facilities, advisory and information services through extension and training.
- m) Enhancing farmers technical capacities to act on advisory information received
- n) Improved crop and livestock emergencies surveillance systems in the County.
- o) Strengthening farmers' associations and cooperatives as an additional solution to marketing challenges

3.3 Emerging Issues

- i) Environmental degradation has reduced productive capacity of farms leading to increased risks to food insecurity and reduced farmers income.
- ii) Climate change, manifested in increased frequency and intensity of extreme weather conditions such as floods, droughts and pest invasion

3.4 Recommendations

To successfully build resilience and enhance growth of the agriculture sector, the County will:

- i) Promote uptake of agricultural insurance, particularly livestock insurance among households. With recurrent natural disasters like droughts, floods, land/mudslides, pest and disease outbreaks in ASALs, it is crucial that the County seeks affordable index-based insurance from development finance institutions (DFIs) to safeguard livelihoods.
- ii) Establishment of abattoirs and cold storage facilities (on-site cold storage and refrigerated vehicles to transport the meat to markets in Kenya and abroad).
- iii) Establish partnership with the National Government, NGOs, Research Institutions and the Private sector in establishment of fully equipped milk, meat and leather processing plants and horticultural processing and value addition plants. Towards this, the County is working with partners to produce and pack camel yoghurt; dried meat (“Nyir-nyir”) also from camel meat – which has a ready market at Eastleigh in Nairobi.
- iv) Invest in access roads to enhance linkage between farms and markets. Extensive rural road infrastructure plays a central role in provision of affordable access to both markets for agricultural outputs and modern inputs. Isiolo’s rural access index (RAI) fairs poorly at 22 per cent compared to the national average of 69.4 per cent. Other crucial market infrastructure includes lighting and water services to facilitate trade activities.
- v) Empower livestock producers to participate in high-value product markets, such as, niche markets for livestock products (e.g. organic milk and meat). This will create value for the County in several ways including: - farmers accessing premium process for the produce; rearrangement of the food chain to marketing structures that bypass exploitative middlemen; steady revenues for farmers; and increased economic incentives in adopting SLM practices.
- vi) Diversify production in the County to suite the high heterogeneity of land associated with ASALs, the selection of products which fit in each niche and into each climatic cycle. Potential areas of production include horticultural production (mainly fruits), beekeeping and fisheries and aquaculture.
- vii) Digitize the agri-food sector to enhance: - training and building capacities of farming households in modern agricultural technologies, provision of advisory and information services, marketing agricultural produce at a wider scope beyond the County level, and improving access to innovative support services including credit and insurance services.
- viii) Enhance access to modern livestock and crop inputs. Key crop and livestock inputs in the County include: - livestock drugs, vaccines, livestock chemicals, labor costs, costs related to establishment of long-term crops, inorganic fertilizers, and herbicides. There is need to enhance households’ access to quality and affordable: - certified seeds, water, animal feeds, and ploughing services by County tractor hire services.

In addition, there are opportunities in enhancing access to agriculture, livestock and fisheries extension services for improved agricultural and livestock production.

- ix) To support farming, particularly among women and youth in food crops and horticultural farming, there is need for sustainable expansion of irrigation and water harvesting projects in the County through partnership with development partners. Current projects under development in the County include: - Malkadalka phase 1 Irrigation project, Rapsu Irrigation project, and Oldonyiro Irrigation project. To support expansion of sustainable irrigation, there is need to promote development of Irrigation Infrastructure and technologies in the County. Further, there are plans to build a dam along Isiolo river to support irrigation.

4 Water, Sanitation, and Hygiene

4.1 Characteristics of the sector

Isiolo County has three main rivers namely Ewaso Nyiro, Isiolo, and Bisanadhi which flows through the county. Ewaso Nyiro River originates from the Aberdare ranges and north-western slopes of Mount Kenya and drains into the Lorian Swamp. The major aquifers that serve Isiolo County include the Isiolo-Nyambeni-Mount Kenya aquifer that has high ground water potential; Merti aquifer, Garbatulla-Modagashe aquifer that has very low ground water potential and Kachuru-Kulamawe-Boji aquifer which has fairly low ground water recharge in the aquifer due to surface water abstraction upstream. Groundwater quality of alluvial aquifers is generally good, though prone to contamination since they are shallow and unconfined. It is estimated that the daily consumption is about 25 litres per capita, excluding livestock requirements.

The provision of sanitation facilities in urban areas of the county is inadequate especially sewer systems. Household domestic sewage is channelled to sewerage treatment ponds. Where sewer system is lacking, on-site sanitation facilities are provided through use of septic tanks and pit latrines. In rural areas pit latrines dominate households and septic tanks serve institutions. To mitigate the effects of COVID-19 the Isiolo County government undertook the following measures:

- Water and Sanitation sector received a sizeable amount in the budget,
- Most areas lack water, due to a low water table thus we need to have water pumps
- The county has drilled bore holes in Merti and Garbatula
- Water tracking mechanism has been instituted, to help even post COVID.
- The county budget is not enough to sufficiently deal with the needs
- Areas installed with pumps have sometimes run dry and the county has to facilitate the fueling of those pumps.
- Some NGOs have really helped in terms of financing, water tracking and also provision of spare parts
- A lot of sensitizations was offered (by NGOS and County Government) in terms of water harvesting, and issues with water pumps, and also in the purchase of water tanks.

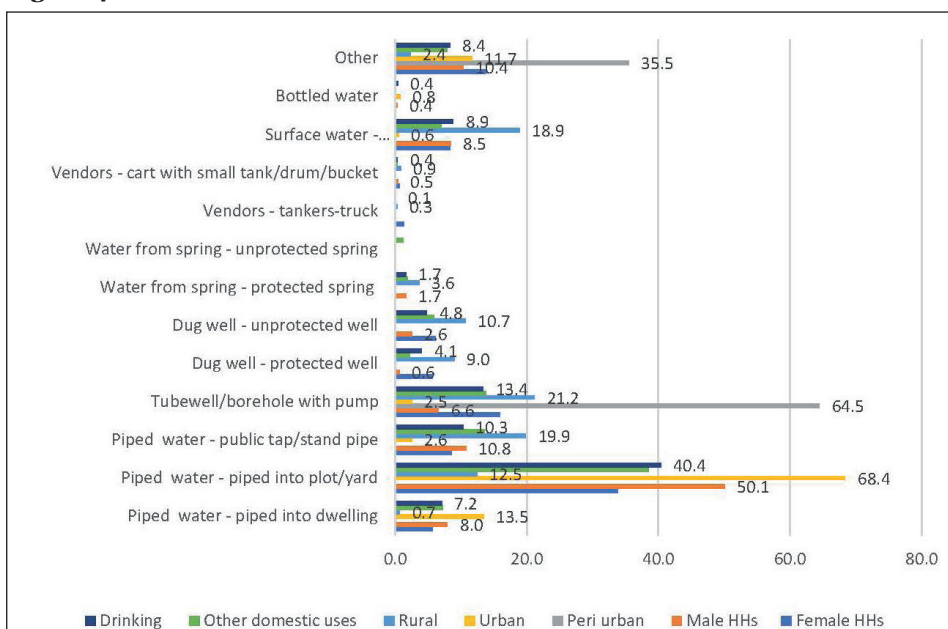
Access to source of water by households

The major source of water for drinking used by households are piped water into plot/yard (40.4%), tubewell/borehole with pump (13.4%) and piped water (public tap/standpipe) (10.3%). Piped water into plot/yard (38.5%) and tubewell/borehole with pump (13.8%,

respectively) are also used for domestic purposes. On the other hand, most urban too have access to piped water into plot/yard (68.4%), piped water into dwelling (13.5%). Rural and peri-urban households relies on tubewell/borehole with pump at 21.2 per cent and 64.5 per cent, respectively.

Additionally, both male, and female headed households also rely on piped water into plot/yard for drinking at 50.1 per cent and 33.8 per cent, respectively. Access to piped water (public tap/standpipe is also common among male (10.8 per cent) and female (8.01%) headed households. There are also small proportions of households with access to piped water into the dwelling (7.2%), as well as among male (7.2%) and female (8.0%) headed households.

Figure 4.1: Access to sources of water for households



Source: KNBS 2015/2016

Combating COVID-19 pandemic has already placed high demand for water for both domestic usage in households, health care institutions, learning institutions, marketplaces, and other public places. Water also remains important to other sectors of the economy such as agriculture and industrial usage, among others. With the planned re-opening of schools and upcoming low rain seasons means that the pressure on water resources will be high, this therefore means that the demand for water will be high and if the supply will be low, households are likely to fail to observe COVID-19 prevention measures of hand washing which may in turn lead to high transmission of COVID-19.

To ensure continuity of quality water supply, there is need for the county to invest in water harvesting and storage facilities both at household and institutional level, this may include supporting schools in building rain harvesting and storage structures in schools from the school structure rooftops, supporting households in rainwater harvesting during rainfall times. Other interventions may include digging boreholes, supply of water to households

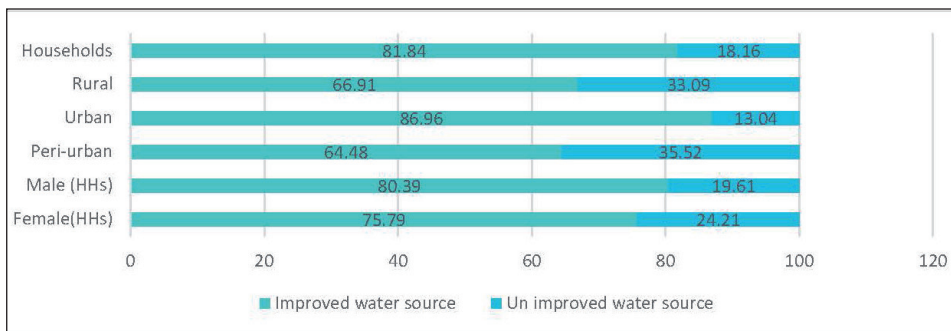
that experiences water scarcity.

Therefore, for equality in access to water the county government can waive or reduce the water bills for urban households who uses piped water as well as support water vendors in access to clean safe water at a reduced cost. This will mean financial support to water service companies. Other long-term measures include inclusion of both rural, urban, and peri-urban dwellers into decision making in regard to water management and governance.

Access to improved and unimproved sources of water by households

Most households as well as male and female headed households have access to improved drinking water² is high in the county among households. Similarly, both rural, urban and peri urban households have higher access to improved drinking water sources as shown in the figure below.

Figure 4.2: Access to improved and unimproved sources of water by households



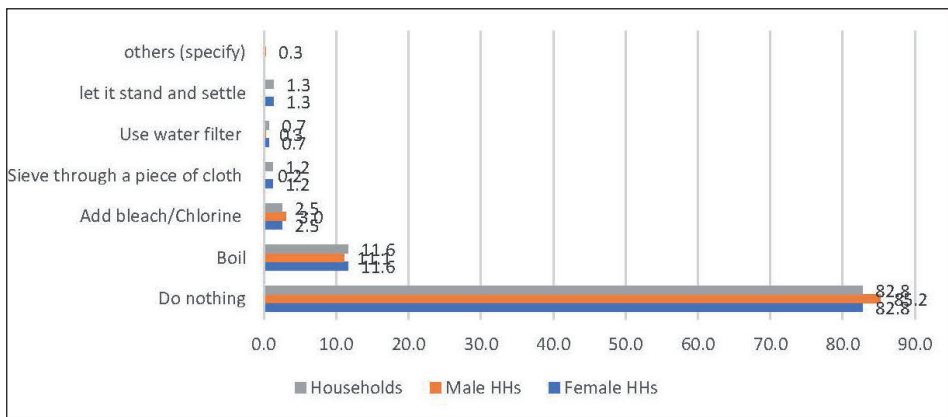
Source: KNBS 2015/2016

Access to water treatment methods

Majority of the households (82.8 per cent), both male (85.2 per cent) and female (82.2 per cent) do nothing to make it safe for drinking. Other methods of water treatment are boiling and chlorination. See the figure below

² Improved sources of water include; water from the following sources Piped water - piped into dwelling, Piped water - piped into plot/yard, Piped water - public tap/stand pipe, Tubewell/borehole with pump, Dug well - protected well, Dug well - unprotected well, Water from spring - protected spring). Unimproved sources of water which include; Water from spring - unprotected spring, Rain water collection, Vendors - tankers-truck, Vendors - cart with small tank/drum/bucket, Vendors-bicycles with bucket, Surface water river/streams/pond/dam/lake/cannal/irrigation channel Bottled water. This is according to WHO and UN classification of sources of water.

Figure 4.3: Access to safe drinking water by households



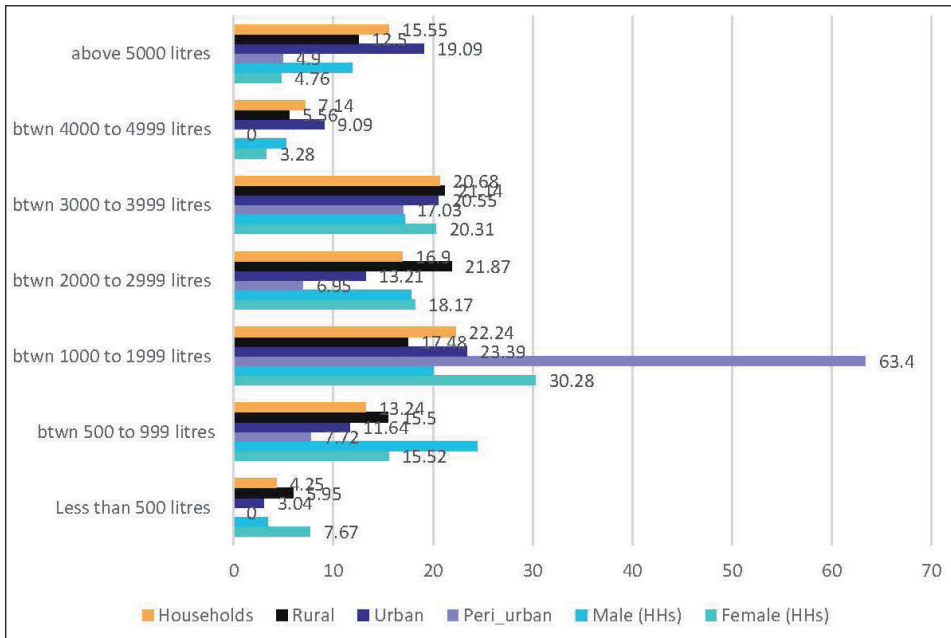
Source: KNBS 2015/2016

Clean and safe water is essential for good health and goes a long way in ensuring reduced infections. Inequalities in access to safe and clean drinking water may put households at risk of contracting infectious diseases as well as make the households less observance of COVID-19 measures of hand hygiene. One mitigation measure that may be undertaken by the county to increase access to improved water source, include connecting the households with piped water, increase the development of improved sources of water especially in rural areas. Long term measure to support access to water all households is to have both male and female headed households to be part of water management/governance team and in decision making in water management. Other important consideration is to have separate water drinking point for livestock, different from the household water drinking water sources to minimize water contamination as well as conflict over water resource. Other long term measures is to avoid agricultural activities along the upstream to minimize water pollution.

Volumes for water used by households in a month

Most households (22.2%), rural households (30.3%) urban (23.4%) and peri-urban households (63.4%) use between 1000 to 1999 litres of water in a month. On the other hand, majority of male headed households (24.5%) uses 500 to 999 litres of water in month.

Figure 4.4: Volumes of water used by households in a month



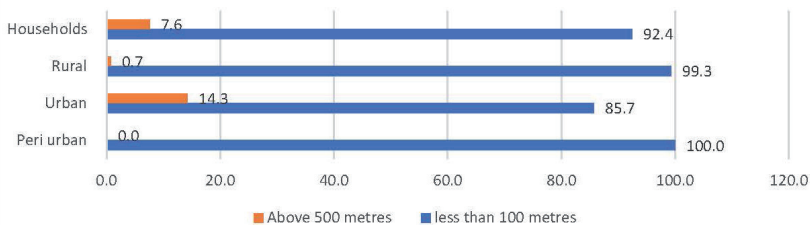
Source: KNBS 2015/2016

The above figure indicates that most households use large volumes of water in a monthly, this therefore means that resumption of learning institutions has increased the demand for water. Water remains a scarce commodity and in places or months where water is scarce, this may have an effect on families and hinder them from observing COVID-19 prevention guidelines. Correct utilizations of water resources should be emphasized at households' level, similarly, there is need for conservation of water catchment areas.

Distance covered to water source and average time spend to and from the water source

Majority of the households (92.4 per cent) both rural, urban and peri-urban covers less than 100 metres to water sources. This may mean that the households have water points within their premises or close to their compounds. Only a small portion of households (7.8%), rural (0.7%) urban (14.3%) covers more than 500 metres to water sources.

Figure 4.5: Distance covered by households to and from water sources



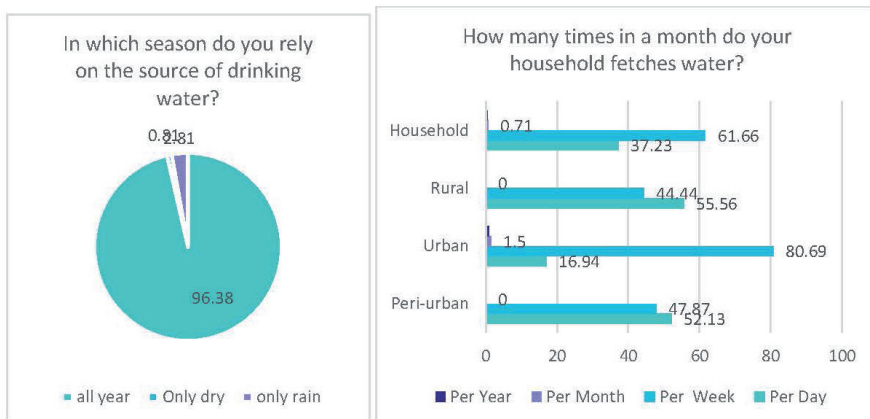
Source: KNBS 2015/2016

If water is available to households, schools, health institutions within the shortest distances possible, it easily encourages observing hand hygiene thus minimizing infections. In learning institutions, it minimizes rates of school dropouts among girls. Women headed households are disadvantaged in access to drinking water within shortest distances and this may make them vulnerable to contracting COVID-19 and other infectious diseases. To support hand hygiene among households there is need to have water supply closer to households headed by women.

Access and reliability of water sources

Majority of households (96.4%) in the county relies on the main source of drink water all year round. This therefore means in case of the source drying up, households will lack water resulting into non observance of COVID-19 measures of hand washing. On the other hand, most households (61.7 per cent), rural households (44.4 per cent) and peri-urban (47.9%) must go to fetch drinking water from the sources per week. Additionally, most urban households (80.7%) must access to water sources weekly. This therefore also means there may be more of interactions with other household members in areas where water sources are shared, this may lead to increase on infections of COVID-19 where COVID-19 guidelines of social distance and avoidance of crowded place may not be observed. It also implies that households may not be having water storage facilities that can minimize number of trips to water points in a day, therefore they may be at risk of water shortages during dry months.

Figure 4.6: Access and reliability to water sources by households



Source: KNBS 2015/2016

Source: KNBS 2015/2016

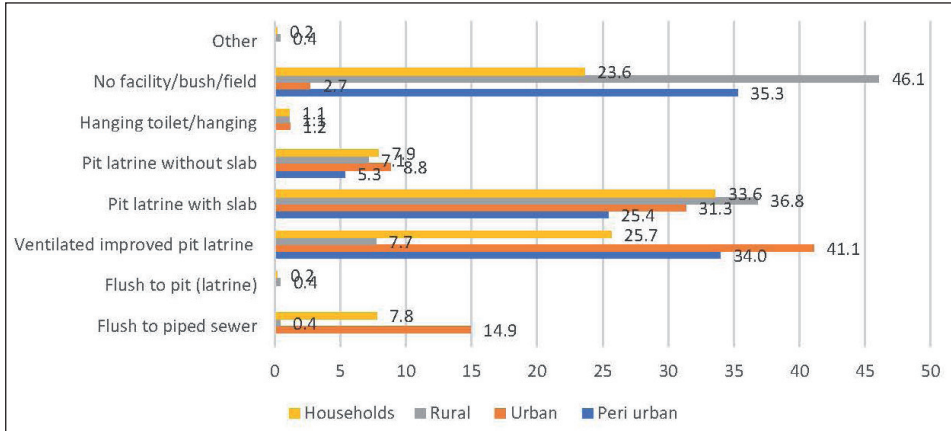
Top interventions are protection of the existing major water sources for households and development of new water sources, this may include rainwater harvesting at individual and institutional level. Protection of water catchment areas.

Access to sanitation

Majority of the households (23.6%), rural (46.1%) urban (7.7%) and peri-urban (35.3%) have no access to sanitation facility and uses bush or open field. On the other hand, most of the urban households have access to pit latrine with slab (33.6%) which is also found

among rural (36.8%), urban (31.3%) and peri-urban (25.4%).

Figure 4.7: Access to sanitation in Isiolo County

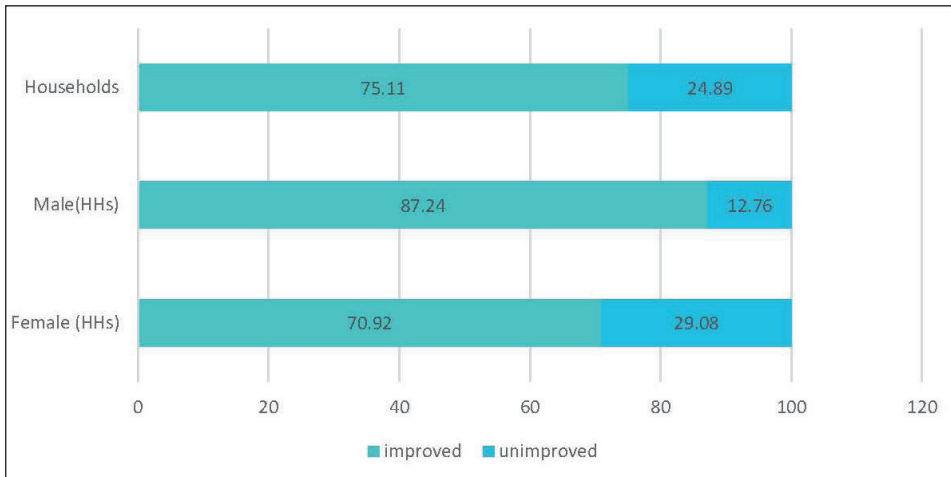


Source: KNBS 2015/2016

Access to improved and unimproved sanitation

Majority of the households (75.1%) have access to access to improved sanitation facilities³ compared to those who have access unimproved sanitation at 24.9 per cent.

Figure 4.8: Access to improved and unimproved sanitation by households



Source: KNBS 2015/2016

Access to improved sanitation is very important in maintaining hygiene and keeping infectious diseases away, good sanitation can help to detect the genetic residues of diseases

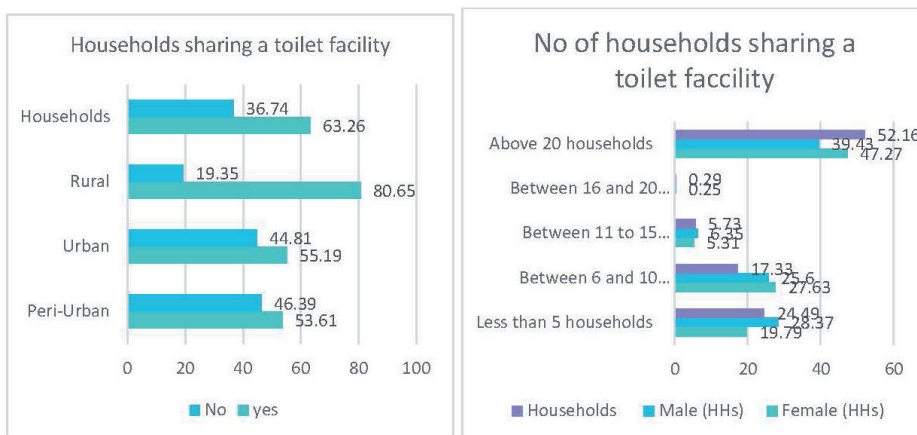
³ Improved sanitation includes; flush to piped sewer, flush to septic tank, flush to pit (latrine), flush to somewhere else, flush to unknown place, ventilated improved pit latrine, pit latrine with slab, pit latrine without slab). Unimproved sanitation includes; composting toilet, bucket toilet, hanging toilet/hanging, no facility/bush/field, others

in wastewater as those who are infected are thought to shed traces of the virus in faeces thus prompting for immediate action from the health officials.

Sharing of a toilet facility

Additionally, 36.74 per cent of the households do not share a toilet facility with other households, this is also similar in rural areas at 19.35 per cent. There are large proportions of households in urban and peri-urban households who share a toilet facility with other households at 55.19 per cent and 53.61 per cent; respectively. On the other hand, most of households do share a toilet facility with more than 20 other households at 52.16 per cent, 39.43 per cent male headed households and 47.27 per cent female headed households. Only a small proportion of households do share a toilet facility with less than 5 other households at 24.49 per cent and 28.37 per cent for male headed households and 19.79 per cent for female headed households.

Figure 4.9: Number of households sharing a toilet facility



Source: KNBS 2015/2016

Source: KNBS 2015/2016

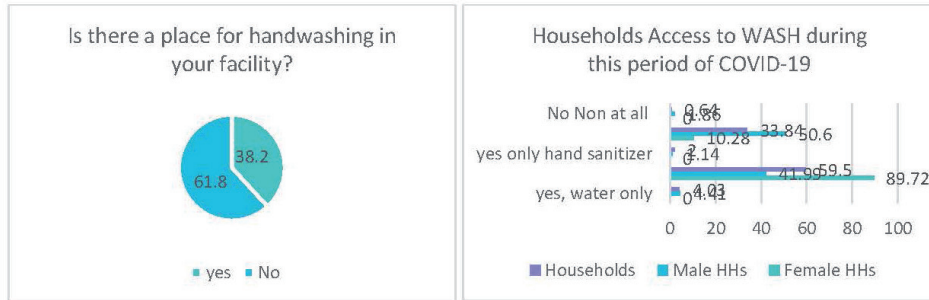
Sharing of toilet facilities with large number of households puts individuals at risk of contracting COVID-19, and other infectious diseases in cases where proper hygiene is not maintained as well as social distancing measures. Similarly, WHO guidelines require separate sanitation facilities for suspected COVID-19 cases which households may not be able to achieve.

Access to WASH during the COVID-19 period

WASH has been identified very important in helping to curb transmission of infectious diseases. 61.8 per cent of the households in the county do not have a handwashing facility in their households. On the other hand, 59.5 per cent of the households have access to WASH (*water and soap*) during this period of COVID-19 male headed households at 41.99 per cent and female headed households at 89.72 per cent. Additional 33.84 per cent of the households having access to both water, soap and hand sanitizer, male headed

households 50.6 per cent female headed households at 10.28 per cent. Only a small portion of households have access to water only at 4.03 per cent while 0 per cent of female headed households do not have access to water, soap nor hand sanitizer.

Figure 4.10: Access to wash during the COVID-19 period



Source: KNBS KIHBS 2015/2016

Source: KNBS COVID-19 wave 2, 2020

More of hand washing should be emphasized especially to those who are not observing hand hygiene to help decrease the spread of the virus, this should be facilitated by provision of water, soap/hand sanitizer to households

4.2 Opportunities with COVID-19 in various sectors

COVID-19 has highlighted the need to maintain a clean safe water, proper sanitation and hand hygiene which places more demand on water and therefore the county needs to leverage on lessons learned from COVID-19 by improving its water and sanitation coverage.

4.3 Emerging Issues

The County has provided wash taps within shops in the town center as well as handwashing facilities in County and sub-County offices. The county has undertaken a distribution of water tanks, water and soaps at points of entry as well as developed hand washing booths in the informal settlements. The booths are made by students from the TVET institutions

4.4 Recommendations

The county has no developed sewerage infrastructure especially in urban settings which poses a health risk. The recovery strategy recommends the following strategies for implementation:

- i) The county to fast-track drilling of borehole, construction of water pans, dams, sand dams and wells to help increase access to water for domestic and for livestock use.
- ii) The county to implement the county water master plan
- iii) The county to construct storage facilities for storage of harvested water to be used during dry periods
- iv) The county to fast-track installation of water metering to help improve in water

- management efficiency and minimize on water loses
- v) The county to install de-salination plants to help improve on the water quality
 - vi) The county to invest in solar water pumping facilities
 - vii) The county government to install water treatment facilities
 - viii) Map out water sources and their capacity to help in management of water resources
 - ix) The county to undertake water trucking to households and to the livestock farmers during times of emergencies and drought
 - x) Expand and rehabilitate the existing piped water connection infrastructure to help increase access to water. There is low access to piped water which stands at 28.1 per cent in urban 10.8 per cent in rural and 0.1 per cent in peri-urban areas. This means low revenue from piped water for the county government. Similarly, it also implies low access to clean and safe water which is guaranteed through piped water system. To increase piped water connectivity to households. The county government can collaborate with the private sector, Non-Governmental organization and the local community to expand the water infrastructure.
 - xi) Expand sewer infrastructure to accommodate more households, currently there is low access to piped sewer among households which is 5 per cent urban and less than 0.5 per cent coverage both in rural and peri-urban areas. Low connectivity to piped sewer denies the county the much-needed revenue from sanitation services as well as access to safe sanitation.
 - xii) Build toilets in communities, households, schools, health care facilities, marketplaces and public places to help increase access to improved sanitation⁴. Currently, 46.2 per cent of rural, 35.3 per cent of peri-urban and 2.7 per cent of urban households have no access to toilet facility. Similarly, sharing of a toilet facility with other households is common which stands at 80.65 per cent rural, 55.2 per cent urban and 53.6 per cent peri-urban. Toilet sharing puts households at risk of contracting COVID-19, and other infectious diseases in cases where proper toilet hygiene is not maintained. Increased access to sanitation can be achieved through collaboration between county government, national government, development partners and PPP to expand sewer infrastructure and to accommodate more households.
 - xiii) Promote the importance of handwashing and construct WASH facilities to increase access at the household level. Currently access to WASH is high among households with majority having access to water and soap at 59.5 per cent, water soap. On the other hand, 61.8 per cent of the households do not have a designated handwashing facility in their households. This may compromise hand washing hygiene of households thus making households vulnerable to contracting COVID-19. Increased access to WASH can be achieved by supporting households with access to water, soap and WASH facilities, sensitization on the importance of handwashing. Collaboration between County Government, Non-Governmental Organizations, local community

⁴ Improved sanitation include; flush to piped sewer, flush to septic tank, flush to pit (latrine), flush to somewhere else, flush to unknown place, ventilated improved pit latrine, pit latrine with slab, pit latrine without slab, while unimproved sanitation include; composting toilet, bucket toilet, hanging toilet/hanging, no facility/bush/field. WHO and UN classification of types of sanitation facilities.

and the media is important to realize increased access to WASH among households.

- xiv) Enforce the WASH regulation of having toilets in all public facilities such as supermarkets, hotels and banks etc.
- xv) The county to organize sensitization forums on the importance of handwashing through the media and in community forums
- xvi) Promote irrigation farming by provision of water for irrigation, currently only 40.8 per cent of households uses irrigation for farming in the past 12 months where the main source of water for irrigation is from rivers. The county can support irrigation farming by increasing access to water for irrigation. This can be achieved by exploring the potential of irrigation farming in the county by collaboration with the national government as well as other stakeholders in agriculture

5. Manufacturing, Trade and MSMEs

5.1 Characteristics of the Sector

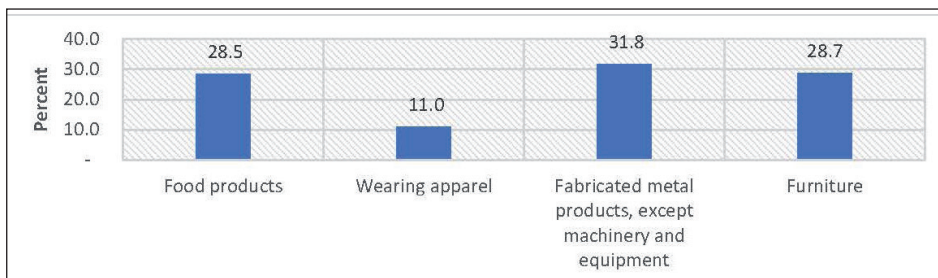
a) Manufacturing sector

Isiolo County has 79 establishments involved in manufacturing activities which comprise of 2.7 per cent of a total of 2,870 firms (KNBS, 2016). In terms of size, 71 (89.6%) are micro while 8 (10.4%) are small. The main drivers of the economy of the county include agriculture (21%), services (63%) and manufacturing (0.1%) (GCP, 2019).

Sector of operation

The KNBS, 2016 survey establishes the key sub-sectors that drive manufacturing in Isiolo County: fabricated metal products, except machinery and equipment (31.8%); furniture (28.7%); food and food products (28.5%); and wearing apparel (11.0%) (Figure 5.1). These are sub-sectors that are vital in dealing with COVID-19 are likely to experience increased activity with focus on food production, production of Personal Protective Equipment (PPEs) and hospital beds. The key products useful in value addition and driving manufacturing include livestock and honey production, and skins and hides processing.

Figure 5.1: Sector of operation in manufacturing

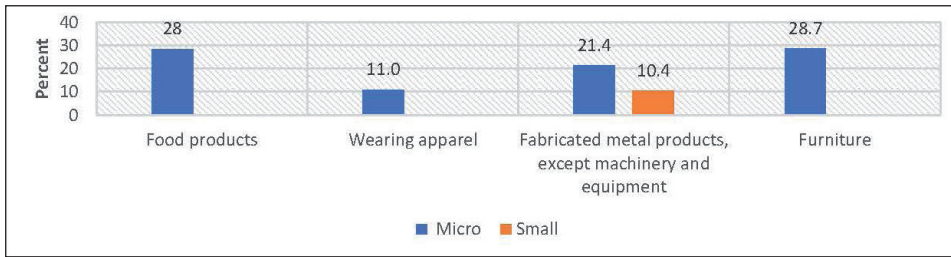


Source: KNBS (2016)

Sector of operation by size

Majority of the enterprises in Isiolo County are micro in nature and operate in the following sectors: furniture 28.7 per cent), food products (28 per cent), fabricated metal products, except machinery and equipment (21.4%) and wearing apparel (11%) (Figure 5.2). Small sized establishments operate in fabricated metal products, except machinery and equipment (10.4%).

Figure 5.2: Manufacturing firms by sector and size

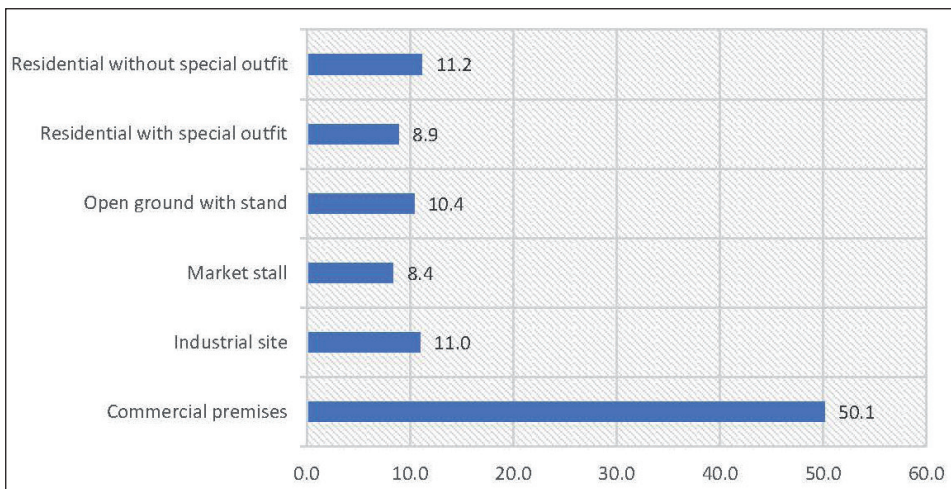


Source: KNBS (2016)

Location of manufacturing firms by type of premises

Common premises used by manufacturing firms in Isiolo County are commercial (50.1%), residential without special outfit (11.2%), residential with special outfit (11.0%), open ground with stand (10.4%), and residential with special outfit (8.9%) (Figure 5.3).

Figure 5.3: Location of manufacturing firms by premises



Source: KNBS (2016)

Distribution of Manufacturing firms by gender and size

Manufacturing establishments in Isiolo County are mostly owned by males (66%), with females comprising 23.9 per cent while 10 per cent are jointly owned. In terms of micro-sized firms, 62.1 per cent are male owned, 26.7 per cent female owned and 11.2 per cent jointly owned. Additionally, small sized firms are largely male-owned (100%) (Table 5.1).

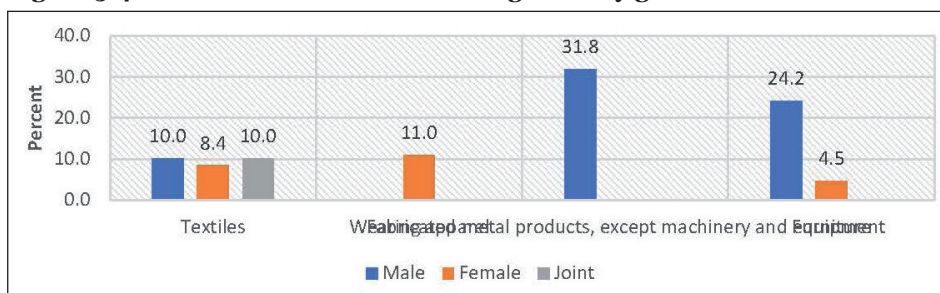
Table 5.1: Distribution of manufacturing firms by gender and size - N (%)

Gender	A11	Micro	Small
Male	52 (66)	44 (62.1)	8 (100)
Female	19 (23.9)	19 (26.7)	0 (0)
Joint	8 (10)	8 (11.2)	0 (0)
Total	79 (100)	71 (100)	8 (100)

Source: KNBS (2016)

Distribution of manufacturing firms by gender and sector

Majority of the sub-sectors in manufacturing are male dominated including fabricated metal products, except machinery and equipment (31.8%), furniture (24.2%), and textiles (10%). Females are mostly found in the wearing apparel (11%), textiles (8.4%), and furniture (4.5%) (Figure 5.4). About 10 per cent of textile sub-sector is jointly owned by both males and females.

Figure 5.4: Distribution of manufacturing firms by gender and sector

Source: KNBS (2016)

In terms of employment, the manufacturing sector employs more men (81.5%) than women (18.5%). Most men are found in the micro-sized enterprises (50.3%) while 31.3 per cent are in small-sized establishments. Majority of the women are predominantly in the micro enterprises as well (15.1%) (Table 5.2).

Table 5.2: Employment by gender and size for manufacturing firms

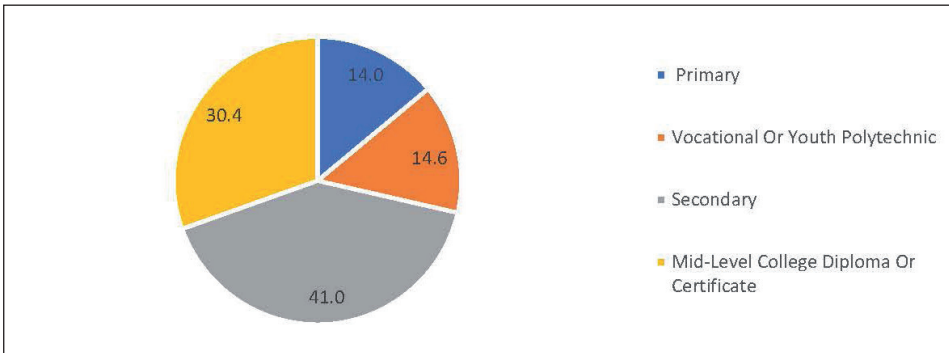
Number of employees	Micro	Small	Total
Male	119 (50.3)	74 (31.3)	192 (81.5)
Female	36 (15.1)	8 (3.5)	44 (18.5)
Total	154 (65.3)	82 (34.8)	236 (100)

Source: KNBS (2016)

Education levels of Manufacturing firm owners

Majority of owners of firms in manufacturing have secondary (41%), mid-level college diploma or certificate (30.4%), vocational or youth Polytechnic (14.6%) and primary (14%) education (Figure 5.5). About 2.2 per cent of the manufacturing firm owners do not have a formal education. It is worth noting that all owners of manufacturing enterprises had a form of formal education.

Figure 5.5: Education levels of manufacturing firm owners

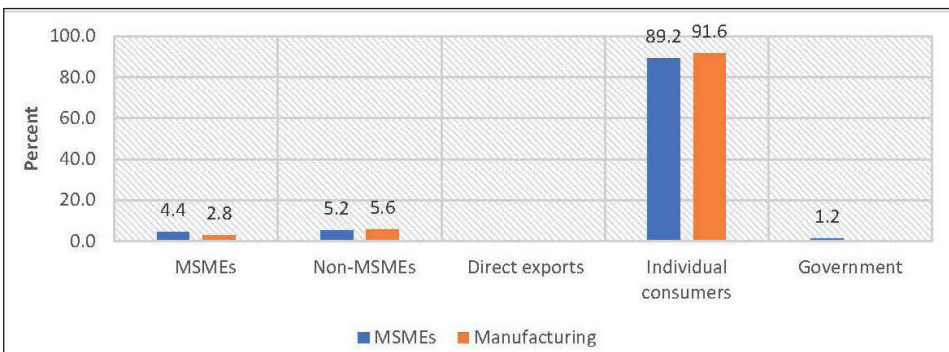


Source: KNBS (2016)

Source of markets

Majority of manufacturing enterprises and MSMEs rely on individual consumers for markets at 91.6 per cent and 89.2 per cent respectively (Figure 5.6). Other sources of markets for manufacturing firms and MSMEs include non-MSMEs and MSMEs respectively. Moreover, the two sectors do not export their produce to external markets, hence exogenous shocks due to COVID-19 may not negatively affect these two sectors.

Figure 5.6: Source of markets

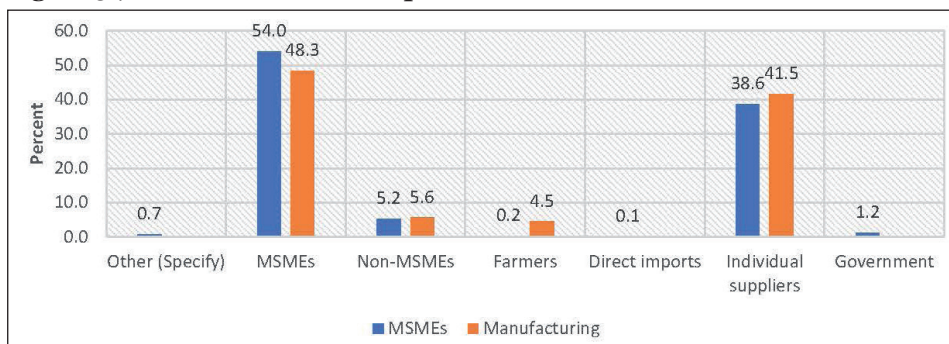


Source: KNBS (2016)

Source of material inputs

Generally, manufacturing establishments and MSMEs source for material inputs from amongst MSMEs at 48.3 per cent and 54 per cent respectively (Figure 5.7). Individual suppliers as well as non-MSMEs are also important to the supply of inputs. Very few firms in manufacturing and MSMEs are involved in sourcing their inputs from external markets, hence there is potentially no major implication to their operations which could be caused by COVID-19 effects.

Figure 5.7: Source of material inputs



Source: KNBS (2016)

Level of innovation by firms in Manufacturing

Manufacturing establishments in Isiolo County were involved in only process innovations. Further, it was only the micro category that was involved at 10.5 per cent (Table 5.3).

Table 5.3: Level of innovation by firms in manufacturing

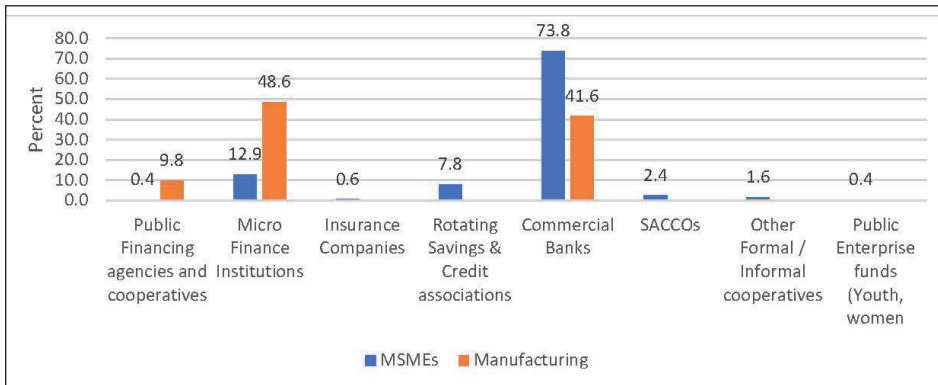
Type of innovation	Micro			Small		Total
	Don't know	No	Yes	No	Yes	
Product	0 (0)	71 (89.5)	0 (0)	8 (10.5)	0 (0)	79 (100)
Process	0 (0)	63 (79)	8 (10.5)	8 (10.5)	0 (0)	79 (100)
Market	0 (0)	71 (89.5)	0 (0)	8 (10.5)	0 (0)	79 (100)

Source: KNBS (2016)

Access to credit for Manufacturing and MSMEs firms

According to the MSME 2016 survey, 80.6 per cent of MSMEs and 71.6 per cent of those in manufacturing applied for credit. The main sources of credit for establishments in manufacturing are: microfinance institutions (48.6%), commercial banks (41.6%) and public financing agencies and cooperatives. MSMEs largely rely on commercial banks (73.8%), micro finance institutions (12.9%), and rotating savings and credit associations (7.8%) (Figure 5.8).

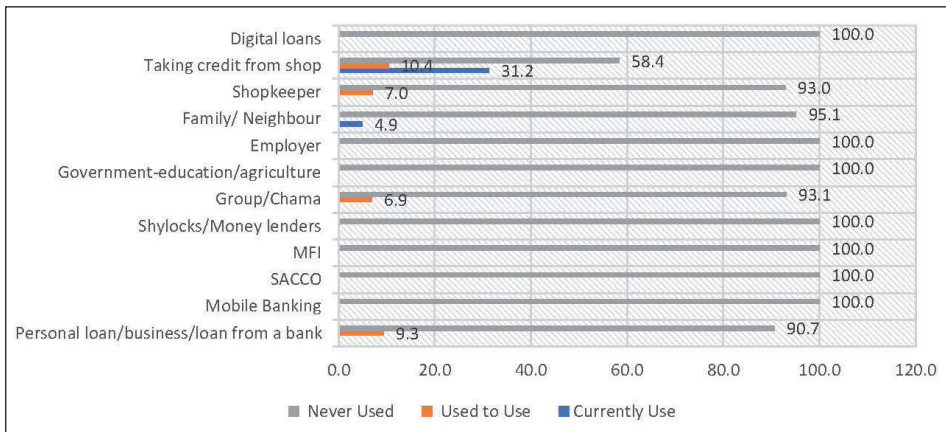
Figure 5.8: Sources of finance



Source: KNBS (2016)

Recent evidence from FinAccess 2019 provides further insights on sources of credit for businesses in Isiolo County. Businesses commonly obtain credit from the conventional sources such as shops (31.2 %) and family/neighbour (4.9%) (Figure 5.9).

Figure 5.9: Recent sources of credit

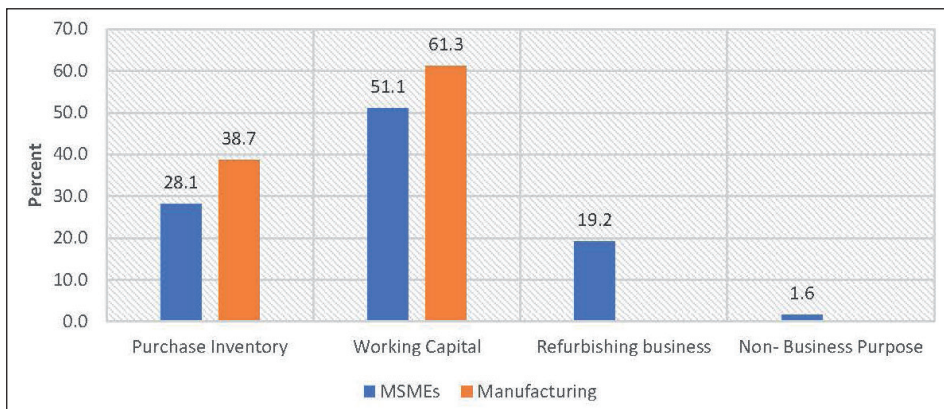


Source: FinAccess (2019)

Purpose of credit

Figure 5.10 presents the main purpose of credit by both MSMEs and establishments in manufacturing in Isiolo County. Overall, manufacturing firms require credit for: working capital (61.3%) and purchase inventory (38.7%). MSMEs in the County require credit for working capital (61.3%), purchase inventory (38.7%), and business refurbishment (19.2%).

Figure 5.10: Main purpose of credit

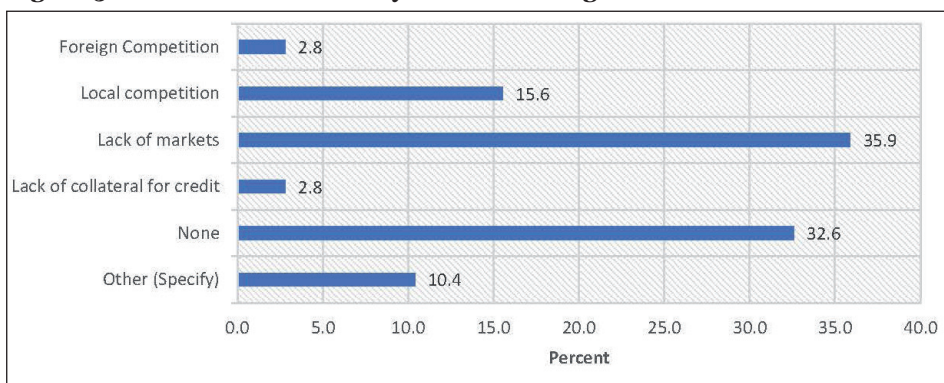


Source: KNBS (2016)

Constraints faced by manufacturing firms

The main constraints faced by establishments in manufacturing include lack of markets (35.9%), local competition (15.6%), foreign competition (2.8%), and lack of collateral for credit (2.8%) (Figure 5.11).

Figure 5.11: Constraints faced by manufacturing firms



Source: KNBS, 2016

Industrial Parks/ Jua Kali Sheds

There are no industrial parks or Jua kali sheds in the County. However, there are 2 industrial centres one in Isiolo Central and another in Madogashe that have not been operationalized. In addition, there are 10 Jua Kali associations in the County.

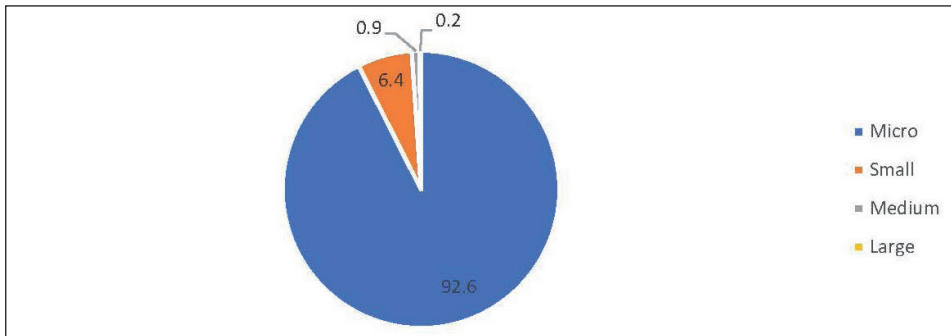
b) Micro, Small and Medium Enterprises (MSMEs)

Isiolo County has 2,870 establishments⁵ with 2,656 (92.6 per cent) being micro; 183 (6.4%)

⁵ After applying weights

are small; and 26 (0.9%) medium and 5 (0.2%) are large enterprises (KNBS, 2016) (Figure 5.12).

Figure 5.12: Distribution of MSMEs by size

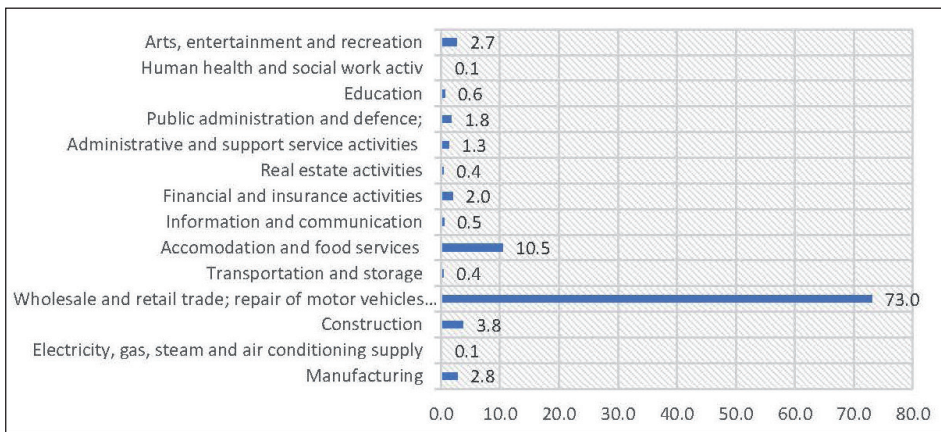


Source: KNBS (2016)

Sector of operation by MSMEs

Most of MSMEs in Isiolo County operate in the wholesale and retail trade; repair of motor vehicles and motorcycles (73%); accommodation and food services (10.5%); construction (3.8%); manufacturing (2.8%); and arts, entertainment and recreation (2.7%) (Figure 5.13). Ideally, these are the sectors that have been worst hit by the pandemic and need focus in achieving re-engineering and recovery.

Figure 5.13: Sector of operation by MSMEs

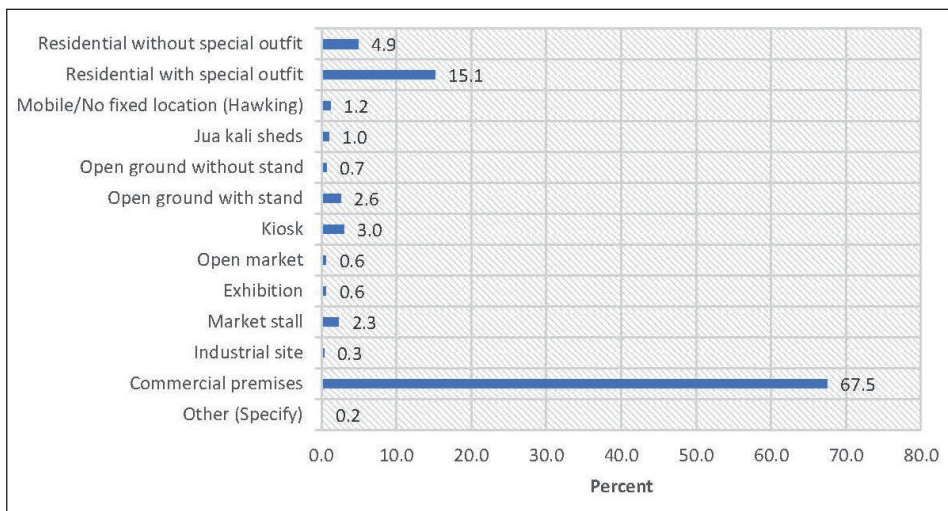


Source: KNBS (2016)

Location of the businesses by type of premises

MSMEs in Isiolo County are largely located in commercial premises (67.5%), residential with special outfit (15.1%), residential without special outfit (4.9%), and kiosks (3.0%) (Figure 5.14).

Figure 5.14: Location of businesses by premises



Source: KNBS (2016)

Due to income disruptions occasioned by COVID-19 pandemic, MSMEs in Isiolo County faced difficulties in meeting their rental obligations considering quite a number of the businesses were in commercial premises (67.5%). According to the May 2020 KNBS COVID-19 survey all respondents from the non-farm and farm businesses attributed non-payment of household rental obligations to reduced incomes/earnings.

Distribution of MSMEs by gender and size

Table 5.4 shows the distribution of MSMEs in Isiolo County by gender: 46.4 per cent are male owned, 31.2 per cent are female owned, while 22.4 per cent are jointly owned (male/female). For Micro establishments, 46.2 per cent are male owned, 32.6 per cent are female owned, while 21.2 per cent are jointly owned. Male owners also dominate ownership among small sized establishments at 55 per cent, females own 12.1 per cent, and 32.8 per cent are jointly owned. Considering medium sized establishments, males own 18.3 per cent, females (11.9 per cent), while 69.8 per cent is jointly owned. Finally, all large enterprises in the County are female owned (100 per cent).

Table 5.4: Distribution of MSMEs by gender and size - N (%)

Gender	A11	Micro	Small	Medium	Large
Male	1,332 (46.4)	1,226 (46.2)	101 (55)	5 (18.3)	0 (0)
Female	896 (31.2)	866 (32.6)	22 (12.1)	3 (11.9)	5 (100)
Joint	643 (22.4)	564 (21.2)	60 (32.8)	18 (69.8)	0 (0)
Total	2,870 (100)	2,256 (100)	183 (100)	26 (100)	5 (100)

Source: KNBS (2016)

In terms of employment, the micro sized establishments employ more people (52.3%) compared to small (25.8%), medium (15.9%) and large (6.0%) (Table 5.5). Micro firms employ 31.7 per cent male and 20.6 per cent female and small sized employ 17.7 per cent male and 8.1 per cent female. Equally, more men are employed among medium and large establishments at 10.2 per cent and 3.9 per cent while females include 5.6 per cent and 2 per cent, respectively. Overall, more men (63.6%) are employed by MSMEs in Isiolo County than women (36.4%).

Table 5.5: Employment by gender and size - N (%)

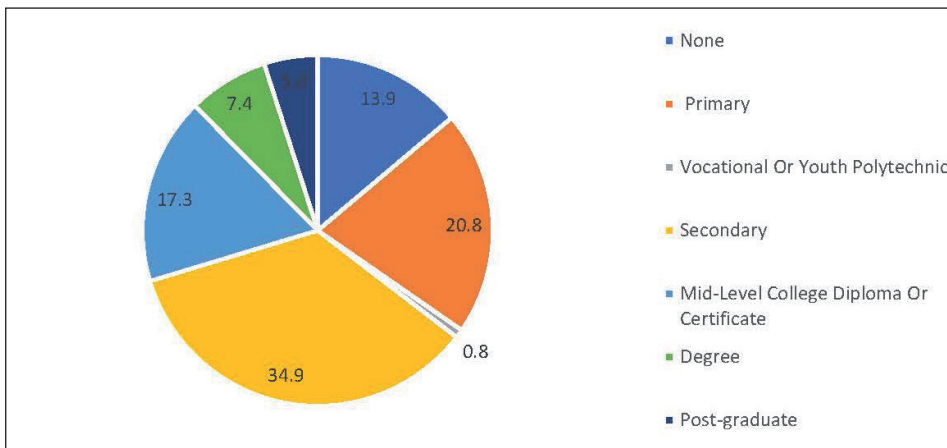
Gender	Micro	Small	Medium	Large	Total
Male	3,709 (31.7)	2,067 (17.7)	1,195 (10.2)	461 (3.9)	7,432 (63.6)
Female	2,408 (20.6)	952 (8.1)	658 (5.6)	236 (2)	4,254 (36.4)
Total	6,117 (52.3)	1,853 (25.8)	1,853 (15.9)	697 (6)	11,686 (100)

Source: KNBS (2016)

Education levels of MSME owners

Figure 5.15 indicates that majority of MSME owners in isiolo County have a secondary education (34.9%) while 20.8 per cent have primary education, about 17.3 per cent mid-level college diploma or certificate, and 7.4 per cent degree. About 5 per cent of the MSMEs owners in the County did not have a formal education.

Figure 5.15: Education levels of MSME owners



Source: KNBS (2016)

Level of innovation by MSMEs

Table 5.6 presents the levels of innovation in Isiolo County by MSMEs according to size. Generally, there were low levels of innovation across MSMEs with 29 per cent involved in product, 4.6 per cent for process, and 24.2 per cent in market innovation for micro-sized enterprises. Regarding small-sized enterprises, 3.4 per cent engaged in product, 1.5 per cent process and 3.7 per cent market innovation. With regards to medium sized

enterprises, 0.7 per cent were involved in product, 0.3 per cent process and 0.3 per cent market innovations, respectively while for large enterprises, none was involved in any form of innovation.

Table 5.6: Level of innovation by MSMEs

Type of Innovation	Micro				Small				Medium		Large		Total	
	Refused to answer	Don't know	No	Yes	Re-fused to answer	Don't know	No	Yes	No	Yes	Don't know	No		Yes
												No		Yes
Product	3 (0.1)	30 (1.1)	1,793 (62.6)	830 (29)	0 (0)	0 (0)	86 (3)	97 (3.4)	5 (0.2)	21 (0.7)		5 (0.2)	0 (0)	2,866 (100)
Process	12 (0.4)	26 (0.9)	2,488 (86.8)	131 (4.6)	0 (0)	0 (0)	141 (4.9)	42 (1.5)	18 (0.6)	9 (0.3)	0 (0)	5 (0.2)	0 (0)	2,866 (100)
Market	28 (1)	26 (0.9)	1,908 (66.6)	694 (24.2)	0 (0)	0 (0)	105 (3.7)	78 (3.7)	18 (0.6)	9 (0.3)		5 (0.2)	0 (0)	2,866 (100)

Source: KNBS (2016)

E-commerce

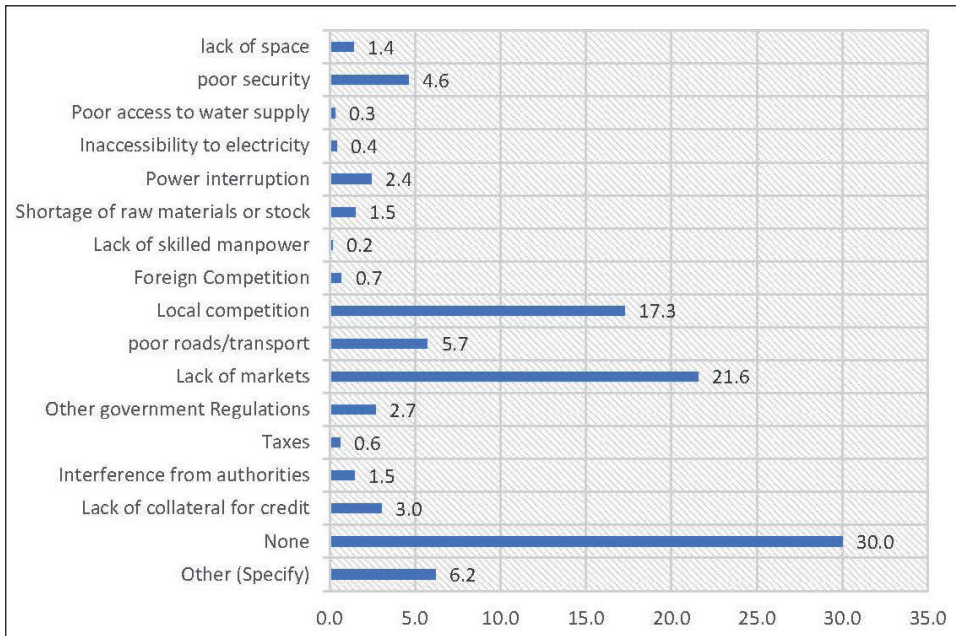
Participation in e-commerce by households in Isiolo County is below the national average. About 2 per cent of the households participate in online e-commerce which is below a national average of 4.3 per cent (KPHC 2019). In comparison, men participate more in online e-commerce (2.6%) than women (1.4%). With introduction of stay-at-home protocols due to COVID-19 online trade has been expected to thrive, little may be impacted in Isiolo County since fewer households participate in the same.

Turnover tax

Only 17.2 per cent of MSMEs in Isiolo County (493) had a previous monthly turnover of above Ksh. 83,333 which translates to Ksh 1 million a year. Ideally, this would be the establishments that are eligible for turnover tax with the new thresholds recently introduced vide the tax laws (Amendment) Act, 2020. The actual impact of this move may be difficult to estimate due to data challenges on actual revenue streams and the number of establishments that comply with the same.

Constraints faced by MSMEs

The main constraints faced by MSMEs in Isiolo County include lack of markets (21.6%), local competition (17.3%), poor roads/transport (5.7%), poor security (4.6%), and lack of collateral for credit (3%) (Figure 5.16).

Figure 5.16: Main constraints faced by MSMEs

Source: KNBS (2016)

A study on County Business Environment for MSEs (CBEM) identified other constraints faced by MSMEs in Isiolo County as: financial and technical capacity, market environment, and worksite and related infrastructure (KIPPRA 2019). On worksites, MSEs face inadequate and unequipped worksites, lack of public toilet facilities, lack designated areas for waste disposal, poor road infrastructure, frequent power interruptions. On technical capacity MSEs are characterized by low levels of innovation, lack of training and apprenticeship programme for artisans, fragmentation due to multiplicity of players who offer training and capacity building, and lack of monitoring and evaluation of training programmes. With the market environment, MSEs face inadequate market for their local products; stiff competition among themselves; and unfair trade practises which manifest through; contract enforcement, counterfeiting, dumping (substandard goods) and misrepresentation (through weight, price, ingredient). MSEs also face bottlenecks related to; insecurity; multiple licences and permits; numerous procedures for obtaining licenses; and shortage of raw materials.

These findings are supported by a study on Assessment of the Investment Climate in Kenya by World Bank (2009) which attempted to identify the impediments of productivity growth among Kenyan firms. The analysis showed that the business environment in Kenya is characterized by poor infrastructure, poor governance, insecurity, and complex bureaucratic administrative and regulatory systems

Key Messages:

- a) The key sectors that drive the economy of Isiolo County include: Agriculture, Services and Manufacturing. Hence, support should be prioritized to these sectors to ensure re-engineering of the County economy.
- b) The key constraints faced by establishments in manufacturing include lack of markets, local competition, foreign competition, and lack of collateral for credit.
- c) The main constraints faced by MSMEs in Isiolo County include: lack of markets, local competition, poor roads/transport, poor security, and lack of collateral for credit
- d) Training and capacity building are important in assisting MSMEs to surmount the shocks faced during the pandemic but also allow for re-emergence.
- e) In terms of re-engineering, there is need to consider establishing support measures to re-vitalize and re-open businesses that collapsed during the crisis within the county.

5.2 Opportunities with COVID-19 in Industrial Recovery and Growth

The following are some of the opportunities created by COVID-19 in trade, manufacturing and the MSMEs sector:

- i) Agro-processing for value addition with important areas of focus include livestock production, and skins and hides processing.
- ii) The textile and wearing apparel sectors can be enhanced to provide PPEs for use within the County and potentially for the export market.
- iii) Exploration and processing of minerals such as sapphire, natural stones, green and red garnet.

5.3 Emerging Issues

- (i) There has been reduced income from traders, manufacturers and MSMEs and a corresponding decrease in taxes collected from them. This will affect implementation of Isiolo County's planned activities due to reduced projected revenues.
- (ii) The need to identify and promote specific and emerging value chains as a result of COVID-19, and which Isiolo County has comparative advantage.
- (iii) Review all the ongoing interventions by the County and also the national government to assess their effectiveness and especially regarding trade, manufacturing and MSMEs.
- (iv) There is need for legislative amendments to ensure the Buy Kenya Build Kenya initiative is implemented at the County.

5.4 Recommendations

To support trade, manufacturing and the MSMEs sector, the County will:

- (i) Consider an emergency rescue package for businesses and traders hard-hit by the effects of COVID-19 in the short run. The emergency Fund, supported by development partners and other stakeholders, can be used to identify and support the most vulnerable businesses and entrepreneurs affected by COVID-19. Related, the County will inject some stimulus to cushion the businesses and traders through affordable credit; waiver of some County taxes, cess, and other charges.
- (ii) COVID-19 has increased demand for locally produced goods in the County, and especially Personal Protective Equipment (PPEs), sanitisers, hospital beds and ventilators. The pandemic also presents an opportunity to spur innovation and promote manufacturing and industry development and generation of jobs for the youth while providing a foundation for further value addition in the county.
- (iii) Establishments in the county will adopt to the new pandemic guidelines including rearranging floor plans to allow for social distancing.
- (iv) Establish Technical, Vocational Education and Training (TVET) as outlined in MTP III to support industries in the County.
- (v) Expand and modernize of aviation facilities in Isiolo (Isiolo Airport) to provide market access to industries. This will be done in collaboration with the national government as it is a national function.
- (vi) Support development of the Northern Eastern Corridor Transport Improvement Project (NETIP) - The project will involve construction of fibre spurs rings and connecting institutions and communities along the Northern Eastern road corridor between Isiolo and Mandera.
- (vii) Roll out Livestock Insurance Programme for ASAL areas in the County in collaboration with the relevant stakeholders as provided for in the third Medium Term Plan.
- (viii) Exploit the huge potential in livestock product-based industries in the County; and the potential in gums and resins as well as Aloe vera.
- (ix) Fast-track completion of the Isiolo Export Abattoir.
- (x) Promote livestock feed lots, cold chains and cottage industries.
- (xi) Explore synergies and integration into FCDC value chains in manufacturing development while increasing the market for nascent manufacturing industries in Isiolo County.

6 Infrastructure

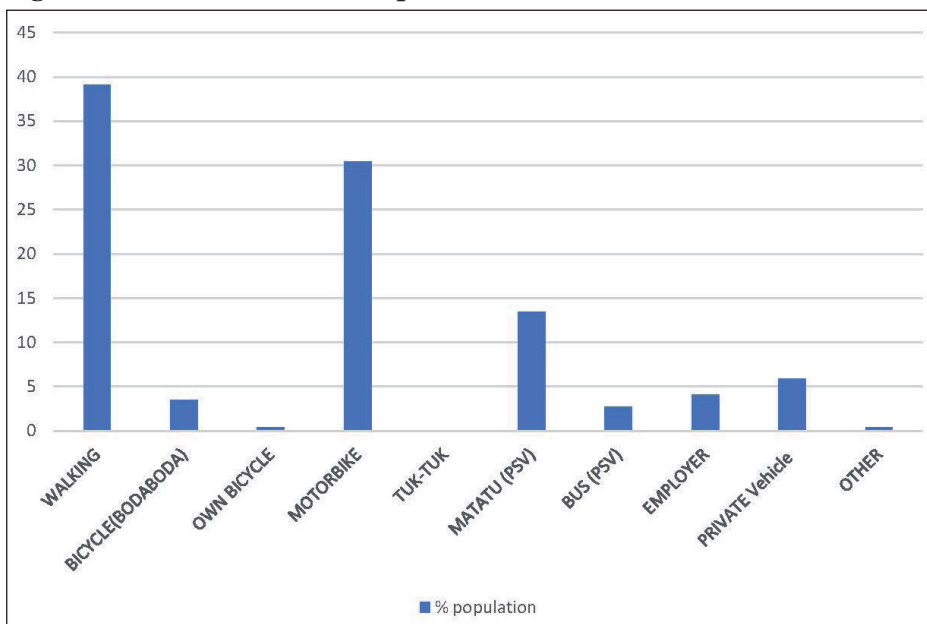
6.1 Transport and Roads

In response to the COVID-19 pandemic, the County responded by delaying the implementation of some of the projects that are likely to exhaust the budget to next financial year. Some of these projects include construction of roads and TVETs. As a result, this budget was reallocated to public health.

6.1.1 Characteristics of the sector

Majority of households own a motorcycle (7.9 per cent) and a bicycle (4.2 per cent). Car ownership is at 4.0 per cent (KNBS, 2019). The main means of transport used in the County is walking at 39.14 per cent, followed by motorbike 30.45 per cent, PSV matatus at 13.43 per cent, private car at 5.9 per cent, and Employer 4.08 per cent, figure 6.1, while 87.92 per cent of the population had not changed the main means of transport (KNBS, 2020b). On average, residents travel 7.63 kilometers to their workplace at an average cost of Ksh 119.83. For the commute to school, residents spend on average Ksh 475.06 (KIHBS, 2015/16).

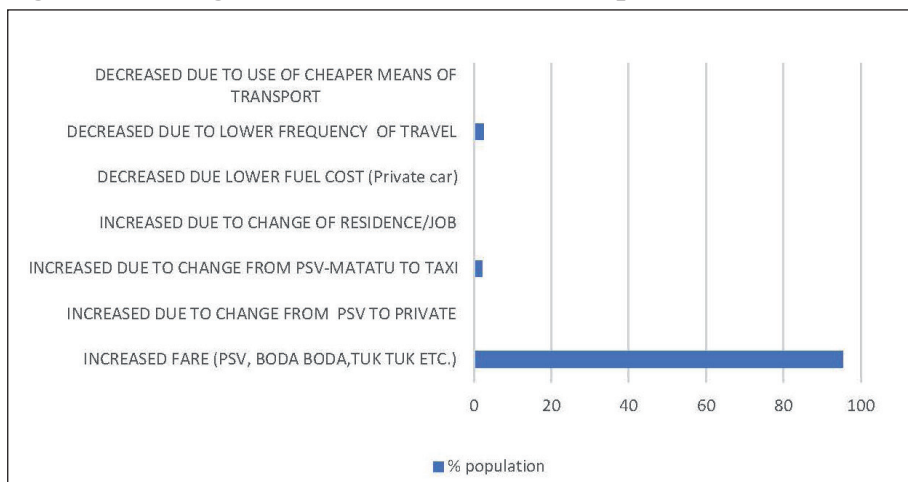
Figure 6.1: Main means of transport



Source: KNBS COVID-19 Impact Survey 2020

The KNBS COVID-19 Impact Survey 2020 revealed that 46.15 per cent of the population reported a change in the cost of travel/commute. The expenditure on transport increased by 45.61 per cent from KSH. 114 before February 2020 to Ksh 166 in May 2020 for a one-way trip. The main change (95.3 per cent) in transport cost was attributed to increased fares for PSV, BodaBoda and TukTuk.

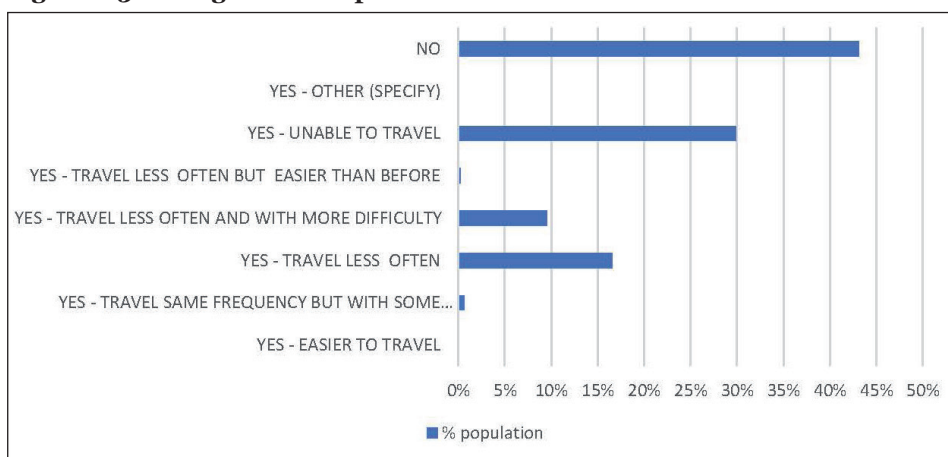
Figure 6.2: Change in cost of main means of transport



Source: KNBS COVID-19 Impact Survey 2020-wave 2

Residents had changed their travel patterns with 16.56 per cent of the population traveling less often, while 0.62 per cent travelled with the same frequency but with some difficulty, and 29.9 per cent were unable to travel. However, 43.16 per cent of the population did not change their travel pattern.

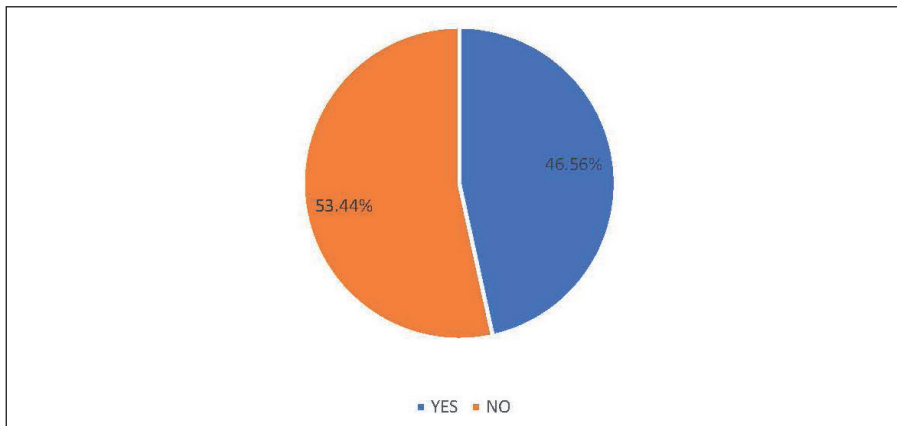
Figure 6.3: Change in travel patterns



Source: KNBS COVID-19 Impact Survey 2020-wave 2

The pandemic has affected delivery of goods and services for 46.56 per cent of households.

Figure 6.4: Proportion of residents whose service delivery has been affected



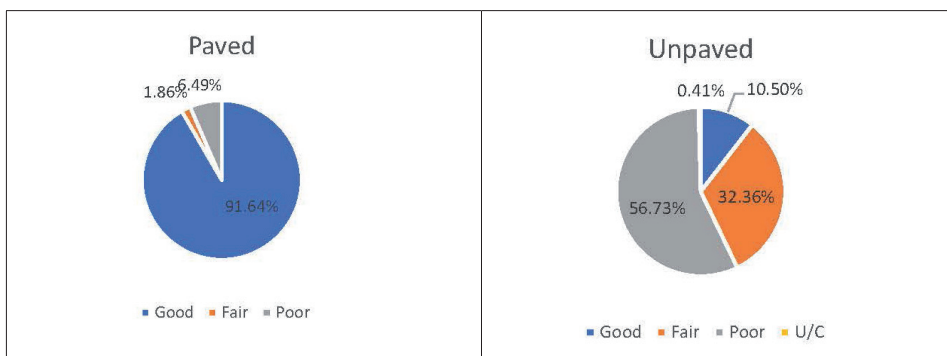
Source: KNBS COVID-19 Impact Survey 2020-wave 2

The County was allocated a total of Ksh 130,230,858 from the Road Maintenance Levy Fund towards road maintenance in the Financial 2017/18 (OCOB, 2019).

Road network in Isiolo County

The county has a total of 3,216.90 km of classified road network. The paved County Road network covers 2.67 km, while the paved National roads cover 29.52 km. Out of the total paved road network of 32.19KMs, 91.64 per cent is in good condition, 1.86 per cent in fair condition and 6.49 per cent in poor condition. The unpaved road network in the county covers 1564.5 km (county roads) and 1168.6 km (National roads), of this, 10.5 per cent is in good condition, 32.36 per cent fair and 56.73 per cent in poor condition as depicted in figure 1 (KRB, 2019).

Figure 6.5: Road condition mix-classified road network



Source: KRB (2019)

The unclassified road network in the County covers 451.62km, with 191.9km of narrow roads, that is, road with a reserve of between 4 -9 meters, while there is a total of 259.72km of new roads.

Constraints faced

The Rural Access Index (RAI) measures the proportion of the rural population who live within 2 km of an all-season road⁶. The county has a RAI of 22 per cent which is below the National Average of 70 per cent, indicating that access to transport in rural areas is below average (KRB,2019). This has negative implications with regard to sectors that rely on accessibility such as agriculture, trade and overall development. The road condition mix of the unpaved network at 56.73 per cent is a constraint to development.

6.1.2 Opportunities in Transport sector

With reference to the 8 point stimulus programme by the National Government⁷ and resources allocated to road development and maintenance, the County has the opportunity to strategically improve the road network for economic development, while creating jobs for youth , women and vulnerable groups as espoused in the Roads 2000 programme⁸ on labour based road development approaches.

The Roads 10,000 programme being implemented nationally by the roads sub-sector actors, and specifically, the Low Volume Sealed Roads (LVSR)approach⁹ offers a strategic and cost-effective approach to improve rural accessibility in the County.

Residents predominantly rely on matatu PSV transport and walking; this is an opportunity during the pandemic period as this mode reduces the risk of infections that would arise from use of motorized public transport¹⁰.

6.1.3 Emerging Issues

- Poor road conditions for unpaved network
- Reliance on PSV transport requires enforcement of COVID-19 mitigation measures

6.1.4 Recommendations

- i) Sensitize PSV and boda boda operators on COVID-19 prevention measures and assist vehicle owners in retrofitting vehicle designs for social distance, hygiene and ventilation.
- ii) Identify a core rural road network for prioritization to improve the rural access index (RAI) from the current 22.0 per cent with a target to match the national average of 70.0 per cent.
- iii) Expand the county capability for telecommuting and teleworking and develop relevant policies in support of the same.

6 RAI defined : <https://datacatalog.worldbank.org/dataset/rural-access-index-rai>

7 GoK eight point stimulus programme <https://www.president.go.ke/2020/05/23/the-seventh-presidential-address-on-the-coronavirus-pandemic-the-8-point-economic-stimulus-programme-saturday-23rd-may-2020>

8 Roads 2000 programme <http://krb.go.ke/our-downloads/roadsper cent202000per cent20strategicper cent20plan.pdf>

9 LVSR /Roads 10,000 programme <https://www.kerra.go.ke/index.php/lvsr>

10 Non-Motorized Transport strategy <https://www.weforum.org/agenda/2020/05/cities-support-people-walking-and-cycling-work/>

- iv) Identify county significant infrastructure projects for implementation under a stimulus programme to support economic recovery from the effects of the pandemic. For these, apply labor based and local resource-based approaches for road development and maintenance, where technically and economically feasible, in line with the Roads 2000 national policy¹¹.
- v) Improve and expand infrastructure for Non-Motorized Transport (NMT) in urban areas and along roads with heavy -high speed traffic to promote sustainable mobility options and enhance road safety for all road users. This is in line with the Integrated National Transport Policy 2009 and the Sustainable Development Goals¹².
- vi) Re-develop bus parks and termini to address crowding and social distancing concerns stipulated in the public health guidelines.
- vii) Focus on increasing the share of unpaved roads in good and fair condition to above 62 per cent which is the national average. For the unpaved road network, focus on adopting the Low Volume Sealed Roads (LVSR) technology for greater network coverage cost effectively.
- viii) Adopt climate smart road engineering designs to safeguard road and bridge infrastructure from floods and to harvest storm water for irrigation and productive use. Use the Kenya Urban Support Programme funding to build storm water management systems in urban areas.

6.2 Information and Communication Technology

The County has been expanding especially using e-platform and IFMIS however some of these projects has slowed down because of low connectivity but overall, they have improved in ICT. The county can now hold meetings using ICT. The county has also improved its ICT software and communication platforms, for example, it is making use of ZOOM and WhatsApp applications. One overall challenge is delay in ICT infrastructure like IFMIS and OSR application, the budget was reallocated to COVID-19 related issues.

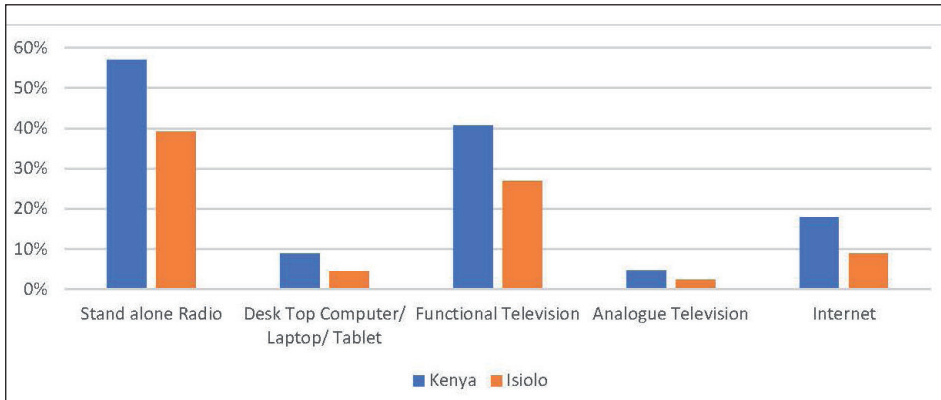
6.2.1 Characteristics of the sector

The analysis of the 2019 KPHC reveals that only 8.9 per cent of the conventional households in the county 'own' internet with 4.5 per cent owning a desktop, computer laptop or tablet. Internet access, ICT device ownership and TV ownership is particularly critical not only for access of COVID-19 information, but as well as supporting remote learning by the pupils as well as remote working (Figure 6.6).

11 Roads 2000 programme <http://krb.go.ke/our-downloads/roadsper-cent20200oper-cent20strategicper-cent20plan.pdf>

12 Sustainable Mobility for All: <https://sum4all.org/implementing-sdgs>

Figure 6.6: Percentage distribution of conventional households by ownership of ICT assets



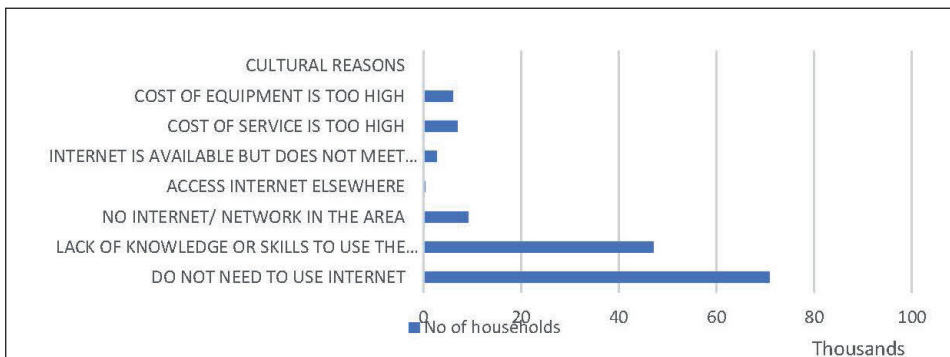
Source: KPHC (2019)

Online shopping is not prevalent in the County. 2.0 per cent of the conventional households searched and bought goods/services online. There exists gender disparity in online shopping with more men (2.6 per cent) than women (1.4 per cent) undertaking online shopping.

The perception of that the individual does not need to use the internet, lack of knowledge and skills on internet are the leading reasons that the people of in the County don't have internet connection (KHIBS). Other key factors include the lack of internet/network in the area, and the high cost of service and equipment (Figure 6.7).

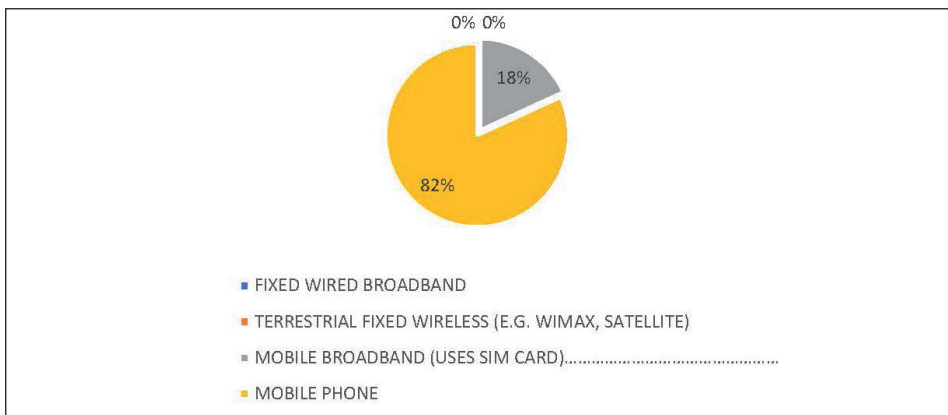
Approximately 82 per cent of the internet users in the county rely on mobile phone for connectivity, with a marginal population of 18 per cent relying on mobile broad band that uses a sim card for connectivity.

Figure 6.7: Reasons for Lack of Internet Connection



Source: KNBS, 2016-KHIBS 2015/2016

Figure 6.8: Type of Internet connection

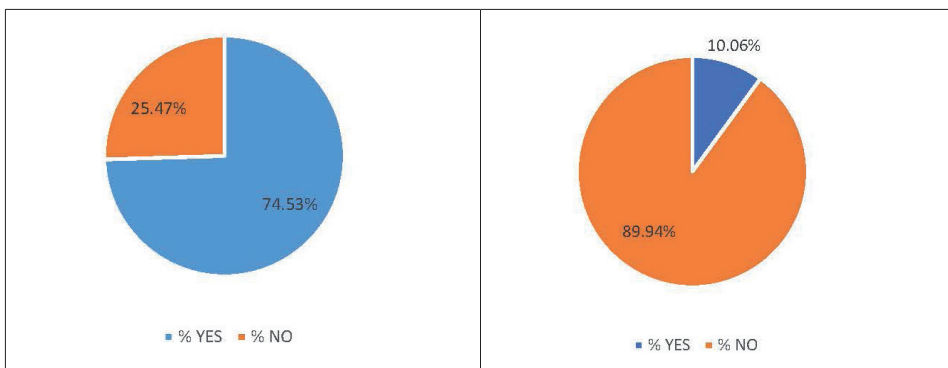


Source: KNBS, 2016-KHIBS 2015/2016

Approximately 38.2 per cent of the population aged 3 years and above own a mobile phone which is lower than the national average of 47.3 per cent.

Approximately 74.53 per cent of the people in the county have a mobile money subscription compared with only 10.06 per cent that have a mobile money banking platform subscription (KHIBS 2015/16)

Figure 6.9: Mobile money transfers subscription and mobile money banking platform



Source: KNBS (2016), KIHBS (2015/16)

Gender and youth

The county experience gender divide in use of internet and ICT devices as well as mobile money subscriptions. Both internet and ICT device use is higher among the male with 16.1 per cent of the men and 12.0 per cent of the women using internet, while 6.3 per cent of the men and 4.1 per cent of the women using Desktop/Laptop/Tablet devices (KPHC 2019). While the usage is below the national averages, the county recorded a similar gender disparity with the national averages in internet and ICT usage.

6.2.2 Opportunities in ICT

Potential to benefit from the National Fibre Optic project

6.2.3 Emerging Issues

The county experience gender divide in use of internet and ICT devices as well as mobile money subscriptions

6.2.4 Recommendations

- i) Initiate support programmes in partnership with the private sector that will enable households acquire ICT assets such as smart phones and laptops and increase mobile phone ownership from 38.2 per cent to 100 per cent in line with the global agenda for Universal Access to Mobile Telephony¹³
- ii) Harness the power of technology and use innovative solutions to bridge the gender digital divide and promote technology adoption in daily socio-economic activities.
- iii) Collaborate with the Communications Authority and telecom service providers to utilize the Universal Service Fund¹⁴ as a “last resort” in providing ICT access in remote areas where market forces fail to expand access.
- iv) The IT personnel in public primary schools can be deployed to support the development of ICT competence and skills among the public.
- v) Enhance internet connectivity to public buildings and key trade centres to boost e-commerce especially for MSMEs in trade and business. The NOFBI programme can be expanded to the sub-county administrative units to further enable deployment of e-governance solutions. Develop an ICT based document management system for appropriate records and documentation management as outlined in the CIDP.
- vi) Make ICT a standalone sector for planning and budget allocation. This is aimed at giving strategic prominence to planning, budgeting and investment in ICT.
- vii) Develop and implement ICT policies and procedures to manage ICT as provided in the CIDP and mitigate the cyber threats. Collaborate with the national Computer Incident Response Team (CIRT) and the Communications Authority (CA) towards managing cyber threats. This is because enhanced use of ICT is known to raise threats and risks related to cyber-crime and misinformation.

¹³ Universal access to mobile telephony: <http://www.itu.int/itunews/manager/display.asp?lang=en&year=2007&issue=07&ipage=universal-telephony>

¹⁴ Universal Service Fund: <https://ca.go.ke/industry/universal-access/purpose-of-the-fund/>

7 Housing and Urban Development

Majority of households are headed by men (59.87%) compared to women (40.13%) in the County (KIHBS, 2015/16). There are four urban centers in the County with a total population of 50.2 per cent males and 49.8 per cent females. The urban land area covers 558 square kilometers with a population density of 225 persons per sq.km

Table 7.1: Distribution of Population by Urban Centers by Gender

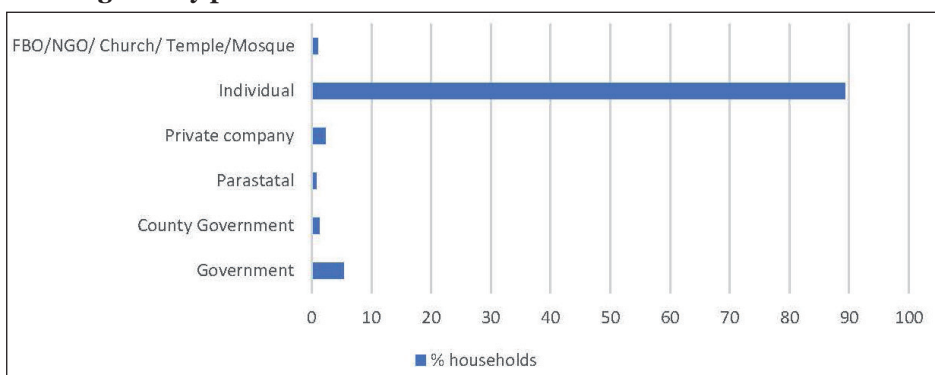
Isiolo	Isiolo	78,650	38,687	39,958
Isiolo	Garbatula	17,443	9,028	8,415
Isiolo	Kinna	11,175	5,739	5,436
Isiolo	Merti	10,990	5,682	5,308

Source: KNBS 2019- Kenya Population and Housing Census

7.1 Characteristics of the sector

The housing tenure is predominantly owner occupied at 71.9 per cent, with 28.0 per cent of the households under rental tenure. Individuals are the primary providers of rental housing at 89.3 per cent, followed by National Government (5.3%); and Private Companies (2.3%); For those who own homes, 92.7 per cent constructed the houses while 3.4 per cent purchased the house and 3.9 per cent inherited their homes (KNBS, 2019).

Figure 7.1: Distribution of households renting/ provided with the main dwelling unit by provider



Source: KNBS, 2019 -Kenya Population and Housing Census

Housing Quality

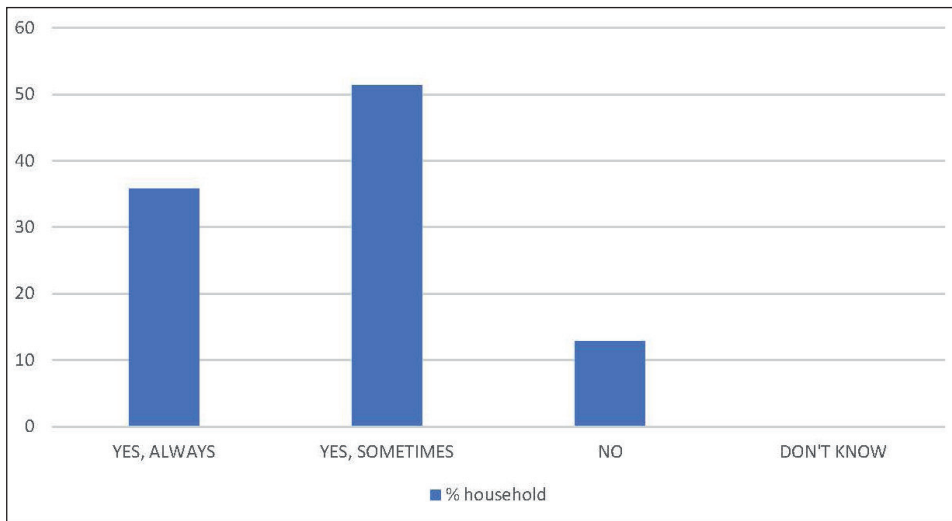
On average, the main dwellings of houses in the County have 1.95 habitable rooms against an average household size of 4.23 persons in a household, translating to approximately 2.17 people per room. According to the UN-Habitat, overcrowding occurs when there are more than three people per room¹⁵. In terms of housing quality (building material), 48.57 per cent of houses are constructed using finished materials for walls, floor and roofing compared to 51.43 per cent constructed using rudimentary materials (KIHBS, 2015/16). Majority of households (70.2%) have iron sheets for roofing, mud/cow dung walls (30.8%) and Earth/Sand floors (61.9%) (KNBS, 2019).

Rent Payment

On average, rental households spend approximately KSH. 5997 on rent with a minimum of KSH.500 and the maximum of KSH. 20000 (KNBS, 2020b). The county recorded a rent to income ratio of 15.83 per cent which is within the acceptable threshold of 30 per cent (KNBS, 2012/13).

With the advent of COVID-19 pandemic, households’ ability to pay rent has been affected, with 44.18 per cent of the population indicating inability to pay rent on the agreed date for April 2020, compared to 25.82 per cent of the population that were able to pay rent on the agreed date and 35.76 per cent who paid rent on agreed date before COVID-19 pandemic.

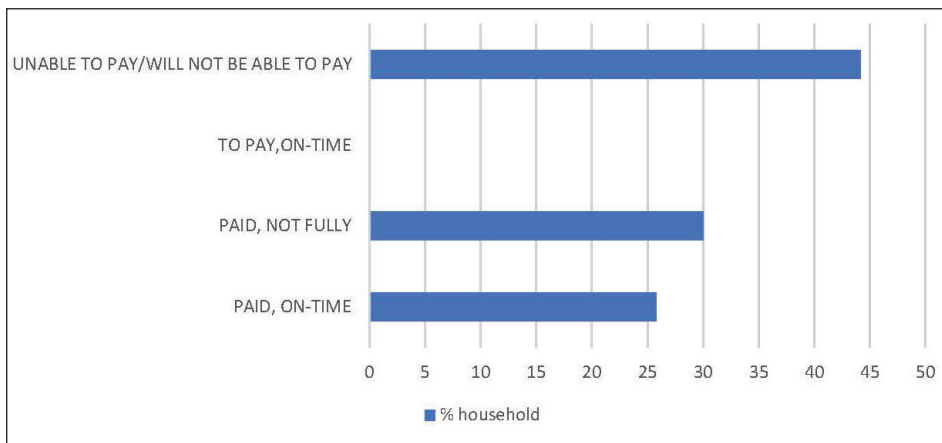
Figure 7.2: Proportion of residents paying rent per terms of contract



Source: KNBS COVID-19 Impact Survey 2020 wave 2

¹⁵ Household crowding measure: [https://www.ncbi.nlm.nih.gov/books/NBK535289/table/ch3.tab2/#:~:text=Overcrowdingper cent20occursper cent20ifper cent20thereper cent20are,perper cent20habitableper cent20roomper cent20\(88\).&text=Crowdingper cent20occursper cent20ifper cent20thereper cent20is,per cent20Drooms\)per cent20\(89\).](https://www.ncbi.nlm.nih.gov/books/NBK535289/table/ch3.tab2/#:~:text=Overcrowdingper cent20occursper cent20ifper cent20thereper cent20are,perper cent20habitableper cent20roomper cent20(88).&text=Crowdingper cent20occursper cent20ifper cent20thereper cent20is,per cent20Drooms)per cent20(89).)

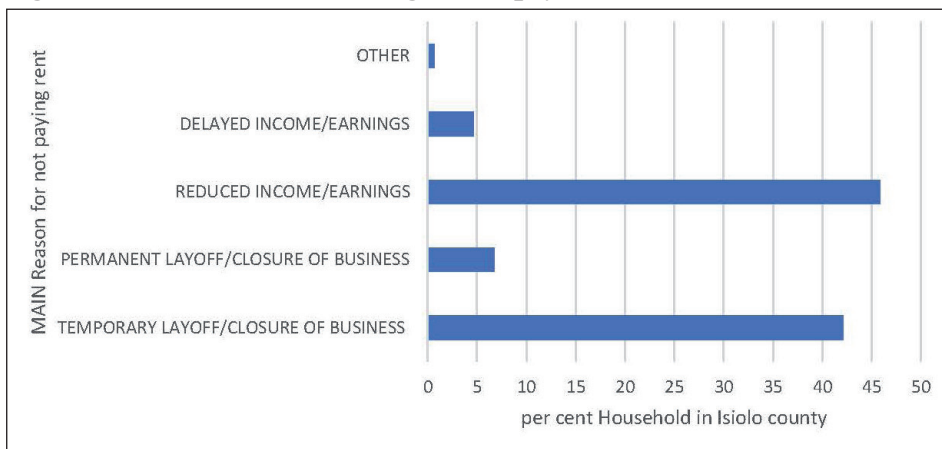
Figure 7.3: Has your household paid the rent for April 2020 on the agreed date



Source: KNBS COVID-19 Impact Survey 2020-wave 2

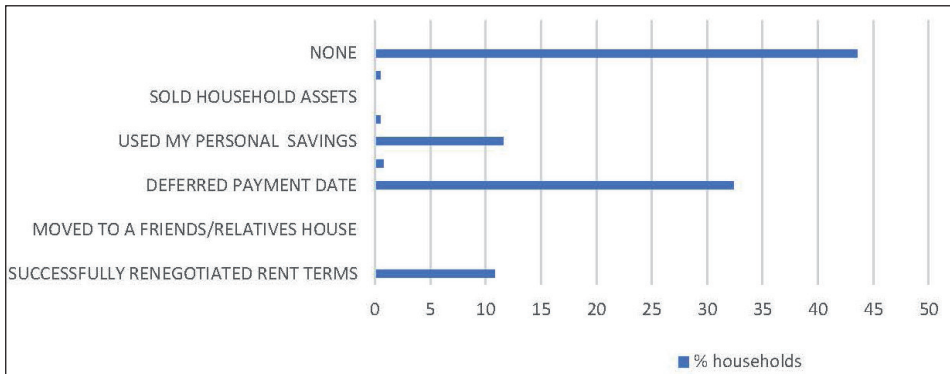
The main reason that has made households unable to pay rent was attributed to reduced incomes /earnings, reported by 45.84 per cent of the population. The inability to pay rent was attributed to the COVID-19 pandemic by 95.06 per cent of the population.

Figure 7.4: Reasons for not being able to pay rent



Source: KNBS COVID-19 Impact Survey 2020 wave 2

Majority of the households (73.72 per cent) did not receive a waiver or relief on payment of rent from the landlord, with 0.49 per cent reporting a partial waiver and 0.98 per cent reporting a full waiver. To overcome the effects of Corona virus on payment on rent 10.8 per cent of households renegotiated rent terms, while 43.53 per cent of households did not take any measures. Approximately 11.56 per cent used personal savings to pay rent.

Figure 7.5: Measures taken by household to mitigate COVID-19 effects on rent

Source: KNBS COVID-19 Impact Survey 2020-Wave2

With regard to primary energy source for cooking, 85.5 per cent of households rely on unclean sources of energy for cooking such as firewood, paraffin and charcoal, which could adversely affect respiratory health of women and children.

7.2 Opportunities in Housing and Urban Development

Potential to partner with national government under the affordable housing program of the BIG four agenda

7.3 Emerging Issues

The housing stock is mainly composed of houses constructed using rudimentary materials

7.4 Recommendations

- i) Develop a policy to promote home ownership to address the problem of rent distress during times of emergency.
- ii) Develop and implement an addressing system with complete, correct and unique address data in line with the National Addressing System to be used in pandemic and disaster surveillance and emergency response.
- iii) Avail appropriate building technology for use by the public in house construction and improvement in every sub-county, that responds to local cultural and environmental circumstances.
- iv) Identify and designate urban centers for upgrade pursuant to provisions of the Urban Areas and Cities (amendment) Act, 2019.
- v) Develop and implement urban planning and design instruments that support sustainable management and use of natural resources and land in line with the New Urban Agenda and as mitigative measure to future pandemics and disasters.

- vi) Adopt programmes aimed at an increasing household access to clean energy sources and technologies for cooking to mitigate against exposure to respiratory diseases.
- vii) Fast-track implementation of the affordable housing programme in partnership with the private sector targeting urban centers.

8 Tourism

8.1 Characteristic of the Sector

Isiolo County is endowed with a variety of tourism attractions which include Nature & Wildlife (Game viewing, bird watching, natural springs at aba, Buffalo Springs, Bisan Adi and 5 community conservancies); Culture, Heritage and Community Based (Cultural events and festivals, traditional music and dance); Adventure (Visits to wildlife areas, scenic viewing, mountain climbing, film shooting sites at ba, Buffalo Springs, Bisanadi. Magado crater, Lorian swamp and Ewaso Ngiro river); Eco-Tourism (Research, game viewing and cultural tours); and sports (Camel sports, local football clubs, annual Safaricom Lewa Marathon at Isiolo Central).

The County has a wide range of hotels and campsites in the county which offer accommodation to tourists including: one five-star hotel with a bed capacity of 34, two four stars hotels with total bed capacity of 78, three 3 star hotels with total bed capacity of 250, one two star hotel with a bed capacity of 311, three 1 star hotel with total bed capacity 348 and several unclassified hotels. Accommodation and food services contributes an estimated 3 per cent of total GCP.

The County receives around 20,000 tourists annually of which 61.3 per cent are domestic and 38.7 per cent are foreign. In addition, the total revenue in period 2015 – 2017 from the 3 Game reserves (Shaba, Buffalo Springs, Bisanadi.) was Ksh 238 million.

8.2 Opportunities with COVID-19 in Tourism Sector

- Improving sanitation aspects in tourism attraction sites.
- Refurbishment of accommodation facilities
- Promoting domestic tourism

8.3 Emerging Issues

Sanitation as a key component in ensuring business continuity in the tourism sub-sector;

8.4 Recommendations

The strategies to support tourism sector recovery include:

- i. Mapping all the sites with tourism potential in the county and coming up with a tourism product diversification strategy; venture into other products away from Wildlife and nature-based that can appeal to the domestic tourist, e.g. cultural festivals, education tourism, community conservancies, medical tourism;
- ii. Setting up a cultural documentation centre and tourism information centre.
- iii. Ensuring high sanitation standards in the hotel facilities to deter spread of COVID-19 in line with the national guidelines for reopening of the hospitality sector.

9 Health

9.1 Characteristics of the Sector

General health provision in the County

The county has two level 3 health facilities (Isiolo and Garbatulla hospitals), 51 tier 2 health facilities and 36 established Community Health Units (Tier 1). Most of the primary health care facilities lack adequate personnel and health commodities. For example, Garbatulla level two-health facility has no doctor. The doctor: population ratio for the county is about 1:5000; nurse population ratio is about 1:1500 against the recommended WHO standard doctor or nurse population ratio of 1:230. However, these numbers are not adequate to achieve the WHO recommended staff to patient ratio and to serve a county population of 268,002 people (2019 Census). To achieve this, the county government need to employ additional staff to bridge the existing gaps in human resource for health.

Table 9.1: Health provision

Year	2017	2018	2019/20
Health facility density			
Primary health facilities		38	70
Hospitals		3	4
<i>Number of health facilities</i>		41	74
Health facility density		0.7	1.1
Bed density			
Hospital beds		636	636
No. of Beds per 10,000 population		10	9
Human resource density			
Total workforce		550	1,249
Human Resources for Health (Technical)		412	729
Number per 10,000 population		18.0	27.2

Source: Ministry of Health (2021)

In 2019/2020, the number of health facilities in the county were 74 which comprised of 70 primary health facilities and 4 hospitals. This was an improvement from a total of 41 health facilities in the previous year, 2018. The number of beds per 10,000 population is 10 against the WHO recommendation of 30 beds per 10, 000 population. The health facilities and personnel serve a growing population of 268,002 people according 2019 census. In

2019, total health workforce was approximately 1,249 representing 27.2 health workers per 10,000 population which is higher than the WHO target of 23 health workers per 10,000.

Table 9.2: Percentage distribution of the population that reported sickness/injury by type of health provider in the county (%)

Type of Health Provider	Percentage Distribution of the Population
Government hospital	24.7
Government health centre	4.8
Government dispensary	36.8
Faith Based (church, Mission) Hospital / Clinic	10.9
Community Health	0.0
Private hospital / clinic	27.0
Nursing/ Maternity Home	0.0
Pharmacy/ chemist	0.3
Community health worker	0.0
Shop/ Kiosk	0.4
Traditional healer	0.0
Faith healer	0.0
Herbalist	0.0
Other	0.0
Number of Individuals ('000)	14

Source: KIHBS 2015/2016

Table 9.2 presents the distribution of population reported to have been sick or injured and the type of health provider they visited. Majority of the County residents who reported illness visited government dispensaries (36.8%) followed by those who visited private hospitals (27%), government hospitals (24.7%) and Government health centre at 4.8 per cent. About 10.9 per cent of county residents who reported illness also visited Faith Based (church, mission) hospital / clinic.

Population with health insurance cover

The percentage distribution of the population with health insurance cover by type of insurance provider is presented in Table 9.3. In general, 7.7 per cent of the county population had some form of health insurance cover. The National Hospital Insurance Fund (NHIF) was the leading health insurance provider reported by 100 per cent of the population. Private contributions to insurance cover were reported by 6.9 per cent of the population while Employer-Non-Contributory was reported by 6.6 per cent of the population.

Table 9.3 : Percentage distribution of the county's population with health insurance cover by type of health insurance provider (%)

Source of Health Insurance	Percentage Distribution of the Population (per cent)
Population ('000)	156
Share of population with health insurance (per cent)	7.7
NHIF	100.0
Private-Contributory	6.9
Private-Non-Contributory	0.0
Employer-Contributory	0.0
Employer-Non-Contributory	6.6
Other	0.0
Number of Individuals ('000)	12

Source: KIHBS 2015/16

Place of delivery

In the 2015/16 KIHBS, women in the county were asked the place where children aged 5 years and below were delivered. Table 9.4 shows the percentage distribution of children by place of delivery, in the county. About 54.8 per cent of children were delivered at home which is higher than the national percentage of 31.3 per cent. The proportion of children born in hospitals, health centres, dispensary/clinics was 33.4 per cent, 7.4 per cent, and 2.6 per cent respectively.

Table 9.4: Proportion of children aged 0-59 months by place of delivery (%)

Place of Delivery	Proportion of Children aged 0-59 Months by place of delivery (per cent)
Hospital	33.4
Health Centre	7.4
Clinic/ Dispensary	2.6
Maternity Home	0.3
At Home	54.8
Other	0.1
Not stated	0.0
Number of Individuals ('000)	23

Source: KIHBS 2015/16

Immunization for children

The 2015/16 KIHBS covered data on measles immunization for children below 5 years at; 9 months (Measles I) and at 18 months (Measles II). The information was collected from vaccination cards where they were available while mother's recall was used where the card was not available. Table 9.5 presents information on the proportion of children immunized (from vaccination cards) against measles. The analysis focused on children aged 12-23 months (or one year). The county had 27.6 per cent of the children aged 12-23 months were fully immunized against measles at 9 months while 15.1 per cent were fully immunized against measles at 18 months.

Table 9.5: Proportion of children aged 0-59 months immunized against measles

		Proportion of Children
Vaccination Card	Yes Seen	41.7
	Yes, Not Seen	49.3
	No	9.0
	Not stated	0.0
Measles Vaccination	Measles I (At 9 months Card)	27.6
	Measles II (At 18 months Card)	15.1
	Measles II (Mother/ Guardian memory)	50.6
	Either (card or memory)	78.2
Number of Individuals ('000)		23

Source: KIHBS 2015/16

Health outputs

The five most common prevalent diseases in the general population includes Upper Respiratory Tract Infections, Malaria, Pneumonia, Otitis Media and Gastroenteritis in order of prevalence. Therefore, special attention needs to be paid in fighting them. This is possible by increasing the number of health facilities and medical personnel in the county.

The levels of acute malnutrition remain a serious public health concern in Isiolo County. About 9 per cent of children are wasted translating to approximately 9,327 children. Moreover, Standardized Monitoring and Assessment in Relief and Transitions (SMART) survey further revealed that 1 in 10 women (7.1%) are malnourished. Stunting also remains high with 19.1 per cent of children less than five years in Isiolo County being stunted compared to the national average of 26 per cent according to results of Kenya Demographic and Health Survey (KDHS) 2014. In addition, about 13 per cent of children are underweight. Recent Knowledge, Attitude, Beliefs and Practices (KABP) survey conducted in 2017 show that exclusive breast feeding is high 74.2 per cent, however complementary feeding practices remains suboptimal with minimum acceptable diet at 24 per cent and minimum dietary diversity for women for More than 5 food groups at 27.4 per cent. Nutrition Causal Analysis (NCA) conducted in the county in 2013, showed that some of the causes

of malnutrition in the county include but not limited to high child morbidity, inadequate quantity and diversity of age specific foods, in access to safe water attributed to heightened drought situation, poor hygiene.

Full immunization refers to children below one year who have received one dose of BCG, three doses each of oral polio vaccine (OPV), pentavalent, pneumococcal vaccine and one dose of measles vaccine. According to the 2017 immunization coverage, 82.3 per cent of children have been immunized against various immunizable diseases in the county. Lack of enough health facilities, personnel, inaccessibility of some health facilities due to the poor terrain and distances explains why it has been possible to hit a target of 100 per cent immunization

The average distance to a health facility is 20 km, this is because there are inadequate health facilities in the county, and therefore it becomes a challenge for the mothers to access skilled delivery. The percentage of children born at home according to demographic survey in 2014 was 58 per cent while mothers who had access to skilled delivery was 44 per cent. The HIV prevalence in the county stands at 3.2 per cent in 2016, while ART adult and child coverage was 68 per cent and 99 per cent respectively (HIV survey, 2016).

Table 9.4: Health indicators in Isiolo county

Key Health Indicators	County Estimates
Maternal and Child Services	
<i>Skilled delivery (per cent)</i>	43.8
<i>Children born at home</i>	57.6
<i>Fully immunized child</i>	82.3
Child Mortality	
<i>Infant mortality (*1000)</i>	32
<i>Under-5 mortality (*1000)</i>	32
<i>Neo-natal mortality (*1000)</i>	75
Nutrition Status	
<i>Stunted children (per cent)</i>	19.1
<i>Wasted children (per cent)</i>	9.1
<i>Underweight children (per cent)</i>	12.9
HIV (per cent)	
<i>HIV adult prevalence (per cent)</i>	3.2
<i>Children with HIV(No.)</i>	0
<i>ART adult coverage (per cent)</i>	68
<i>ART children coverage (per cent)</i>	99

Source: KDHS, 2014; DHIS 2018

Effects of COVID-19

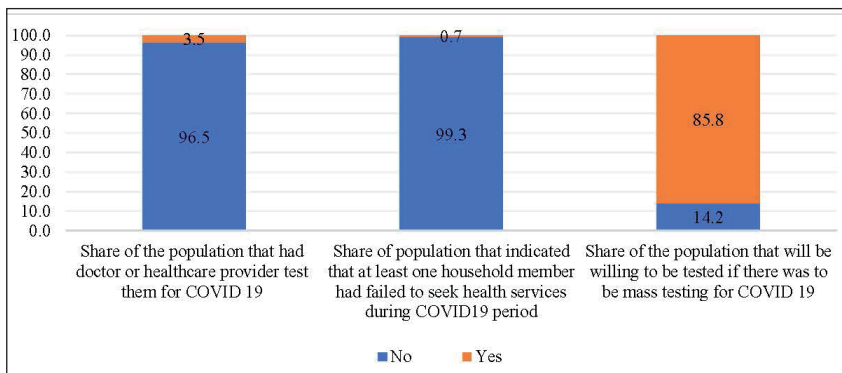
The county has two main isolation centres including Isiolo County Referral Hospital with 119 isolation beds and Merti Sub County Hospital with 20 isolation beds. The county put in place measures to mitigate the impact of pandemic. This included the prioritization of health services, identifying and setting up centers for COVID-19 pandemic to limit interference and contact with those seeking services in the big hospital. The county is in the progress of improving the bed capacity to the requisite 300 beds. The county also identified and set up centers for the pandemic making them COVID-19 hospitals to ensure there is no interference with services in the big hospital.

Recruitment for more health workers is in place to boost the human resource (nurses and clinical officers) in the hospitals. The county also offers counselling services to her health care professionals over and above the safety measures for the front-line health providers. To enhance mobility and access, the county has purchased a new vehicle to facilitate more efficient transportation of reagents to Nairobi County, which is depended upon for testing services.

In collaboration with partners, the county has managed to supply masks to every ward and in public places and has obtained sprayers to disinfect markets. Further, the county has set up washing hand booths at strategic places like hospitals and markets, public office and public areas, where the county has provided water tanks, soaps and sanitizers. The county has also put effort in ensuring there is enough supply of water as well as reviving water points and continuous takes prompt measures to address water challenges where required.

In June 2020, Kenya National Bureaus of Statistics conducted a survey of COVID-19. The results showed share of the population that had doctor or healthcare provider testing or confirming to them the status in regards COVID-19 was estimated at 3.5 per cent in 2020 (COVID-19, Wave 2 survey). This small number shows that there is a large population of people in the county who have not yet been tested for COVID-19. Further, only 0.7 per cent of the population indicated that at least one household member had failed to seek health services and 86 per cent of the population indicated they will be willing to be tested if there was mass testing for COVID-19. Therefore, a lot of awareness need to be created among the county population.

Figure 9.1: COVID-19 testing, 2020



Source: COVID-19 Wave 2 (June 2020)

As per the latest NAYS report of 2020, the main health problems in the county facing adolescents and youth are drug and substance abuse, STIs, HIV and AIDS, teenage pregnancies and SGBV. The health issues are common and have largely been prevalent due to parental negligence, negative cultural practices such as FGM and lack of awareness on health issues such as HIV/AIDS transmission. The results of these problems are mental illness, suicide, school dropout, low economic and social productivity, low self-esteem, stigma, and premature deaths. Therefore, action need to be taken to prevent such from occurring. This can be achieved through parental guidance, economic empowerment, sex education, employment creation among the youths, early school enrolment and guidance and counselling.

Other health problems affecting youths are Malaria, abortion, abortion dug and substance abuse (DSA), malaria, mental health, malnutrition sexually transmitted infections such as HIV and AIDS. Some of contributing factors include idleness, lack of health education, negative cultures as highlighted above, parental negligence and lack of guidance, peer pressure, illiteracy and high poverty levels.

Lack of adequate health infrastructural facilities across the county, negatively impact on access and equity in the availability of essential health care aimed at promoting a healthy population that will effectively participate in the development of the nation. Those unable to access the health services are sometimes rendered economically unproductive. In cases where the sick person is the breadwinner, the family may become impoverished. This has led to high cases of dependency. Inaccessibility to health facility has also led to high mortality rates.

There are incidences of health facilities that are not being utilized especially those constructed under the various funding programmes. This is because they lack necessary equipment and are understaffed. Further, there are inadequate public education programmes to encourage Kenyans to change their lifestyles in ways that will improve the health status of individuals, families and communities.

The county is undertaking awareness to dissuade the fears among the public most of whom had stopped going to the hospital thus cutting the revenue stream. The local productions of masks have provided opportunity for revenue creation. The county was also experiencing challenges in meeting her local revenue collection. The county has been experiencing downward trend in revenue collection due to weak systems in place for collecting revenue. However, with more sensitization about COVID-19, people will resume looking for health services from the hospitals and other health centers. This will increase revenue collection in the county.

Main raw materials in the health sector are the services offered by health professionals and other employees. Medicine and drugs are also key materials. County is also producing masks, which are in high demand during this COVID-19 period. Access and provision of these materials were affected by the outbreak and spread of the virus, resulting to higher demand relative to the supply.

Although the county has been putting a lot of effort in fighting the pandemic, there other several challenges that have been slowing the fight. For instance, lack of finances. The county had not envisaged a health pandemic of this magnitude hence overreliance on the national government for support. I addition, local revenue collection is bound to happen

since many economic activities had been disrupted by the country lock down and curfew. Many commodities, which were being sold outside the county, had been affected as well.

The county is also likely to face protracted labor disputes especially with medical officers who might demand more risk allowances during this pandemic period. The county is also struggling with the health sector after devolution. There were enough structures to handle the responsibilities given to the county government. There are not enough health workers to serve the large population in the county. In addition, there is a problem of procurement of medicine and other drugs as the counties are not allowed to procure for drugs themselves but are forced to buy from KEMSA. This sometimes results into delays in delivery of the needed drugs. The county also does not have adequate bed capacity to handle all her patients. It is in the wake of COVID-19 outbreak that the county has rushed against time to establish more ICU beds.

The sector has linkages with the Education, ICT, WASH and Agriculture sectors. There is a direct proportionality between education and health. The higher the education level of members of the county, the healthier they are. High level of education reduces instances of disease outbreaks due to ignorance. This particularly reduces health diseases such as sexually transmitted among the youths and adults.

Advancement in ICT also helps improve health sector. This is because with ICT, it is easy to scan for diseases and manage the treatment. With advancement in ICT, it is possible to do diagnosis to patients and treat them promptly. A good example is the scan for pregnant mothers and cancer patients. Some countries such as Rwanda, drones are being used to deliver bloods. This is helping in mortality rate reduction. Good water and sewerage facilities also contribute greatly to reduction of diseases such as cholera, typhoid and other waterborne. This is because by maintaining good hygiene such as washing hands after visiting toilets, washing fruits before eating and boiling/treating drinking water.

Good disposal of waste by avoiding open defecation and using toilets also helps reduce spread of diseases spread through human waste. Agriculture sector also plays a key role in ensuring that people get balanced diet and good nutrition. This reduces cases of malnutrition and stunted growth among children due to lack of certain nutrients and vitamins. Agriculture also serves as a source of revenue and employment mostly for the females. This reduces cases of family conflicts and stresses, hence reducing mental diseases.

9.2 Opportunities with COVID-19 in Health Sector

There is an enhanced collaboration within Frontier FDC counties, which has resulted into training of the health officers and all the frontline staffs. This collaboration has also seen enhanced intercountry screening and testing centralized at the Coast general hospital.

The pandemic has also led to utilization of local capacity in production of masks and PPEs. This has promoted growth of local industries, hence creating employment. It has also challenged the county government hence exposing the health sector since it lacked enough ICU beds. More attention is now being given to the sector leading to improved health services. The county has also received a number of donations in terms of bed and PPEs which have contributed to general improvement of the health sector in general.

Additionally, due to reduced social contacts many meetings have been taking place

virtually. This has provided an opportunity for the development of ICT. This has saved the county money, which could have used in the movement from place to another, conference hall fee as well as accommodation for her staff. This has also promoted of ICT and other communication channels within the county hence speedy transfer of information.

9.3 Emerging Issues

The COVID-19 pandemic has increased the demand for isolation centres, admission beds, ICU and HDU beds. It has also overstretched the existing health facilities. Additionally, with spread of pandemic across counties it has created fear among the residents and some of them have opted not to visit the hospital in fear of contracting the virus.

The outbreak of the virus has caused the county to reprioritize its health sector priorities and some preventative and promotive health services such: malaria control; expanded programmes on immunization; integrated management of childhood illness; and control and prevention of environmentally communicable diseases have been affected to some extent.

9.4 Recommendations

In line with the health status in the county, some of the recommendations that need attention include the following:

- (i) The county should create awareness on availability and importance of free maternity services and address other constraints to access of maternal health services in the county to address risk of contracting COVID-19 in event of visiting any health facility.
- (ii) To reduce high burden of both communicable and non-communicable disease, the county should revamp its Community Health Strategy. This is a community based promotive and preventive health services. To make this more effective, the County should engage Community Health Volunteers (CHVs) and equip them with the relevant resources and skills.
- (iii) The county needs to consistently allocate resources towards nutrition specific and sensitive programmes in the various sectors by establishing specific budget lines for nutrition support initiatives.
- (iv) More sensitization about negative effects of FGM and Early marriages need to be carried out by the county government in collaboration with national government and other change agents.
- (v) The county should revamp, expand, modernize and equip health facilities, including, Isiolo Referral Hospital, Garbatulla and Merti sub-county hospitals, also recruit additional public health officers and community health workers and ICU nurses to strengthen preventive and primary health systems.
- (vi) Invest in research and development to spur innovation in health sector including in the area of medicine.

- (vii) Implement a comprehensive human resource health management system including undertaking training needs assessments and information system to ensure skilled and motivated health care workers are equitably deployed.
- (viii) Promote and support public and community health including the installation of hand washing facilities in homes and institutions such as schools, tertiary education institutions, workplaces and health care facilities within Isiolo County.
- (ix) Address the mental health needs including those of the health workforce, mental illnesses from depression, especially in response to shut downs and economic downturns.
- (x) Ensure health officers working at all levels are well remunerated and paid salaries and allowances in time to avoid constant strikes in Isiolo County.

10 Education and Training

10.1 Characteristics of the Sector

General Education Provision in the County

Isiolo County has a total of 900 pre-primary centres, 805 primary and 188 secondary schools. Infrastructures are in place to support water and sanitation efforts in learning institutions by the county. The county has rolled out plans to provide hand washing facilities in schools in preparation for re-opening.

The county has 125 primary schools of which 108 are public and 17 are private. There are 33,008 pupils enrolled in primary schools, but these figures keep changing cause of dropouts due to effects of culture and climate related issues such as drought. There are a total of 624 primary school teachers, and this implies that the teacher/pupil ratio is 1:37.

The county has 25 secondary schools as per 2016 Kenya National Bureau Statistics (KNBS) data, of which 17 are public and 8 are private. Only six are boarding schools and the rest are day schools. The total enrolment for 2016 is 5,397 students (2,988 males and 2,409 females.) Teacher population in secondary schools stands at 236 with a teacher/student ratio of 1:23 an improvement from 2013 when the number of teachers stood at 61 and teacher-student ration of 1:30. However, still a great number of students have to walk/travel for 5 km and above to reach the nearest secondary school.

There are 160 ECDE centres of which 42 are private. 2017 total enrolment is 16,295 with 9,102 being boys and 7,193 girls. The teacher pupil ratio in the ECD centres is 1:87. This ratio is far above the optimal of 1:40 implying that the county is running short of ECD teachers. Dropout rate is nil which means that all the student transit to primary schools

There are three tertiary institutions in the county. These are Kenya Medical Training College, St. Marys Secretarial College, and Isiolo ECD Training centre. There is one extra mural centre for Nairobi University in Isiolo town offering diploma courses. More tertiary institutions need to be constructed across the county to tap the growing local demand by the Isiolo youth.

The county has 2 vocational training centres, namely Uhuru in Isiolo and Merti in Merti Sub-County. The latter is not yet operational. This means fewer youth acquire technical and crafts skills within the county. There is need for the establishment of more vocational training centres in the county but also very important to address the enrolment challenges due to negative perceptions on technical, vocational education and training.

About 85 per cent of public primary schools in Isiolo County have been installed with ICT infrastructure and devices under the Digital Literacy Programme (DLP) (ICT Authority, 2019). The infrastructures include learner digital devices (LDD), teacher digital devices (TDD) and the Digital Content Server and Wireless Router (DCSWR).

Gross Attendance Ratio (GAR) and Net Attendance Ratio (NAR)

The Gross Attendance Rate (GAR) for pre-primary school was 85.2 per cent while that of primary school and secondary school was 92.3 and 50.9 per cent respectively in 2015/16 (Table 10.1). Gross Attendance Ratio (GAR) represents the total number of persons attending school regardless of their age, expressed as a percentage of the official school age population for a specific level of education. The GAR for pre-primary school was higher for female, 92.9 per cent, compared to that for males, 78.5 per cent. The GAR for primary school was higher for males, 94.4 per cent, compared to that for females, 90.1 per cent. The GAR for secondary school was higher for males, 58.6 per cent, compared to that for females, 43.2 per cent. Net Attendance Ratio (NAR) is the total number of persons in the official school age group attending a specific education level to the total population in that age group. Table 10.1 shows that total NAR for pre-primary, primary and secondary school was 54.3 per cent, 72.2 per cent and 30.9 per cent, respectively.

Table 10.1: Gross attendance ratio and net attendance ratio by educational level in Isiolo County

Education Level	Gender	Gross Attendance Ratio	Net Attendance Ratio
Pre-Primary School	Male	78.5	53.7
	Female	92.9	56.2
	Total	85.2	54.3
Primary School	Male	94.4	74.7
	Female	90.1	69.4
	Total	92.3	72.2
Secondary School	Male	58.6	33.0
	Female	43.2	28.7
	Total	50.9	30.9

Source: KIHBS 2015/16

Basic education gross and net enrolment rate

The pre-primary gross enrolment rate in the county was 85.2 per cent in 2018 and while the net enrolment rate was 54.3 per cent (Table 10.2). The Gross Primary and Secondary enrolment rates stood at 92.3 per cent and 50.9 per cent respectively in 2018 while the Net enrolment rates (NER) were 72.2 per cent and 30.9 per cent for primary school and secondary school respectively during the same period. The huge difference between primary and secondary school enrolment is due to primary to secondary school dropouts

Table 10.2: Gross and net enrolment rate (%), 2018

Preprimary	Total
Gross Enrollment rate (GER)(%)	85.2
Net Enrollment rate (NER)(%)	54.3
Gender parity index	1
Primary	
Gross Enrollment rate (GER)(%)	92.3
Net Enrollment rate (NER)(%)	72.2
Gender parity index	1
Secondary	
Gross Enrollment rate (GER)(%)	50.9
Net Enrollment rate (NER)(%)	30.9
Gender parity index	0.6

Source: Education statistical booklets 2014-2018

High rate of school dropouts can be attributed to factors like Harsh environment, Early marriages mostly among the girls, teenage pregnancies where girls drop out of school after becoming pregnant for the fear of ridicule by colleagues, Lack of school fee due to poverty especially if one is admitted in a boarding school, Drug and Substance abuse, school absenteeism by teachers and pupils and indiscipline among some pupils leading to expulsion.

These challenges have been contributed by many factors such poor parenting which leaving children unguided, poverty which pushes girls to be married at early age, negative cultural practices such as FGM and forced early marriages, peer pressure and easy drugs accessibility. To address the issues, there is need to create awareness against drug and substance abuse, offer guidance and counseling to students, introduce free and compulsory secondary education, discourage negative cultural practices that affects school attendance and ensure there is no teacher absenteeism

Literacy

The analysis of literacy is based on respondents' self-assessment as no reading and writing tests were administered during the data collection. Further it was assumed that anybody with secondary level of schooling and above could read and write. The percentage distribution of population aged 15 years and above by ability to read and write is presented in Table 10.3. The proportion of literate population in the county was 60.1 per cent with the male population being more literate (64.6%) compared to their female counterparts (55.9%).

Table 10.3: Percentage distribution of population aged 15 years and above by ability to read and write (%)

	Ability to Read and Write	Percentage Distribution (per cent)
Overall county	Literate	60.1
	Illiterate	39.6
	Not Stated	0.4
	Number of Individuals ('000)	86.0
Male	Literate	64.6
	Illiterate	35.2
	Not Stated	0.2
	Number of Individuals ('000)	41.0
Female	Literate	55.9
	Illiterate	43.6
	Not Stated	0.5
	Number of Individuals ('000)	45.0

Source: KIHBS 2015/16

Educational Attainment

The distribution of population aged 3 years and above by educational qualification attained is presented in Table 10.4. Approximately 54.2 per cent of the population do not have any educational qualification. This is high than the national percentage of 49.7 per cent. Only 2.1 per cent of the population has attained university degree. The proportion of the population with CPE/KCPE qualification is 21.6 per cent and that of KCE/ KCSE qualification is 13.6 per cent.

Table 10.4: Percentage Distribution of Population by Highest Educational Qualification

Highest Educational Qualification	Percentage Distribution of Population
None	54.2
CPE/ KCPE	21.6
KAPE	0
KJSE	0.1
KCE/ KCSE	13.6
KACE/ EAACE	0.3
Certificate	2
Diploma	2.9
Degree	2.1
Basic/post literacy certificate	0.1
Other	0.1
Not Stated	3
Number of individuals ('000)	96

Source: KIHBS 2015/16

Percentage distribution of Isiolo County residents aged 3 years and above who had ever attended school by the highest level reached, and sex is presented in table 10.5. The proportion of males who had reached primary school level was 47.2 per cent while that of females was 50.4 per cent. Except for primary school level and college (middle level), the proportion of males who had reached other levels of education were comparatively higher than females. For instance, for all persons who reported to have attended school, 17.2 per cent of males and 17.1 per cent females had reached pre-primary school level in the County. There was a high disparity between the proportion of persons who had reached university education level, with male recording a higher percentage than female at 3.9 per cent and 2.5 per cent, respectively.

Table 10.5: Percentage distribution of residents 3 years and above who had ever attended school by highest level reached, and sex for Isiolo County (%)

Educational Level	Gender	Percentage Distribution of Population 3 Years and above
Pre-primary	Male	17.2
	Female	17.1
Primary	Male	47.2
	Female	50.4
Post primary vocational	Male	0.4
	Female	1
Secondary	Male	23.3
	Female	20
College (Middle-level)	Male	5.3
	Female	4.8
University	Male	3.9
	Female	2.5
Madrassa / Duksi	Male	0.6
	Female	0.5
Other	Male	0
	Female	0
Not Stated	Male	2.2
	Female	3.7
Number of Individuals ('000)	Male	50
	Female	46

Source: KIHBS 2015/1

The schools in the county had closed due to the outbreak of COVID-19 pandemic. This forced the government to offer online learning though the programme was stopped even before picking momentum. This was attributed to lack of enough infrastructure among many schools across the country Isiolo county was not an exemption as most rural schools have no internet access or e-learning, which is mainly concentrated at Isiolo town and

its environs. The county reallocated Ksh 16 million to learning activities (ECDE and polytechnics).

Isiolo County still has a high rate of illiteracy with 20 per cent of the population not having gone to school. Less than 10 per cent had reached post-secondary level with majority only having gone to primary school. Dropouts were seen to be one of the major factors for this with reasons such as lack of school fees and early marriage being cited.

Currently less than five years' age group population is estimated at 25,662 and 90 per cent of them are supposed to be attending ECD centres but because of drought and inadequate ECDE infrastructures and pastoralism this is not the case. This calls for rapid infrastructure development, increase teaching manpower in ECD centres to accommodate this high number. Others include introduction of school feeding programmes to improve enrolment levels such as reintroduction of mid-morning snack (porridge) and lunch.

The dropout rate in the county is one per cent implying that most pupils are transiting to secondary schools. However, 74 per cent of pupils walk/travel for over five km to reach the nearest public primary school. The current projection of primary school going children population is 35,989. This implies that over 37 per cent of the children who are supposed to be in primary school are out of school due to pastoralism, early marriages and insecurity. There is therefore urgent need to come up with strategies that will keep children in school.

Non-formal education has not been formally rolled out in Isiolo. However, there is great need for the adoption of the same in order to provide education for children who miss out school early in life. These include the children in the streets, children with disabilities and young mothers among others. The objectives of this are: To develop aesthetic values and capacity to appreciate own and other people's cultures and to develop awareness and appreciation of the environment to this group. This would prepare them for joining secondary education of enrollment into the vocational training.

There are two operational youth polytechnics in the county namely St. Joseph Polytechnic which is privately owned and Uhuru Youth Polytechnic. With respect to post-secondary education, the county has built one youth polytechnic in Merti Sub-County but still the polytechnic is not operational.

There are 55 adult literacy classes in the entire county with an enrolment of only 3,073 students in by 2015/2016 out of which 657 were males and were 2,416 are females. This represents an improvement in overall enrolment from 2013/14 where the total enrolment stood at 1595 (342 males and 1253 females). There is therefore a dire need to increase the number of adult literacy classes in the entire county and undertake campaigns to influence enrolment.

Table 10.6: Number of adult education centres across the county

Sub County	2014	2015	2016
Isiolo	31	30	30
Garbatula	25	20	17
Merti	16	9	8
<i>Total</i>	72	59	55

Source: Adult Education Department, Isiolo

The main issues affecting education in the county is DSA, child labour, absenteeism of teachers and students, lack of school fees and inadequate schools. The high usage of drugs has been as a result of peer pressure and 'stress' while lack of school fees has been caused by poverty. The above issues are common especially due to persistent drought and insecurity. The outcome has been poor examination results since some students miss classes and the syllabus not being covered exhaustively when teachers are absent. The county has high level of poverty due to also lack of skilled youths for gainful employment.

According to Basic Education Statistical Booklet (2014), 69 males and 238 females were employed as ECD teachers in the public schools. This makes a total of 307 ECD teachers in public sector compared to a total of 220 in private sector in which males were 36 and 184 females. In total, county had 527 ECD teachers in both public and private schools. At this level of education more females are engaged compared to males. The number teachers employed in primary schools were 933 in public sector and 387 in private sector. This makes a total of 1320 teachers at primary level of education. At secondary level, the county had 211 secondary school teachers in public schools and 68 more in private schools making it a total of 279. From the above statistics it is evident that the number of teachers to student's ratio is large meaning that the teaching labor force is stretched.

There are three main players as far as education is concerned. We have parents, teachers and students. Other stakeholders include county and national governments as well as the donors. They play a critical role in ensuring that the education is supported, and learners are learning smoothly. Their interaction brings about success in the education sector.

As the schools prepare to re-open the opportunity will be created for revenue collection. However, the collections from the market, SMEs and agricultural produce forms the basis of own revenue. Even after reopening of schools, private schools will still be struggling to come back to the feet as many of them had suffered huge losses. There is a likelihood that some of the schools will close permanently unless the government comes for their rescue. National government has recently release funds to support teachers in the public schools who had been employed by BOM. This has come as a relief for the many teachers who have been suffering since the schools were locked down due to COVID-19.

The main raw materials in education are the services offered by the teachers and other employees such as cooks, drivers, cleaners and security persons. Learners also consume goods such as food, clothing, reading and writing materials and other learning equipment.

The ECDE expenditure was constant at approximately Ksh 0.2 billion throughout the period under review and averaged 18.2 per cent of the education spending. Spending on primary school education increased from Ksh 0.5 billion in 2014/15 to Ksh 0.8 billion in 2017/18 while spending on secondary school increased from Ksh 0.2 billion in 2014/15 to Ksh 0.3 billion in 2017/18.

The share of spending on ECDE to total spending on basic education decreased from 20 per cent in 2014/15 to 18.6 per cent in 2015/16 before increasing to 20.9 per cent in 2016/17 and then decreasing again to 13.4 per cent in 2017/18.

Most of the ECDE spending was on recurrent expenditure – averaging 66 per cent over the review period. The absorption rates increased from 78 per cent in 2014/15 to 98 per cent in 2016/17 before decreasing to 40 per cent in 2017/18.

Teaching services are the key services. Performance of the students in national exams is used as a measure of the output from the services offered by teachers.

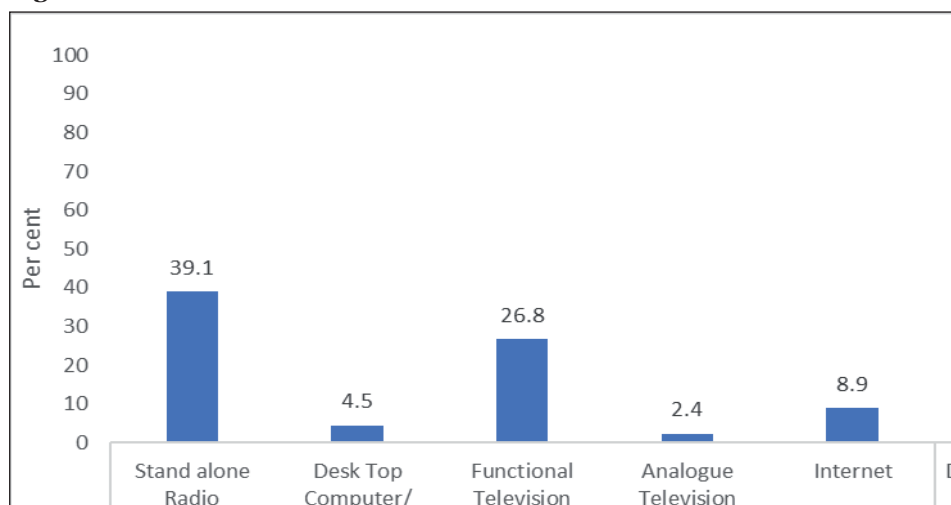
Water is a shared commodity between community and the schools. The county government should ensure that all learning institutions have water for proper hygiene during this COVID-19 period. School uniforms and learning materials such as books are provided by parents. Schools should make sure that there is sufficient number of classrooms to accommodate all learners when schools re-open. There is need to cover days lost through make up programs both at home and in schools. There is also Need for employment of more teachers in case of double tracks.

There are several constraints in the education sector. The main one right now is COVID-19 which led to closing of schools. This has disrupted education calendar posing a great challenge to both county and national government. The national government announced that the education calendar 2020 a waste. Closure of all schools has led to loss to learning time and teaching time. The school infrastructure in the County is not only limited but also is of poor quality. High illiteracy level is another issue of concern as not all county persons can read and write. Lack of parental guidance and early marriages are other challenges being experienced. There is also lack of enough ICT infrastructure in the county making it difficult for the online learning to take place.

ICT in education

The county has also low internet access (8.9 per cent) which constrains online learning across the County. Furthermore, only 4.5 per cent of the households had access to ICT equipment such as laptops and computers. This makes it difficult for the pupils and other students to benefit from national learning programme which had been started by the government. Even if the programme was to be done through radio, it would be difficult since only 39.5 per cent of the county population has a radio.

Figure 10.1: Access to ICT in households and schools



Source: Kenya Population and Housing Census (KPHS, 2019)

Agriculture provides food for the school going children. Therefore, it plays a key role in ensuring that the school going children get food of the required quality and quantity. It is always children who are in the right health status who can concentrate and learn in classes. Therefore, good health ensures continuity of learning among the pupils and students. It is in schools where children are taught about good health hygiene which contributes to reduced diseases spread. ICT plays a key role especially now that schools have been closed and people are advocating for online classes. Good internet connectivity, possession of laptop/desktop computer, iPad, TV, and radio would greatly facilitate the online learning.

10.2 Opportunities with COVID-19 in education and training

The demand for PPEs such as masks in the County has led to local production by VTCs hence creating employment and income for youth. It will however be important to address issues of standards and quality of the local produced PPEs. COVID-19 pandemic has also provided opportunity for the county government to forge partnerships to ensure enough network coverage across all the sub-counties and counties in the Central region. There is also the opportunity of exploring online classes. This if effective, can save time spent on travelling from home to schools to teach. Teachers will be able to reach at the comfort of their seats. This can reduce the cases of lateness and absenteeism. Learning from homes will also reduce accidents and injuries among pupils at school. It will also reduce indiscipline and drug abuse as parents will be able to closely monitor their children at home. The disease has also created an opportunity for creativity among students who are involved in making of ventilators and researching on vaccines.

10.3 Emerging Issues

The County with support from stakeholders will need to continue to invest in early childhood development through infrastructural development to allow for adequate social distancing when schools reopen; deployment of ECDE teachers, provision of sanitation facilities and enhanced school feeding programme. To achieve these objectives, the county will require to partner with the national government and private sector to enhance ECDE and vocation training through infrastructural development as well as equipment of all ECDE, primary, secondary and vocational training, and University branches in the County with adequate WASH and adequate learning spaces upon reopening. High cases of school dropout especially transition from primary to secondary level of education. There is also the issue of drug and substance abuse among the students which need to address has it has great impact on education.

10.4 Recommendations

- (i) The County with support from stakeholders should continue to invest in early childhood development through infrastructural development to allow for adequate social distancing when schools reopen; deployment of ECDE teachers and provision of sanitation facilities.

- (ii) The county should involve communities to mobilize learners when schools will be reopening process and while deepening implementation of COVID-19 mitigation measures. The county will combine community participation and large-scale direct communication campaigns to parents, and where possible, increase attendance options to accommodate all children, including those with highest risk of dropping out, also promote back to school campaign and community outreach to ensure that no child is being dropped out of school due to COVID-19 emergency.
- (iii) The County should prioritize projects that improve school water, sanitation and hygiene facilities and management in order to reduce future effect of similar or related outbreak while promoting public health in learning institutions.
- (iv) The county should promote remedial/catch up lessons for learners who might have lagged behind also schools to utilize ICT platforms and have a depository of teaching and learning materials that learners could use at their own time and while at home.
- (v) The county should provide financial or in-kind support, such as school feeding, to help families overcome the increased costs of attending school, also provide psychosocial support to teachers and learners.
- (vi) Concerted efforts will also be required to fight drug and substance abuse among the youths in the county. This can be done through counseling and ensuring that they are not idle especially this period when learning institutions are locked.
- (vii) Government need to come in and support private institutions which are facing threat of closure due to losses as a result of closing school indefinitely. This can involve giving grants and loans to the private schools.

11 Social Protection

11.1 Characteristics of the Sector

Sources of vulnerabilities in the County

According to the KNBS census 2019, Isiolo County has a population of 268,002 of which 3.7 per cent are the elderly and 1.2 per cent are people living with disabilities. The overall poverty rates in the county stand at 53 per cent which is higher than the national average of 36.1 per cent. The county's food poverty levels are at 52 per cent and 35 per cent of the total population is multidimensionally poor. Further, about 19 per cent of the children population is stunted. The impact of the COVID-19 to the county's economy cannot be gainsaid.

Severe Shocks to The Households

Severe shocks have had negative impact to the household's economic and social welfare of county residents. Table 11.1 presents the proportion of households by the first severe shock in the county. The major shock in the county was dearth of livestock and large rise in price of food which affected 32.3 per cent and 12.3 per cent of the households in the county. Droughts and floods, Death of family Member and Loss of salaried employment or non-payment of salary were also other major shocks in the county affecting 10.1 per cent, 8 per cent and 3 per cent respectively. Crop disease or crop pests were experienced by 0.4 per cent of households while the 7.5 per cent reported having their livestock stolen as other 4 per cent of the households reported to have experienced Break-up of the households.

Table 11.1: The proportion of households by the first severe shock in the county

First Severe Shock	The proportion of households (per cent)
Droughts or Floods	10.1
Crop disease or crop pests	0.4
Livestock died	32.3
Livestock were stolen	7.5
Household business failure, nonagricultural	1.1
Loss of salaried employment or non-payment of salary	3
End of regular assistance, aid, or remittances from outside the household	0
Large fall in sale prices for crops	0

Large rise in price of food		12.3
Large rise in agricultural input prices	-	
Severe water shortage	-	
Birth in the household	1	
Death of household head	8	
Death of working member of household	3	
Death of other family Member	9	
Break-up of the household	4	
Bread winner jailed	-	
Fire	3	
Robbery / Burglary / Assault	2	
Carjacking	-	
Dwelling damaged, destroyed	-	
Eviction	-	
Ethnic/ Clan Clashes	3	
Conflict	-	
HIV/ AIDS	-	
Other	9	
Number of households with Shock		11,000

Source: KIHBS, 2015/16

Distribution of Social Assistance Beneficiaries

Households in the county received various forms of social assistance or transfers or gift either in form of a good, service, financial asset or other asset by an individual, household or institution. Transfers constitute income that the household receives without working for it and augments household income by improving its welfare. Cash transfers include assistance in form of currency or transferable deposits such as cheque and money orders. The proportion of households that received cash transfers by source, household headship, residence and county is presented in Table 11.2. Overall, 32 per cent of the households received cash transfers. A higher proportion of households received transfers from within the country (69 per cent), mainly from individuals (79 per cent) while external transfers constituted 16 per cent.

Table 11.2: The proportion of households that received cash transfers by source, and household headship

		Beneficiaries
	Total Number of Households	34,000
	Households receiving transfers (per cent)	32

From Inside Kenya	Individual	15,822
	Non-Profit Institution	358
	National Government	273
	County Government	-
	Corporate Sector	-
Inside Kenya		16,453
Outside Kenya		-
Total		14,914
Number of households that received transfers		11,000

Source: KIHBS, 2015/16

Children in Isiolo County face many protection concerns including abuse, exploitation, violence and neglect. Child labour, child neglect, violence against children including female genital mutilation (FGM), child marriage and children in street situations are protection concerns affecting children in Isiolo County. Children's right to name and nationality is also curtailed as the birth registration is low in Isiolo County especially for pastoralist children who were not born in health facilities. There is need to decentralize birth registration services to the sub-counties so that children in rural areas can access birth registration services. The social services department has grants for PWDs. However, amounts given are little. There has been a delay in remitting money to the fund that was established. Finance department following up on this.

The vulnerable children groups/categories in the county can be listed as follows; child headed households, children living in extreme poverty, children living with grandparents, orphaned children, children at risk of FGM, child marriage, children living with or affected by disability, child pregnancy, children living with HIV or at risk of infection, children living with HIV positive caregivers, children living with aged/elderly caregivers, children dropping out of schools and single parents' children. The current statistics of vulnerable children per category cannot be established and a survey needs to be conducted to ascertain this in the county. The number of children in street is steadily increasing in Isiolo town. The current number of street children is estimated to be 375 and is mostly in Isiolo town central and along Airport Road and Kulamawe.

The county has several organization/ Institutions contributing to children well-being. These include children homes supported by; Faith based institutions and civil society organization (NGOs). The children organization works with the government institutions such as children department, court and police to strengthen children protection issues in the county. There is need to establish government owned child protection and rescue centres to support children in need of care and protection including child survivors of

violence, girls running away from child beading & FGM & child Marriage, lost children, trafficked children, children in street situations and children who have dropped out of school due to various reasons.

County government has been supporting youths, women and PWDs in the county. Such empowerment includes Merti Integrated Development Programme (MID-P), through the Department of Culture and Social Services, organized a Lobby and Advocacy training for PWDs from the 10 wards of Isiolo County. The training was tailored to enable leaders of Disabled Person's Organization to understand the principles of group and dynamic leadership, Enables the leaders of different DPOs to understand the existing legal instruments that protect PWDs, Enables the leaders of DPOs to understand the existing opportunities that aim at empowering PWDs.

One of the action plans from the training was to come up with a Bill/ policy that supports the marginalized members of society. In 2019, The Isiolo County Youth, Women and Persons with Disability Enterprises Development Fund Act and Regulations 2019 was passed. The law provides the establishment of a Youth, Women, and Persons with Disabilities Enterprise Development Fund and promotes new and existing micro and small businesses and industries. The aim is to increase household income, improving living standards in reference to persons with disability – who are perceived to be a burden to the community because of their dependency on others, inability to have a reliable source of income, and who often lack opportunities to access finance to do business.

The social and economic effects of the COVID-19 pandemic increased households' susceptibility to Gender Based Violence (GBV) in the county. Response measures taken to contain the COVID-19 pandemic, such as movement restrictions, lockdown and curfew hours, have led to loss of income, isolation, high levels of stress and anxiety exposing household members to psychological, economic, sexual violence and physical harm as couples spend more time in close contact. Other challenges affecting the youth include unemployment and drug use, especially alcohol and substance abuse.

Livestock Markets were closed which mostly serve as places of trade. Most people in this market are females. This has therefore affected their welfare in terms of finances and access to food and other goods. This has an impact of lowering their living standards. Livestock markets had also been closed making it hard for people to sell their livestock which serves as a main source of income. This has therefore reduced their income with some operating at losses. Shops and Kiosks, social centers such as club and bars, hotels have been affected by the curfew and social distance requirements thus reducing the amount of income that they get. Unemployment rate in the county has increased due to close of many businesses and learning institutions. This has led to the decline in living standards and family conflicts due to limited sources of income.

Most of the social protection operations were undertaken through non-contributory transfers in cash for the elderly, OVCs and PWDS. In some instances, in kind transfers which include school feeding programmes were also used to reach a wider audience and age group.

Potential sources for revenue were adversely affected by the floods and COVID-19. However, through lifting of up restrictions and the measures taken by the county on local business is picking up which would eventually revive the revenue stream though it might take

time but there are positive signs to that effect. The county has lost revenue from livestock selling and tourism which greatly contribute to the economy. However, the situation has started improving owing the reopening of the county in July 2020. The main source of revenue to implement social protection activities in the county were mostly government budgetary allocations and donor contribution to OVCs, PWDs, and the elderly. The county government has been complementing the work of the national government on taking care of the OVCs. The county government aims at protecting children from abuse, neglect and discrimination in accordance with the Children's Act, 2001, and the Education Act, 2012.

Loss of jobs and business opportunities led to an increase in poverty and declining of people welfare. With loss of jobs and businesses, most youths were involved in the activities such as crimes, prostitution and other social evils. Job losses also increased suffering among county residents. In addition, decreased county revenue made it hard for the county to cater for the needy cases and mostly those affected by COVID-19. In addition, unemployment and recruitment to the terror groups posed a great danger to the youths in the county.

Social protection is directly linked to the health sector. When people's social welfare is good, that is people have good health insurance, they can be able to access health services in case of sickness. When people welfare is affected by loss of employment and closing of businesses, they are more likely to suffer from diseases such as stress and depression. ICT also plays a key role in terms of information dissemination through media such as radio, television, mobile phones, etc. Communication is key especially for the people in business as one need to place order for goods or services. ICT is also involved in record keeping of those people in schemes such as NHIF and NSSF as well as other insurances.

Additionally, social protection is directly related to education. The more one is educated the more is informed of existing welfare schemes. Educated people also are aware of the need for and importance of engaging in social protection programmes such as insurance and investment for future to benefit after retirements. With good education, one is able to understand government role in ensuring good life for its citizens.

Agriculture is the main source of revenue in the country and most of the counties. Isiolo county is not an exception. Majority of people are involved in livestock keeping and farming. This provides people with source of food as well as revenue which is used to improve their welfare. Agricultural sector also creates employment among many county residents who would otherwise have been jobless. Trade and industry play an important role bettering life of the residents. This is where majority of people derive their livelihood from especially those engaging SMEs. The profits and savings obtained from business is used in feeding the family members as well as insuring them in future.

11.2 Opportunities with COVID-19 in social protection

COVID-19 exposed lack of preparedness among counties in terms of responding to the emergencies such as COVID-19 pandemic. It provided an opportunity to measure how county governments are prepared to handle the devolved functions. Health being a devolved function, it has really exposed the counties as many of them lack required health facilities such as ICU beds and enough medical personnel. The virus has also given an opportunity to develop social protection programs to cushion the vulnerable groups in the community in case of outbreak of other diseases.

11.3 Emerging Issues

Due to social distancing and curfew hours, GBV victims had limited contact with family and friends who would act as the first contact persons during violence. Survivors also experienced challenges accessing healthcare services, counselling services and access shelters. These challenges underscore the need for deliberate measures at the county level to prevent and support GBV survivors in times of emergencies as experienced with the pandemic. Further, the pandemic has exposed the level of lack of comprehensive social protection at the county level.

11.4 Recommendations

COVID-19 pandemic created effects with immediate and long-term economic consequences for children, PWDs, elderly and their families. In an effort to strengthen social protection response in face of a similar pandemic, the Isiolo county government should:

- i. Form economic block partnership to ensure borders are manned and enhance cross border screening especially among long distance drivers. This will drastically slow the spread of the virus.
- ii. Conduct mass civic education among the people on COVID-19 prevention measures, how to handle an infected person and avoidance of stigmatization of the affected person.
- iii. Enroll more county residents in welfare programmes such as NHIF which will ensure that they access medical treatment in case of falling sick.
- iv. Give tax exemption for the SMES who have suffered losses in their business as result of diseases outbreak.
- v. Create a kit where they can collaborate with local banks in offering loans to the SMEs to restart and boost their businesses.
- vi. Provide food and other basic wants for the elderly since their movement have been reduced as they are at great risk of contracting the virus. Therefore, their life has been affected and cannot afford to feed themselves anymore.
- vii. Have programmes to incorporate youths in development are needed. This will ensure they do not get involved in drug and substance abuse and other crimes. More employment opportunities to be created for the youths. This will ensure they do not remain idle hence joining terror groups.

In Isiolo County, there were no reported COVID-19 related GBV Cases in April 2020 based on data from the Healthcare Assistance Kenya (HAK) Helpline 1195. The May 2020 KNBS COVID-19 survey revealed that approximately 22.7 per cent of respondents had witnessed or heard of domestic violence in their communities since the National Government instituted measures to contain COVID-19. Between March -May 2020, there were a total of 578 cases of female adolescents (age 10 - 19) presenting with pregnancy at health facilities (Kenya Health Information System (KHIS, 2020).

To address these issues, the County will:

- (i) Enhance inclusion and participation of women, girls, men and boys in budget making process and public consultation to make the process and outcomes gender responsive.
- (ii) Promote use of alternative means of Gender Based Violence safe outreach and awareness-raising that limit direct contact i.e. using traditional methods e.g. town criers and use of loudspeakers.
- (iii) Partner with stakeholders to actively engage and sensitize the youth on reproductive health; HIV/Aids and COVID-19 prevention measures.
- (iv) Establish a multi-sectoral committee that oversees the implementation of gender policies across various cross-cutting sectors.
- (v) Support gender champions and sign language interpreters to activate and communicate an 'alert chain' to reach GBV survivors or those in imminent danger of injury and harm.
- (vi) Strengthen inclusive community outreach strategies to ensure GBV messaging is localized and clear, and addresses stigma, discrimination and other power dynamics that serve as barriers to accessing GBV services and COVID-19 information among differently able persons.
- (vii) Designate gender safe spaces to provide accommodation for GBV survivors and create space in County Referral Hospitals to serve as GBV recovery centers.

12 Human Resources

12.1 Characteristics of the Sector

Sources of employment in the County

The main employment and income opportunities in the county include agriculture and trade. Most of the farmers are livestock keepers while some are engaged in farming in the irrigation scheme. The traders are mainly dealing with livestock, charcoal burning and selling, selling miraa and other small businesses. Other sources of employment are government departments, Non-Governmental Organizations, donor agencies and business organizations. Most of these wage earners are in formal employment. Some workers are self-employed, and they engage in milk vending, jua kali, hawking and livestock selling among others economic activities.

Table 12.1: Distribution of Population Age 5 Years and above by Activity Status, and Sex in the County

	Male	Female	Total
Population	119,065	108,311	227,379
Working	55,731	45,945	101,678
Seeking Work/ No Work Available	17,538	9,990	27,529
Persons outside the Labour Force	45,774	52,360	98,134
Not Stated	22	16	38
<i>per cent Working</i>	<i>76.0</i>	<i>82.1</i>	<i>78.7</i>
<i>per cent Seeking Work/ No Work Available</i>	<i>23.9</i>	<i>17.9</i>	<i>21.3</i>

Source: KNBS (2019)

Distribution of Population Age 5 Years and above by Activity Status, and Sex in the County is shown in Table 12.1 above. An assessment on the county labour force indicates the County population aged 15-64 years (labour force) was estimated at 117,952 people of whom 101,678 people were working and 16,274 were seeking work but work was not available representing an unemployment rate of 13.8 per cent (Kenya Population and Housing Census, 2019).

Effects of COVID-19

COVID-19 has greatly affected Isiolo county by disrupting economic activities leading to closure of businesses and job loss. Miraa trade was also affected after the county government banned any sell or consumption in the county to avoid the spread of COVID-19. In addition,

the county closed border points with Wajir and Garissa at Modogashe and Malkagalla to curb spread of coronavirus. With the loss of jobs in the Small and Medium Enterprises the livelihood of people working in these sectors were directly or indirectly affected, particularly youths as the sector employs most of the young population. In addition, the reduction in operation hours and restriction on movement in and outside Nairobi negatively impacted on the transport sector with many relying on it rendered jobless. The loss of jobs in the matatu and boda boda industry had directly impacted on the lives of the youth as some residents avoided public means of transport in fear of contracting the virus. The impacts of the pandemic were also felt on the service sectors as it affected workers in both private and public sector with several people working in restaurants and bars being left jobless due closure as ordered by the government.

However, the employment and income opportunities are affected by several challenges in the county. The major challenges pointed out in the county include lack of knowledge and skills, lack of capital among the youth, high taxation and insecurity. The informal sector covers small scale activities that are semi-organized, unregulated and uses low and simple technologies while employing few people per establishment.

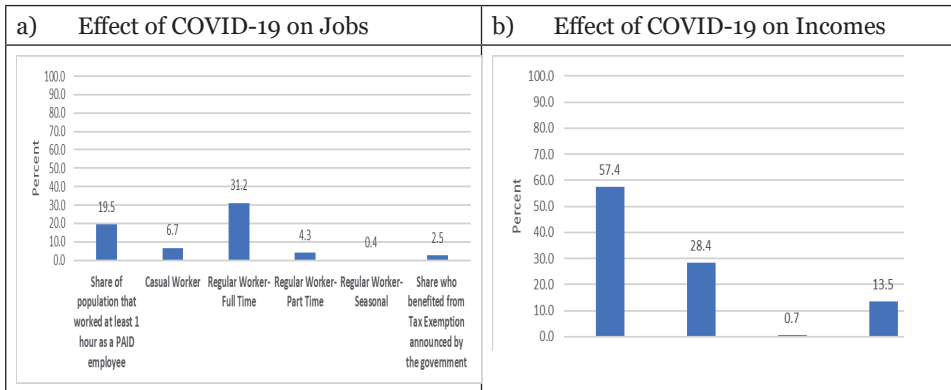
The ease of entry and exit into the informal sector, coupled with the use of low level of technology at all makes it easy avenue for employment creation especially for the youth. About 60 per cent of the county's population is in rural self-employment. 15 per cent is in the urban self-employment and are doing retail trade in various commodity sales such as Miraa trade, most of the rural dwellers are engaged in livestock trade.

The employed group comprise about 14.5 per cent of the county's population. Majority of the wage earners are employed in the public sector and hotel industry. Over 85.5 per cent of the populace is not engaged in formal employment due to high illiteracy levels among the locals and lack of industries. The proportion of skilled labour is also low due to lack of technical and vocational training institutions in the county. Therefore, there is need to sensitize the community on the importance of education, promote youth volunteerism as a tool for improving youth employability and enhancing investment in training the youth to enable them to compete in the labour market.

The unemployment has increased during the period of COVID-19, according to May 2020 KNBS COVID-19 Survey, 19.5 per cent of the county labour force worked at least for 1 hour for pay; 27.7 per cent had never worked, and 52.8 per cent worked in the informal sector. However, 14.9 per cent of employees did not attend to work due to COVID-19 with other 88.5 per cent of employees working without any pay. On average, workers in the County lost 17.3 hours per week due to COVID-19.

During the pandemic, about 6.7 per cent of workers in the county were casual workers 31.2 per cent were regular workers (full time), 4.3 per cent employees were working as part time. However, about 28.4 per cent of workers reported decrease in income while 0.7 per cent of people reported to have experienced increased income. These could be the people working in the health sector who are supplying medical equipment such as masks and PPEs. About 2.5 per cent of workers indicated to have benefited from government tax exemptions which indicates about 97 per cent did not benefit from National government tax relief for low-income-earning persons, a reduction in the top Pay-As-You-Earn (PAYE) rate, and other changes such as cash transfers, credit relief, lower VAT, and a corporate tax cut.

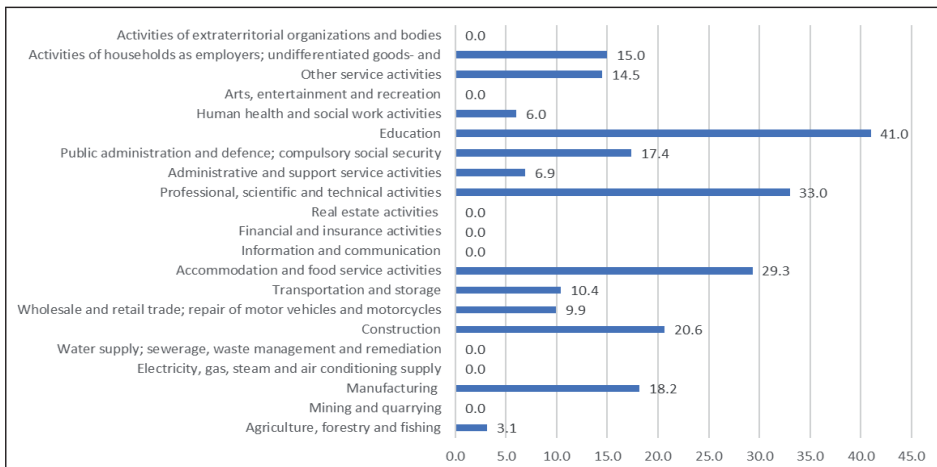
Figure 12.1: Effects of COVID-19, 2020



Source: May 2020 KNBS COVID-19 Survey

According to the May 2020 KNBS COVID-19 Survey, education sector reported the highest level of loss of hours worked (41 hours per week) followed by professional, scientific and technical activities which lost 33 hours per week (Figure 12.2). The high number of hours lost in education is attributed to the fact that the county was offering Madrassa sessions even during the weekends and this time was also lost due to restrictions in holding any gatherings. Workers in accommodation and food service activities and construction lost a total of 29.3 hours and 20.6 hours per week, respectively. Workers in manufacturing and public administration and defence; compulsory social security recorded an average loss of 18.2 hours and 17.4 hours per week, respectively.

Figure 12.2: Difference between usual hours worked and actual hours worked during COVID-19 period



Source: May 2020 COVID-19 Survey

According to the May 2020 KNBS COVID-19 Survey, 28.0 per cent of workers in Isiolo county recorded decreased income; 88.5 per cent recorded working as unpaid workers, while 14.9 per cent never attended to work due to COVID-19 related activities. In private

sector schools, teachers and other workers lost their incomes. Some other businesses such as bars, hotels, market centres had totally closed, leading to reduced business activities. Some workers in the transport sector had also been rendered jobless due to restrictions of moving in and out of Nairobi and Mombasa counties. On average, the county lost 17.3 hours worked in a week and the hours lost in economic base of the county like service sector and agriculture sector (3.1 hours) will negatively affect the county economy.

12.2 Opportunities with COVID-19 in human resource sector

The county government have been provided with the opportunity to use digital platforms to enable remote access to jobs for their employees where the Human Resource Management will have an essential role to play in navigation of the situation caused by the pandemic. There have been notable efforts by the county government to invest more money in training health workers. The county government now has an opportunity to recalibrate its employees and develop strategies (mid- and post-pandemic strategies) to adapt to the evolving reality.

The pandemic has strengthened the regional unity as the counties looked forward in the fight against corona pandemic and exploitation of the economic potential. The disease has also exposed lack of preparedness among counties in terms of responding to the emergencies such as COVID-19 pandemic. It has also provided an opportunity to measure how county governments are prepared to handle the devolved functions. Health being a devolved function, it has really exposed the counties as many of them lack required health facilities such as ICU beds and enough medical personnel. Lack of comprehensive social protection at the county level exposing the county residents to sufferings such as lack of food and treatment.

ICT was very significant and had enabled the county programs to run smoothly since the pandemic and provided an opportunity for exploitation for adequate internet coverage especially to the education sector.

The pandemic has provided opportunity for county government to invest more money in training health workers. The economic block can serve as a market for the locally produced goods, hence creating more employments.

The county government has created opportunities for the youths so that they can get some income especially during this period of COVID-19. For example, county launched the Kazi Mtaani to improve the livelihood of youths in the county. The countrywide programme being implemented jointly by the national and the county governments will benefit many youths in the county.

12.3 Emerging issues

The COVID-19 pandemic has expedited the speed at which different firms and businesses within the county are changing their pay programmes through pay reductions and incentive resets. The county governor and his deputy experienced a 30 per cent pay cut. In addition, the County executives took a 20 per cent pay cut while county chief officers took 15 per cent pay cut.

The county is not well prepared in terms of response to health-related risks such as the current COVID-19. Opportunities within the regional economic block needs to be exploited to enhance economic competitive advantage. There are emerging talents among the youths which can tapped to benefit the county especially this time of COVID -19 such as making of ICU bed, masks and PPEs. There is an increase in unemployment rate.

In collaboration with the other FCDC counties, some youths in the county are being trained on entrepreneurship and life skills. Among the modules covered in the ten-day training include generating, identifying and selecting business ideas, developing a business plan, understanding record keeping, cash flow, savings and marketing concept as well as how to tap into accessing loans specifically targeting youth and women such as Uwezo Fund, youth fund and talanta fund. The trainees also got firsthand experience when they toured business enterprises and universities in Nyeri and Embu Counties to learn the changing economic landscape from being job seekers to job creators and explore their own ways of creating employment and wealth.

12.4 Recommendations

- (i) Develop and expand livestock sector through value addition especially in leather and beef processing in the county which is the main source of employment. Livestock processing will be enhanced to reduce effects perennial drought and create employment for county residents. The county will provide financial support for expansion of Isiolo Livestock markets in the county.
- (ii) Promote implementation of a stronger labour market interventions and policy reforms that drive employment creation. The County shall deepen technical education, training and skills development.
- (iii) Partner with research institutions like Kenya Industrial Research and Development Institute (KIRDI) and the Productivity Centre to improve the quality of MSMEs products.
- (iv) Improve access to finance for small and medium enterprises through lending institutions.
- (v) Encourage more youths to enroll in the TVETs so that they can be engaged in the current LAPPSET project taking place in the county.

13 Conclusion and Key Recommendations

13.1 Conclusion

Fiscal policy, planning and budgeting

The county's total revenue however declined during 2019/20 and 2020/21 to Ksh 5.03 billion and Ksh 4.58 billion respectively, following the adverse effect of COVID-19 pandemic that affected various revenue streams. Analysis of county revenues shows that the main source of revenue for the county has been the equitable share from the National Government, which averaged 88.81 per cent of the county's total revenues from FY 2013/14 to 2020/21.

Agriculture, Livestock and Fisheries

The Agri-food analysis highlights the sector was negatively affected by COVID-19 in terms of labour supply, trade and marketing operations, food supply and the resulting effects on food prices. At the peak of the COVI-19 pandemic period, the County also suffered from desert locusts, floods and livestock diseases. The County's agricultural productivity is also affected by: - variable and extreme weather events Poor and inadequate infrastructure; water scarcity; low agro-processing and value addition opportunities; dependence on rainfed agriculture; low access to quality and affordable inputs; low commercialization levels and marketing opportunities; low access to major off-farm services including extension, climate and market information, and credit services; pests and livestock diseases; and farm losses and post-harvest waste. This adversely affects the productivity of the sector and impairs marketing and consequently places livelihoods and food security at risk especially in times of emergencies. The analysis calls for strategies to enhance productivity, profitability, and resilience of the sector for improved livelihoods.

Water sanitation and hygiene

The county relies more on surface water as well as water from springs, with low access to piped water, to minimize the risks of households missing water and access to safe water for drinking, it is important to put in place measures to ensure protection of water catchment areas for continuity of access to clean and safe water by households. Sanitation, coverage remain low in the county, with majority of households having no toilet facility, with little access to piped sewer. This presents an opportunity for the county to increase sanitation coverage to increase its additional revenue collection from sanitation services

Manufacturing, Trade and MSMEs

Isiolo County's Manufacturing, Trade and MSMEs momentum was disrupted by the COVID-19 pandemic as the containment measures associated with COVID-19 pandemic

took a heavy toll on the sector. In sustaining growth and building resilience in this sector, it is important to strengthen trade and production capacity of MSMEs and especially those involved in manufacturing in the County by exploiting opportunities afforded by the pandemic such as production of masks, PPEs, hospital beds, ventilators, reagents, gloves, and sanitizers.

Infrastructure, housing and urban development

The main means of transport used in the County is walking followed by motorbike. The paved County Road network covers 2.67 km, while the paved National roads cover 29.52 km. Out of the total paved road network of 32.19 km, 91.64 per cent is in good condition, 1.86 per cent in fair condition and 6.49 per cent in poor condition. The status of ICT access and use in the county is low, especially among households. The perception that individuals do not need to use the internet, lack of knowledge and skills on internet are the leading reasons that the people of in the County do not have internet connection. The housing tenure is predominantly owner occupied at 71.9 per cent, with 28.0 per cent of the households under rental tenure. Majority of the households (73.7 per cent) did not receive a waiver or relief on payment of rent from the landlord, despite inability to pay due to the pandemic.

Tourism

Isiolo County is endowed with a variety of tourism attractions which include Nature & Wildlife (Game viewing, bird watching, natural springs at aba, Buffalo Springs, Bisan Adi and 5 community conservancies); Culture, Heritage and Community Based (Cultural events and festivals, traditional music and dance); Adventure (Visits to wildlife areas, scenic viewing, mountain climbing, film shooting sites at ba, Buffalo Springs, Bisanadi. Magado crater, Lorian swamp and Ewaso Ngiro river); Eco-Tourism (Research, game viewing and cultural tours); and sports (Camel sports, local football clubs, annual Safaricom Lewa Marathon at Isiolo Central). The County receives around 20,000 tourists annually of which 61.3 per cent are domestic and 38.7 per cent are foreign.

Health

Under the health sector, there is need for more awareness on immunization so that mothers can ensure their children get immunized. Implement a comprehensive human resource health management system including undertaking training needs assessments and information system to ensure skilled and motivated health care workers, equitable deployed across all sub-counties. This is in addition to paying the salaries in time to avoid cases of strikes and low staff morale. Recruit additional of public health officers and community health workers to strengthen preventive and public health systems. COVID-19 has worsened the situation as far as youths and women are concerned. These are the groups of people that have been facing several challenges even before the outbreak of the COVID-19. FGM and Gender based violence cases have increased with the lock down. Youths who are entrepreneurs have also been affected losing jobs and businesses due to the lockdown. Other problems facing youths includes teenage pregnancies, malnutrition, STI/HIV and Aids, poor environment, drug and substance abuse and malnutrition

Education and training

The County with support from stakeholders would continue to invest in early childhood development through infrastructural development to allow for adequate social distancing; deployment of ECDE teachers and provision of sanitation facilities. The county to provide financial or in-kind support, such as school feeding, to help families overcome the increased costs of attending school and provide psychosocial support to teachers and learners during and after the pandemic.

Social protection

It will be important for the County to build linkages with other Ministries, and with NGOs that work with vulnerable groups to strengthen families, deliver assistive devices, reduce barriers to access and provide vocational training. Undertake research to get a better understanding of the actual situation of disability and chronic illness in the County, and to map existing initiatives on social protection.

Human resource

The county will enhance investments and mechanisms for up skilling and reskilling, deepening technical skills as well as ICT skills; and retraining employees on how to work from home, where applicable. The county government will also protect workers in the informal economy by pursuing innovative policies to reach them quickly through a combination of non-contributory and contributory social security schemes and facilitating their transition to the formal economy in the longer term.

13.2 Key Recommendations

Fiscal policy, planning and budgeting

To ensure continued recovery, the county must now move quickly to tackle the problem of pending bills, mobilize more finances from OSR to increase the available revenues for budgetary operations, seek for more funding in form of grants from development partners to cater for the critical development projects in the county and ensure that the ongoing projects are completed before launching new project and clear any pending bills and arrears owed to suppliers.

Agriculture, Livestock and Fisheries

To successfully build resilience and enhance growth of the agriculture sector, the County will: explore partnerships to develop agro-processing and value addition capacities at the County; expansion of water harvesting projects and sustainable irrigation; scale up conservation agriculture, post-harvest management, plant and keep drought-tolerant crops and livestock breeds; link farmers to diverse product markets; strengthen the County's institutional capacity in disaster surveillance and management; enhance farmers access to critical agricultural inputs and services and build their technical capacity to act on information obtained; provision of storage and cooling facilities; natural resource management; and strengthen agricultural cooperatives to enhance marketing.

Water sanitation and hygiene

To build resilience and mitigate the effect of COVID-19, the county will increase water supply in households, institutions, and public places through drilling of boreholes, dams, and access to piped water in all the sub-counties. Promote the use of safe and improved toilets in schools, health care facilities, workplaces, and public places by connecting households to piped sewer or supporting them to build low-cost sanitation facilities. Promote handwashing as a measure against COVID-19.

Manufacturing, Trade and MSMEs

In sustaining growth in the Manufacturing, Trade and MSMEs sector, the County will: Consider an emergency rescue package for businesses and traders hard-hit by the effects of COVID-19 in the short run. The emergency Fund, supported by development partners and other stakeholders, can be used to identify and support the most vulnerable businesses and entrepreneurs affected by COVID-19. Related, the County will inject some stimulus to cushion the businesses and traders through affordable credit; waiver of some County taxes, cess, and other charges; COVID-19 has increased demand for locally produced goods in the County, and especially Personal Protective Equipment (PPEs), sanitisers, hospital beds and ventilators. The pandemic also presents an opportunity to spur innovation and promote manufacturing and industry development and generation of jobs for the youth while providing a foundation for further value addition in the county; Establishments in the county will adopt to the new pandemic guidelines including rearranging floor plans to allow for social distancing; Establish Technical, Vocational Education and Training (TVET) as outlined in MTP III to support industries in the County; Expand and modernize of aviation facilities in Isiolo (Isiolo Airport) to provide market access to industries. This will be done in collaboration with the national government as it is a national function; Support development of the Northern Eastern Corridor Transport Improvement Project (NETIP) - The project will involve construction of fibre spurs rings and connecting institutions and communities along the Northern Eastern road corridor between Isiolo and Mandera; Roll out Livestock Insurance Programme for ASAL areas in the County in collaboration with the relevant stakeholders as provided for in the third Medium Term Plan; Exploit the huge potential in livestock product-based industries in the County; and the potential in gums and resins as well as Aloe vera; Fastrack completion of the Isiolo Export Abattoir; Promote livestock feed lots, cold chains and cottage industries; Explore synergies and integration into FCDC value chains in manufacturing development while increasing the market for nascent manufacturing industries in Isiolo County.

Infrastructure, housing and urban development

In addressing the challenges, the county will Identify a core rural road network for prioritization to improve the rural access index (RAI) from the current 22.0 per cent with a target to match the national average of 70.0 per cent; initiate support programmes in partnership with the private sector that will enable households acquire ICT assets such as smart phones and laptops and increase mobile phone ownership from 38.2 per cent to 100 per cent in line with the global agenda for Universal Access to Mobile Telephony; avail appropriate building technology for use by the public in house construction and improvement in every sub-county, that responds to local cultural and environmental circumstances.

Tourism

The strategies to support tourism sector recovery include mapping all the sites with tourism potential in the county and coming up with a tourism product diversification strategy; venture into other products away from Wildlife and nature-based that can appeal to the domestic tourist, e.g. cultural festivals, education tourism, community conservancies, medical tourism, setting up a cultural documentation centre and tourism information centre and ensuring high sanitation standards in the hotel facilities to deter spread of COVID-19 in line with the national guidelines for reopening of the hospitality sector.

Health

For a resilient health sector, there is need for more awareness on immunization so that mothers can ensure their children get immunized. Implement a comprehensive human resource health management system including undertaking training needs assessments and information system to ensure skilled and motivated health care workers, equitable deployed across all sub-counties. This is in addition to paying the salaries in time to avoid cases of strikes and low staff morale. Recruit additional of public health officers and community health workers to strengthen preventive and public health systems.

Education and training

The County with support from stakeholders will need to continue to invest in early childhood development through infrastructural development to allow for adequate social distancing when schools reopen; deployment of ECDE teachers and provision of sanitation facilities. The county would put up measures that encourage learners to complete all levels of education.

Social Protection

COVID-19 pandemic created immediate and long-term economic consequences for vulnerable groups including children, PWDs, elderly and their families. To strengthen social protection response in face of a similar pandemic, the county government will need to provide basic income security, especially for persons whose jobs or livelihoods have been disrupted by the pandemic. Build linkages with other Ministries, and with NGOs that work with people with disabilities to strengthen families, deliver assistive devices, reduce barriers to access and provide vocational training.

Human resources

The COVID-19 pandemic has expedited the speed at which different firms and businesses within the county are changing their pay programmes through pay reductions and incentive resets. It will be important for the County to promote implementation of a stronger labour market interventions especially those working tea sector which is a major employer in Isiolo county and policy reforms that drive employment creation. The County shall deepen technical education, training and skills development.

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