

# Socio-Economic Status of Baringo 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

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**Kenya Institute for Public Policy  
Research and Analysis**

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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**

The county total revenue has significantly grown over the years as the Government focus on enhanced services and amenities for the citizens. Total revenue has significantly increased from Ksh 3.97 billion in 2013/14 to Ksh 8.69 billion in 2018/19 before a slight decline to Ksh 7.03 billion in 2019/20, an average annual growth rate of 12.8 per cent. Analysis of the sources of the county revenues shows that equitable shares contributed the largest share of the total revenues, averaging 60 per cent over the same period. This accentuates the commitment of the National Government to support county operations. Actual expenditure in the county doubled, rising from Ksh 2,810.7 million in 2013/14 to Ksh 6,324.2 million in 2019/20 before slowing to Ksh 4,596.0 million in 2019/20, an average growth rate of 9.1 per cent. To support effectiveness of spending at the County, the following should be considered: ensuring that the on-going projects are completed before launching new projects and clearing any pending bills and arrears owed to suppliers; improve budget execution and absorption of development budget by harmonizing project implementation cycles to budgeting and fast-track exchequer releases; reduce expenditure on compensation of employees within the PFM requirement and monitoring and prompt payment of pending bills as they limit execution of planned activities in subsequent budgets.

### **Agriculture, Livestock and Fisheries**

Livestock and crop farming account for a significant share of the economic activity in the County. Key agricultural value chain commodities in the County include: - cattle, sheep, goats, and camels, bee keeping (apiculture) poultry production, maize, beans, millet, kales, bananas, potatoes, onions, sweet potatoes, avocado, tomatoes and mangoes. 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; land fragmentation; invasive species on crop and pasturelands; low adaptive capacity of farmers to climate change; low agro-processing and value addition opportunities; low access to quality and affordable inputs; low marketing opportunities; low access to major off-farm services including extension, climate and market information, and credit services; and pests and livestock diseases; and farm losses and post-harvest waste. To successfully build resilience and enhance growth of the agriculture sector, the County needs to: explore partnerships to develop agro-processing and value addition capacities at the County; promote drought tolerant production; link farmers to diverse product markets; strengthen the County's institutional capacity in disaster surveillance and management; strengthen water harvesting, sustainable and efficient irrigation; enhance farmers access to critical

agricultural inputs and services and build their technical capacity to act on information obtained; improved standards of County roads; provision of storage and cooling facilities; and strengthen agricultural cooperatives.

### **Water Sanitation and Hygiene (WASH)**

Clean water, proper sanitation and good hygiene remain 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 government is facing challenges in revenue collections due to the COVID-19 pandemic, which resulted in reduced incomes among households and businesses, thus deferred collection of revenue from the water services it provided 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 and partner with private sector, donor agencies, local communities, and NGOs to help develop water infrastructure.

### **Manufacturing, Trade and MSMEs**

The momentum in manufacturing, trade and MSMEs 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 needs to: Exploit the opportunity presented by the pandemic especially in production of essential goods such as masks, Personal Protective Equipment (PPEs), and sanitizers, disinfectants, canned foods, immunity boosting products, hospital beds and ventilators; Consider an emergency rescue package for businesses and traders hard-hit by the effects of COVID-19. 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 should inject some stimulus to cushion the businesses and traders through affordable credit; waiver of some County taxes, cess, and other charges; Adopt the new pandemic guidelines including rearranging floor plans to allow for social distancing in manufacturing establishments; Operationalize Cummins Power Co-generation Company for renewable energy and Leverage on Public Private Partnerships to invest other sources of renewable energy; and Collaborate with the National government to ensure security is enhanced to reduce on crime and create a peaceful business environment.

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## **Infrastructure, Housing and Urban Development**

The main means of transport used in the county is public service vehicles (PSV) matatus followed by walking. Households reported a change in the cost of travel/commute due to the pandemic. Baringo has a Rural Access Index that is below the National Average, indicating that access to transport in rural areas in Baringo is low. The status of ICT access and use in the county is low, especially among households. Majority of internet users in Baringo County rely on mobile phones, with a marginal population relying on mobile broadband that uses a sim card. The housing tenure in Baringo is predominantly owner occupied. The county has challenges in quality of the housing stock where close to half of the houses are constructed using rudimentary materials. In responding to the challenges faced in infrastructure, housing and urban development, the county to focus on increasing the share of unpaved roads in good and fair condition to above 62 per cent, which is the national average; support programmes that will increase mobile phone ownership; integrate the “build back better” principles into the pandemic recovery process to fit in resilience-building in County Spatial Planning.

## **Tourism**

Tourism is one of the key economic sectors of Baringo County. There are numerous physical attractions including Lake Baringo and its 13 Islands, Lake Bogoria, Tugen Hills, Laikipia escarpment, Eldama Ravine sceneries, Korossi dormant volcano, Kapedo hot springs, and Kursalal falls located within Lembus forest. The county is also endowed with diverse wildlife, tortoises, large aquatic and terrestrial game, flamingos, and ostriches. Other tourist attractions include beekeeping, a reptile park, and birdwatching. The county is a melting pot of diverse cultures and Kenyan communities which reinforces its competitiveness as a tourist destination. However, cultural tourism is under-developed and under-exploited along with other under-developed tourist sites and products with great potential. Hence revenue collected is below potential. There is an opportunity to develop various underutilized tourism products with potential to attract both foreign and domestic tourists centered around the scenic lakes and landscape, wildlife, water sports, cultural tourism, excursions, M.I.C.E tourism (and modern accommodation facilities), private/community conservancies as well as agro-eco-tourism tourism. The recovery strategies include developing a county tourism masterplan diversify into conference tourism, water sports, excursions, hiking, guided tours, scenic drives, and cultural tours, villages and cultural festivals and renovating infrastructure around the tourism attraction sites along with improving sanitation conditions.

## **Health**

The county has a total of 247 health facilities and 58 level one hospitals, 176 level two hospitals, 31 level 3 hospitals, 7 level four hospitals and 1 level 5 hospital. In addition, the county has 1,450 staff in the health services department across its healthcare system. In 2019/2020, the number of health facilities in the county were 279 which comprised of 270 primary health facilities and 9 hospitals. This was an improvement from a total of 169 health facilities in the previous year, 2018. Under-nutrition is prevalent in some sections



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## 1.2 Structure of Baringo County Economy

Baringo County Gross County Product (GCP) accounted for 0.8 per cent of total Gross Domestic Product (GDP) between 2013 and 2020. The GCP increased from Ksh 35,852 million in 2013 to Ksh 76,636 million in 2020 representing an average annual growth rate of 16.3 per cent. The agriculture sector contributes 58.0 per cent of GCP while services and other industries share constituted 39.0 per cent and 3.0 per cent, respectively. The services sector in the county comprises such activities as wholesale and retail trade. Agriculture is mainly dominated by crop farming, fishing activities and Livestock production which consists of pastoralism and dairy farming while manufacturing is mainly dominated by bee keeping and milk processing activities.

**Figure 1.1: Structure of the county economy, 2020**

a) County Gross Product (2013-2020)	b) Sector Contribution as share of GCP (2017)

Data Source: KNBS (2019)

## 1.3 COVID-19 Caseload and Implications of Mobility Restrictions

As of March 2020, Baringo County had zero cases. The County still had zero cases by August 2020 as the mobility stringency stood at 70.4. By August 2021, however, the County had 732 cases 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 with an index measure closer to 100 meaning high incidence or severity of mobility restrictions. The County mobility stringency index of 56 per cent implies the severity of the restrictions was moderate.

**Table 1.4: Total COVID-19 cases in Baringo County and country's mobility stringency**

Date	Total cases	Mobility stringency (0-100)
13 <sup>th</sup> March 2020	0	36.1
23 <sup>rd</sup> August 2020	0	70.4
23 <sup>rd</sup> August 2021	732	56.0

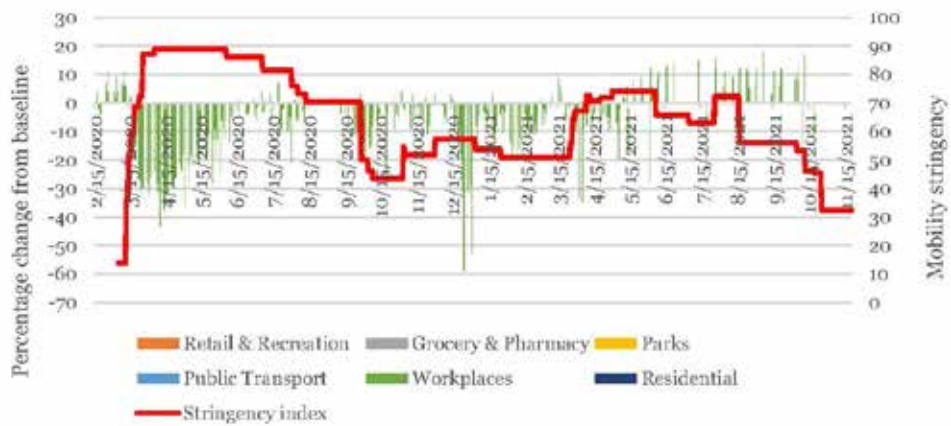
Source: Oxford University

New COVID-19 cases in Baringo 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 in Baringo County and country's mobility stringency**

Data Source: Oxford University

**Figure 1.3: Effects of COVID-19 on economic performance in Baringo County and the country’s mobility stringency**



Data 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

Financial resources are 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 National Government

The County total revenue has increased over the years as the government focuses on improving the living standards of the citizens. Total revenue has significantly increased from Ksh 3.97 billion in 2013/14 to Ksh 8.69 billion in 2018/19 before a slight decline to 7.03 billion in 2019/20, an average annual growth rate of 12.8 per cent . During 2020/21, the County raised Ksh 7.58 billion to finance its operations. The amount was 95.8 per cent of the annual budget allocation, an improvement from 83.9 per cent realized in 2019/20.

The main source of revenue for the county operations was equitable share, which accounted for more than 60 per cent of the total revenues (Figure 2.1). Equitable share to the county had similarly increased by 56.8 per cent from Ksh 3.25 billion in 2013/14 to Ksh 5.10 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, indicating its commitment to support county operations through timely financing. Despite the nominal increase, analysis of the shares of county revenues indicates that the contribution of equitable revenue has been decreasing over the years as the share of conditional grants increase (Figure 2.1). This indicates a potential for the county to raise more finances from conditional grants.

#### 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 maintained an increasing trend





of revenue system, strong internal control systems as well as establishment of good business environment for trade. In 2019/20, the county had raised Ksh 301.7 million, which is 76.7 per cent of the annual target. The collection was 16 per cent lower than Ksh 359.3 million collected in 2018/19, which may be attributed to the effects of COVID-19 pandemic experienced. During 2020/21, the County generated Ksh 205.20 million as OSR, representing a 32 per cent decrease from the amount realized in 2019/20. The low performance, similarly, may have resulted from economic disruptions occasioned by the effects of the COVID-19 pandemic, that affected economic activities across the country. Easing of containment measures and recovery of economic activities is expected to boost the growth OSR, going forward.

**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 the County collects higher revenues during the first quarter and the least amount in the second quarter of every year (Figure 2.3). During 2019/20, similar trend was observed for the first and second quarter. However, the county experienced decline in third and fourth quarter collections in comparison to the last four financial years. The low performance of quarterly OSR collections continued during 2020/21. This may be attributed to effects of the measures implemented to contain COVID-19 pandemic. Specifically, the first cases in the country were reported in March, which informed the various measures put in place by the National and County governments. Important to note is that March is a critical month for the counties as they collect the single business permits fees. Therefore, as business activities slowed down due to restriction of movements, institution of curfew hours, social distancing and banning of social gatherings, most businesses were not able to remit the required fees. Further, the county eased the enforcement measures used in collection to cushion traders.

**Figure 2.3: Quarterly own source revenue collection**

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

In the last quarter of 2019/20, the OSR reduced further. This was because the county relies heavily on tourism fees and CESS. As at the beginning of the fourth quarter, the tourism activities were suspended and hence the county lost around Ksh 100 million from the tourism activities, which was almost the total revenue collected quarterly. Similarly, the county waived market fees and CESS to cushion the small traders during the pandemic. This further deepened the OSR loss. As the Country move towards economic recovery, the OSR performance is expected to improve as well.

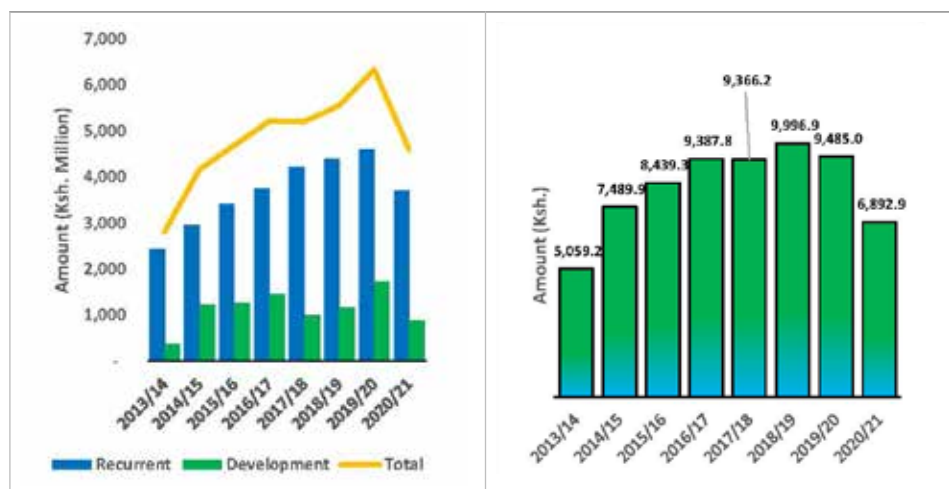
In terms of revenue streams, the five major streams for the county include game park fees, hospital revenues, CESS (produce and other cess), market fees and single business permit (table 2). Suspended tourism activities, closure of open markets (livestock auctioning), waiver of CESS and market fees as well as lenience in collecting single business permit fees will reduce the local revenues significantly. The county therefore needs to consider adopting necessary measures to facilitate recovery of the affected sectors of the economy. This is envisaged to reduce further revenue losses.

**Table 2.2: County local revenue streams in Ksh**

Source	2013/14	2014/15	2015/16	2016/17	Total
Game Park Fees	69,456,838	54,429,063	44,298,390	62,320,050	230,504,341
Hospital revenues	29,303,991	55,737,110	69,475,982	75,304,695	229,821,778
Single Business Permit	31,737,095	35,722,947	38,098,248	32,366,030	137,924,320
Produce & other CESS	18,374,372	32,385,244	48,506,214	36,985,511	136,251,341
Market Fees & Others	29,184,504	30,303,827	37,215,442	35,942,724	132,646,497
Plot Rent/ Rates	15,127,880	17,317,051	16,744,873	12,916,819	62,106,623
Animal Stock Sales Fees	7,497,705	9,928,000	15,258,665	11,812,060	44,496,430



**Figure 2.4: Trends in actual aggregate expenditure and per capita expenditure**



Data Source: Office of the Controller of Budget

Consistent with nominal growth in actual county expenditures, spending on a per capita basis has shown an increasing trend. In 2013/14, per capita spending in Baringo County was around Ksh 5,059.2 compared to Ksh 9,485.0 in 2019/20. Due to the impact of the pandemic, it is evident that per capita spending reduced to Ksh 6,892.9.

### Utilization of public resources in Baringo County

Analysis of expenditures by economic classification and by departments (spending priorities) reveals interesting insights. It is evident that since inception of devolution, Baringo County government prioritized narrowing the economic and social infrastructure gaps. Much of government development expenditures have been dominant in provision of health services, public works, transport and infrastructure, agriculture, education and ECDE projects as well as water and sanitation services.

Figure 2.5 show that the share of development expenditure to total county expenditure averaged 23.0 per cent between 2013/14 and 2020/21. Development expenditure constituted 13.0 per cent of the budget in 2013/14 and increased to 29.2 per cent in 2014/15 and a decline to 27.2 per cent in 2015/16. In 2016/17, development expenditure accounted for 28.1 per cent. By the end of 2019/20 development expenditure accounted for 27.4 per cent of the county budget, the highest performance attained since 2016/17. At the end of 2020/21 development spending accounted for only 19.3 per cent of total county expenditure again emphasizing the low capital spending in the county.

County compensation of employees has been burgeoning between 2013/14 and 2020/21. The average share of compensation of employees in total county budget over the review period was 51.1 per cent (half of its expenditure). This kind of spending on wages and personnel emoluments implies limited resources are left for capital expenditures crucial for strengthening county growth prospects and cushioning against disasters such floods, locusts, and pandemics.

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



*Data Source: Office of the Controller of Budget*

Reflecting on expenditures by functional classification (priority spending), the county spent a combined average of 75.1 per cent of the total expenditure during the period 2014/15 to 2020/21 on health services; education; transport and infrastructure; water and irrigation; and agriculture, livestock, fisheries, and marketing. Spending on health services accounted for the largest share of the budget at 37.8 per cent (slightly above a third of the budget) for the last seven fiscal years. Education, ICT, Sports, Culture & Art accounted 7.8 per cent, Transport and infrastructure accounted for 7.7 per cent of the budget followed by Agriculture, Livestock, Fisheries & Marketing at 7.4 per cent. Further during the review period co-ordination and administrative functions accounted for a combined 24.9 per cent with County assembly leading at 11.4 per cent, followed by Governor and County Executive services at 7.5 per cent, while county treasury services accounting for 6.0 per cent.

**Table 2.3: County priority spending, 2014/15-2020/21**

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Average	Average share of spending (per cent)
Health Services	1,236.5	1,780.6	1,960.5	2,123.9	2,132.6	2,288.6	1,981.1	1,929.1	37.8
County Assembly	430.3	446.5	549.3	613.8	633.4	704.7	706.9	583.6	11.4
Education, ICT, Sports, Culture & Art	435.2	398.4	437.2	416.3	483.3	346.9	274.8	398.9	7.8
Transport and Infrastructure	362.9	329.0	437.4	387.8	410.0	627.0	200.2	393.5	7.7
Governor/ County Executive services	324.9	302.8	359.4	394.4	499.2	522.2	286.0	384.1	7.5
Agriculture, Livestock, Fisheries & Marketing	323.5	312.0	311.7	362.5	334.5	530.4	452.9	375.4	7.4
Water & Irrigation	299.5	338.2	406.2	266.4	346.0	501.9	239.9	342.6	6.7



**Figure 2.6: Approved versus actual county spending and absorption rates for recurrent and development expenditures**

<b>Figure 2.6(a): Approved versus actual county spending (Ksh million)</b>	<b>Figure 2.6 (b): Absorption rates for recurrent and development expenditures (%)</b>

Data Source: Office of the Controller of Budget

### Pending Bills

Pending bills in Baringo County has generally remained on a downward trend between 2014/15 and 2017/18. Pending bills declined from Ksh 173.4 million in 2014/15, to Ksh 63.6 million in 2017/18, and thereafter increased to Ksh 112.6 million in FY 2018/19 before nose diving to Ksh 78.7 million by the end of 2019/20, At the end of 2020/21 pending bill increased to 195.3 million (Figure 10). The average development and recurrent expenditure related pending bills was Ksh 60.2 million and Ksh 60.7 million respectively during the 2014/15 to 2020/21 period. If pending bills for development spending 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 2014/15 to 2020/21**



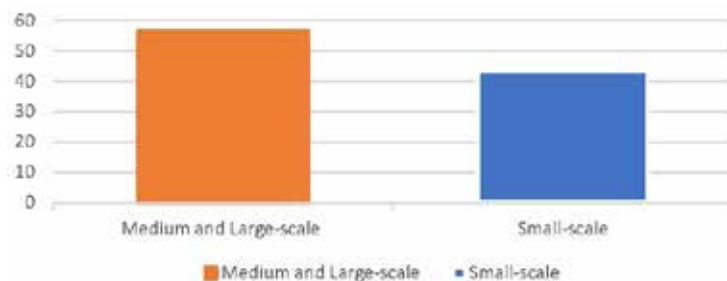
Data Source: Office of the Controller of Budget







**Figure 3.1: Scale of operation: per cent of households**



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

An overall analysis of the County agricultural production indicates among the top food crops produced by households in Baringo include maize, beans, millet, kales, bananas, potatoes, onions and sweet potatoes.

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

County/Sub County	Baringo	Baringo Central	Baringo North	East Pokot	Koibatek	Marigat	Mogotio	Tiety East
Maize	80,000	13,463	15,300	3,931	19,234	11,044	11,524	5,504
Beans	49,579	10,087	10,260	1,330	12,917	5,507	7,043	2,435
Millet	27,128	5,873	10,639	1,114	3,616	2,522	3,195	169
Kales	23,812	4,799	4,096	381	9,339	2,355	2,118	724
Bananas	18,052	6,131	5,250	101	3,617	1,310	1,552	91
Sorghum	13,594	2,739	3,927	1,798	1,545	1,391	1,918	276
Potatoes	12,438	877	1,052	95	9,351	574	199	290
Onions	11,101	1,401	1,432	73	6,054	1,035	784	322
Sweet Potatoes	7,571	2,185	1,974	69	1,567	614	971	191
Cassava	5,655	1,815	1,940	77	803	434	537	49
Cabbages	5,585	441	433	84	4,069	188	209	161
Tomatoes	5,204	1,036	999	185	1,192	935	503	354
Ground Nuts	4,242	1,609	808	53	264	299	1,185	24
Green Grams	3,802	376	1,161	363	416	773	397	316
Sugarcane	3,070	940	705	80	707	428	186	24
Watermelons	1,742	120	190	140	104	948	109	131
Wheat	1,310	316	177	126	275	151	210	55

Source: 2019 Kenya Population and Housing Census

Key permanent crops among households in Baringo include Avocado and Mangoes.







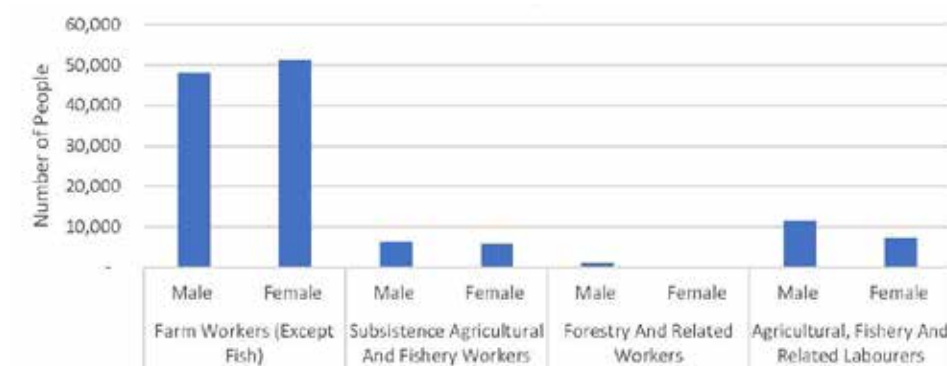
The above characterization of farming households highlights the priority value chain opportunities in cattle, sheep, goats, and camels, bee keeping (apiculture) poultry production, maize, beans, millet, kales, bananas, potatoes, onions, sweet potatoes, avocado, and mangoes. With majority of the households farming the identified products, the current Baringo 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

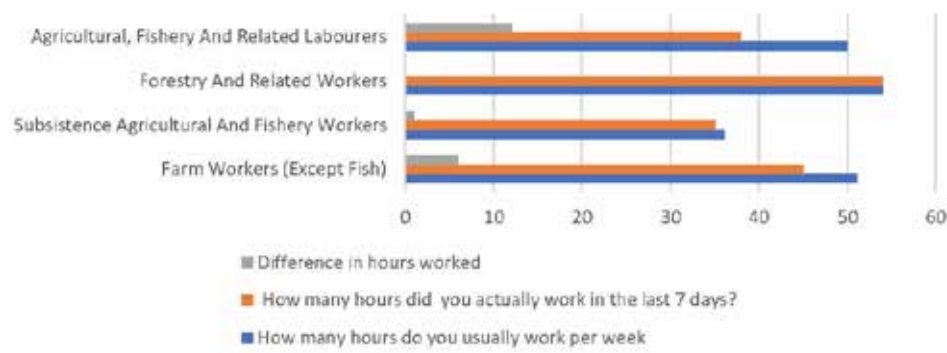
Agricultural labor participation in Baringo indicates relative parity between females and males with no strong dominance of either gender in the labor force. Majority of the population in Baringo are farm workers where the group covers occupations related to: Field Crop, Vegetable and Horticultural Farm 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 in agriculture related occupations indicates workers in all the identified sub-sectors worked fewer hours in May 2020 (the reference period) as compared with the usual hours worked per week. The most affected workers were the agricultural, fishery and related labourers who recorded the highest difference of 12 hours between the usual and actual hours worked in a week. The workers in this sub-major group include: farm-hands and related labourers; forestry labourers; and fishery, hunting and trapping labourers

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

Source: Estimates from the KNBS Survey on Socio Economic Impact of COVID-19 on Households-Wave 2 (2020)

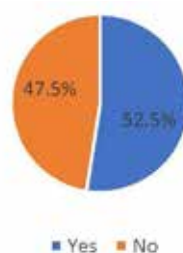
The identification of COVID-19 effects on labour force participation, especially among causal workers who fall under the agricultural, fishery and related labourers sub-group is likely to have negative effects on output yields thereby increasing yield gaps.

### ii) Market operations

Successful transformation of smallholder agricultural production in Baringo 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 to 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. Baringo's rural access index (RAI)- which measures "the number of rural people who live within two kilometres (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 46 per cent. This is low compared to the national average of 69.38 per cent.

As a result of COVID-19, there was a further slow down on trade activities due to the restrictions on movements. From the KNBS conducted between 30th May and 6th June 2020, 47.5 per cent of the households in Baringo 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.

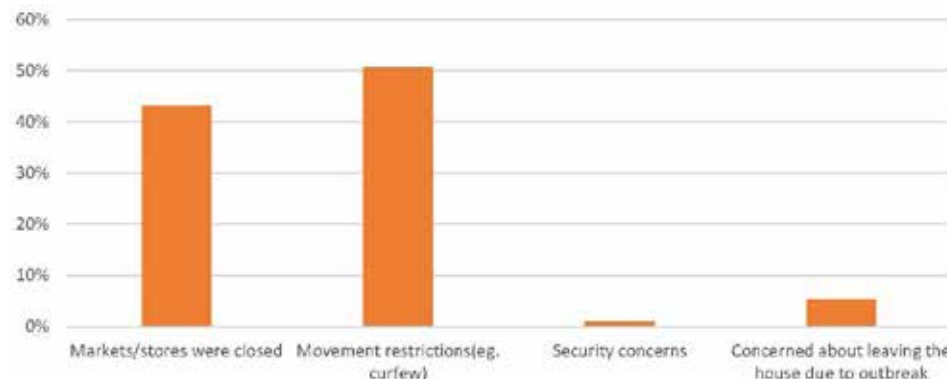
**Figure 3.4: Limited access to markets to purchase food items**

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 (50.6%) and closure of the markets/grocery stores (43.2%).

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

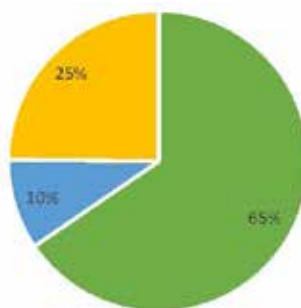


Source: KNBS Survey on Socio-Economic Impact of COVID-19 on Households-Wave 2

Livestock trade was especially majorly affected as traders are unable to take the livestock to the market.

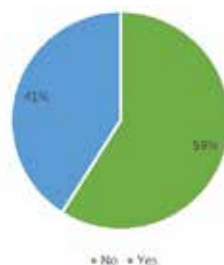
Restrictions affecting seamless movement of food commodities are likely to cause a hike in prices in non-production areas and fall in prices in production areas. 65 per cent of households in Baringo County indicated that over the past 2 weeks from the reference period, while 25 per cent indicated that they had not experienced a change in the prices.

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



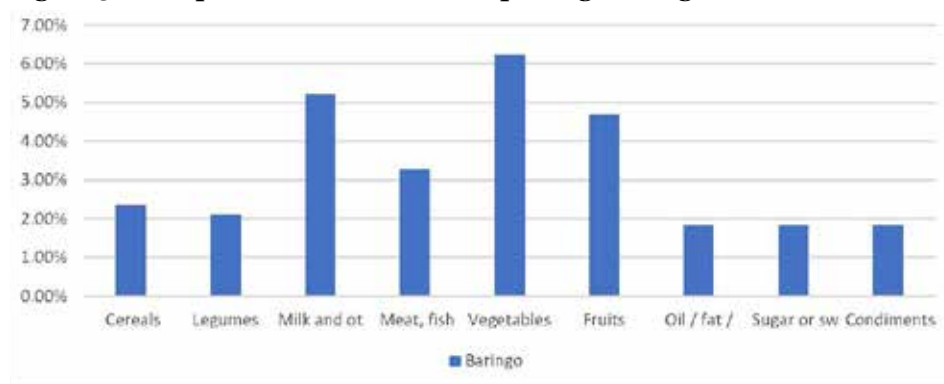
Source: KNBS Survey on Socio-Economic Impact of COVID-19 on Households-Wave 2

On the magnitude of the price shocks, 59 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 table.

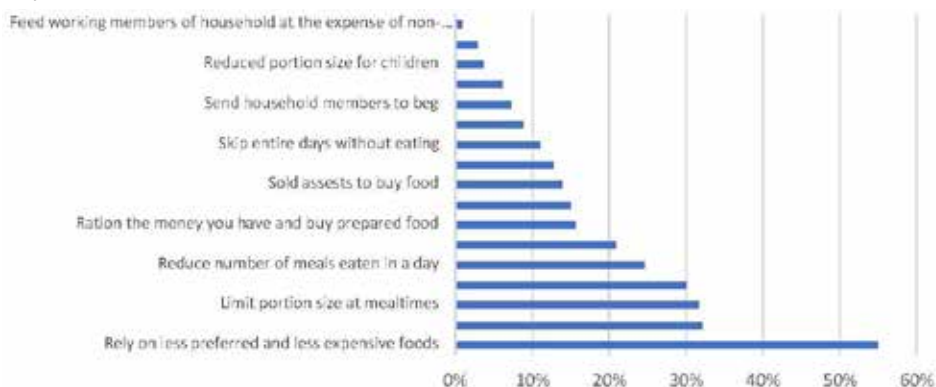
**Figure 3.8: Proportion of households reporting shortage of food items**

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

While access to all food groups were affected, a key concern is that the food groups affected most are the nutritious food categories-vegetables, milk 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 (54.9%), decreased buying some non-food products (32.1%), limit portion size at mealtimes (31.6%) and purchase food on credit or incurred debt (29.9%).

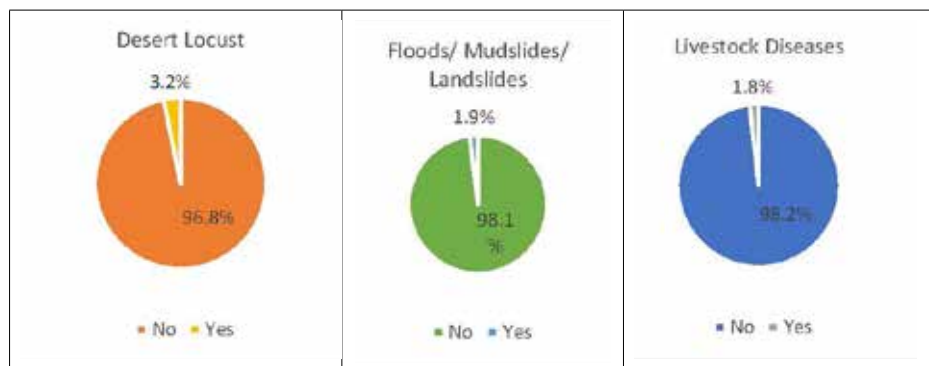
**Figure 3.9: Proportion of households that employed strategies for at least one day**



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

Additional challenges faced by the County, albeit at low levels, during the COVID 19 pandemic period include: Desert locusts (3.2%); Floods/ Mudslides/ Landslides (1.9%); and Livestock Diseases (1.8%).

**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

### Agri-food constraints faced in the county

Among the key constraints the County faces include:

- (i) Variable and extreme weather events which have increased in frequency and intensity over the years adversely affecting crop and livestock production
- (ii) Water scarcity affecting crop and livestock productivity
- (iii) Dependence of rain fed agriculture despite frequency in extreme climate conditions, such as drought episodes and delayed and erratic rains



- (ii) Access to quality, certified, and affordable inputs including certified seedlings, AI services, fertilizers, livestock vaccination, ploughing services by County tractor hire services.
- (iii) Investment in cooling and storage facilities to reduce post-harvest losses
- (iv) Adoption of drought resistant livestock pastures/fodder and crops
- (v) Adoption of early maturing, drought resistant and improved crop varieties
- (vi) Rearing livestock breeds adapted to drought
- (vii) Livestock Production for Niche Markets
- (viii) Strengthening water harvesting, sustainable and efficient irrigation.
- (ix) Increased livestock production through: - routine vaccination, deworming and vector control to maintain animal health; decentralized veterinary services; disease surveillance; storing and conserving pastures and fodder; capacity building on animal management and training on preservation and value addition techniques.
- (x) Adoption of natural resource management to include soil and water conservation, tree planting, and changing of crop type.
- (xi) Enhance supportive services to include early-warning systems, insurance and credit, extension advisory and information services through extension and training.
- (xii) Enhancing farmers technical capacities to act on advisory information received
- (xiii) Improved crop and livestock emergencies surveillance systems in the County.
- (xiv) Strengthening farmers' associations and cooperatives as an additional solution to marketing challenges

### **3.3 Emerging Issues**

- (a) Climate change- defined by the United Nations Framework Convention on Climate Change (UNFCCC) as 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods'- is changing at unprecedented rate and poses a great risk to the ASAL County with high aridity levels.
- (b) Environmental degradation as a result of both human and non-human-related activities such as extreme climate conditions. Environmental degradation has reduced resources available for households, livestock and wildlife and likely to lead to increased inter-community conflicts within the County.

### **3.4 Recommendations**

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

- (a) Develop partnership with the National Government, NGOs, Development Partners, Research Institutions, and the Private sector in enhancing agro-processing and value addition capacities of the County especially in horticulture (Watermelon, onions and vegetables), milk meat and leather processing.

- (b) 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. Baringo's rural access index (RAI) fairs poorly at 46 per cent. This is low compared to the national average of 69.4 per cent. Other crucial market infrastructure includes lighting and water services to facilitate trade activities.
- (c) Investment in storage and cooling facilities particularly at collection points to minimize spoilage and post-harvest losses.
- (d) Digitize the agri-food sector to support: - 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.
- (e) Enhance farmers' 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. Access to affordable inputs would reduce cost of production in the County thereby improving the competitiveness of the County's outputs relative to cheap imports.
- (f) Establish programmes for surveillance of disasters such as extreme weather conditions at the County level equipped with relevant technical specialists and finances to effectively prevent, prepare, respond and prevent risks. There is also need for the County to mitigate disasters, such as those related to floods, through institutional capacity development, vulnerability analyses and updates, monitoring and early warning systems, and public education.
- (g) Expansion of sustainable irrigation in the County through partnership with development partners. To support expansion of sustainable irrigation, there is need to promote development of Irrigation Infrastructure and technologies in the County. The key irrigation scheme in the County is the Perkerra Irrigation Scheme covering 3,000 acres.
- (h) Establish County multi-sectoral committees to deal with cross-cutting issues such as marketing of agricultural produce that cuts across the trade, ICT and infrastructure sectors that provide crucial market infrastructure such as road infrastructure, lighting, and water services.
- (i) Build the capacity of farmers in adoption of modern farming technologies (modern production, harvesting, processing and post-harvest aggregation and storage methods), standards and practices and adopt sustainable land management practices to minimize environmental degradation. This can be done by establishing model farms & farmer training centres.
- (j) Strengthen agricultural cooperatives through effective stakeholder engagement and implementation of interventions for more sustainable models of financing and customized training of cooperative members.

## 4. Water, Sanitation, and Hygiene

### 4.1 Characteristics of the sector

Clean safe water, proper sanitation and good hygiene remain an essential component in protecting human health in times of outbreak of infectious diseases. Frequent and correct hand hygiene has been emphasized by WHO as one of the measures to curb transmission of COVID-19. This has placed a higher demand for water in households, schools, health care facilities, marketplaces, workplaces and other public places where water is utilized for handwashing and for general hygiene practices.

Water remains one of the top challenges faced by residents of Baringo County, this is due to the ASAL nature of Baringo which receives an annual rainfall of between 1000 to 1500mm per annum and with temperatures ranging from as low as 10°C and as high as 35°C. The county's major sources of water are Lake Baringo (fresh water lake) lake Bogoria (salt water lake) and Lake Kamnarock, as well as from rivers Kerio, Waseges, Emsos, Lobo, Perkerra and Molo. Other seasonal rivers are Amaya, Nginyang', Mukutani, Arabal and Edao. Water shortage is prevalent during the dry seasons around Lake Baringo and Lake Bogoria, parts of Kerio Valley, Mogotio, western slopes of Ng'elecha (Mochongoi) and the entire Tiaty (Kolloa to Tangelbei).

Despite this water coverage remains low in the county with only 17.5 per cent households accessing piped water and with no sewerage plant in all major urban centers and trading towns. Low water coverage has had a major effect on farming and livestock activities undertaken in the area by residents, which heavily relies on water. The County intends to prioritize water provision for human, livestock and irrigation use for the development of the county as per its 2018-2022 CIDP. To achieve this the county government needs to initiate programs with development partners to improve access to water making it accessible within an average time of 30 minutes. This will include construction of water pans and dams and drilling of boreholes to increase access to clean water.

### Measure to mitigate the effect of COVID-19 under water and sanitation

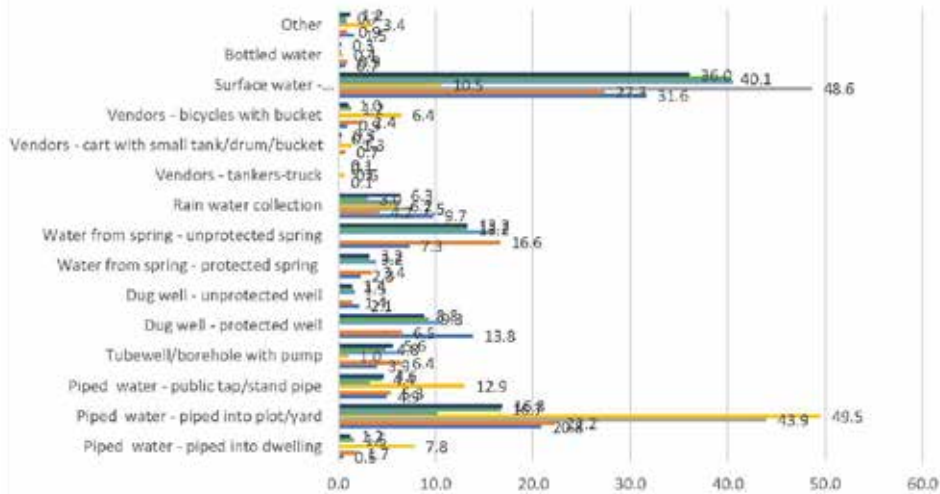
A budget of Ksh 200 million has been set aside by the Baringo County to fight the pandemic where Ksh 70 million is directed towards food items and water. Other planned measures include provision of water tanks and hand-washing facilities to schools once the schools reopen to ensure compliance with COVID-19 safety requirements. Infrastructure has been boosted to support water and sanitation efforts.

### Access to water sources by households in the county

According to KHIBS 2016, the major source of water utilized by households in Baringo is surface water (36.03%), piped water into plot /yard (16.84%) and water from springs

(unprotected) (13.23%). Similarly, most rural (40.1%) and peri urban (48.6%) households relies on surface water while most of the urban households (49.5%) have access to piped water into plot/yard. Similarly, majority of households rely on surface water for their domestic uses at 40.14 per cent, piped water into plot/yard (16.65%), and water from unprotected springs at 13.23 per cent. (See the figure below)

**Figure 4.1: Access to source of water by households (%)**



Source: KNBS 2015/2016

Combating COVID-19 pandemic has already placed high demand for water for domestic usage, public health, learning institutions, public places, agriculture, and industrial usage, among others. With the re-opening of schools, this will continue to add pressure to the existing water resource. Baringo being ASAL county, major sources of water, which is surface water (lakes, rivers, springs, dams and wells are likely to dry up during drought seasons (November to March) used for drinking as well as other domestic uses. This therefore means that water supply will go down thus leading to high transmission of COVID-19 in the absence of hand-washing.

**Access to improved and unimproved sources of drinking water by households**

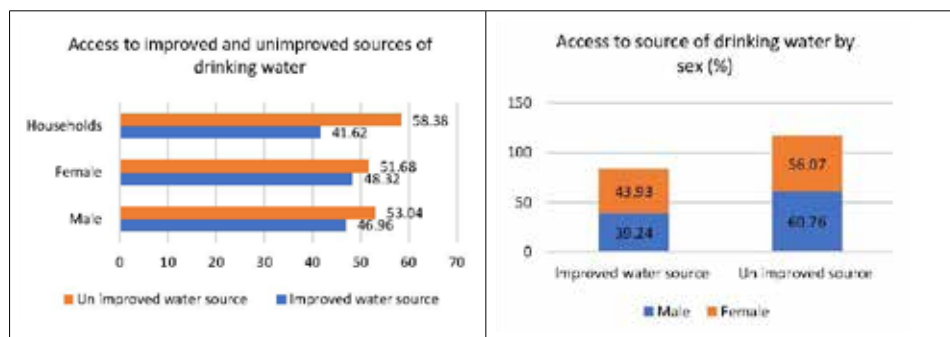
According to KNBS Access to improved drinking water is still poor among both households with only 41.62 per cent (322, 127) total weighted sample of the households having access to improved source of drinking water ( these includes water from the following sources Piped water - piped into dwelling, Piped 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) while 58.38 per cent (451,887) of the households accesses unimproved sources of water (these 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 water2).

<sup>2</sup> WHO and UN classification of sources of water



Female headed households have a higher chance of access to improved drinking water at 48.32 per cent (57,021) than male headed households at 46.96 (113,872). Similarly, female headed households have a lower chance to access unimproved drinking water sources at 51.68 per cent (60,998) in comparison to male headed households at 53.04 per cent (128,620). Additionally, women have a higher access to improved drinking water at 43 per cent (343,360) compared to men at 39.24 per cent (296,777) of the weighted household sample. These higher inequalities in access to improved drinking water may put male headed households at risk of contracting infectious diseases as well as make the households less likely as well as observance of COVID-19 measures of hand hygiene.

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

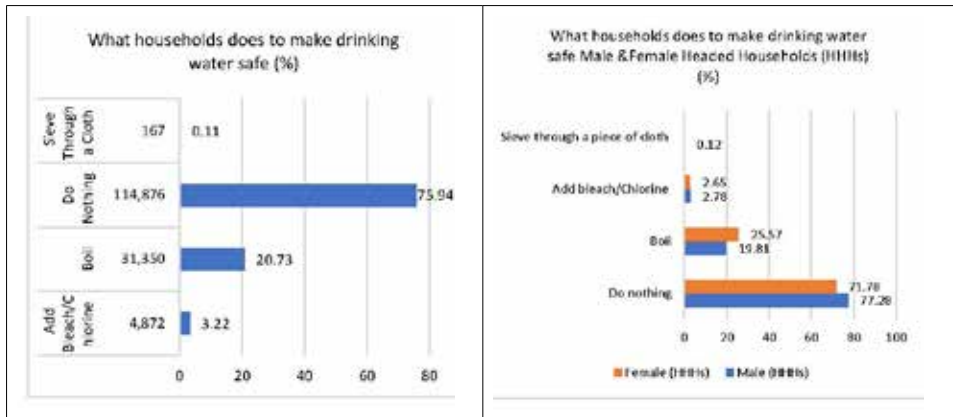


Source: KNBS 2015/2016

### Access to safe drinking water

Clean safe drinking water is important in reducing infectious diseases. However, only 20.73 per cent (31,350) of the households boiled water as well 3.22 per cent (4,874) uses bleach/chlorine to make it safe for drinking representing while majority of the households (75.94 per cent, 114,876) do nothing about the safety of their drinking water. Male headed households are likely to do nothing in terms of making drinking water safe at 77.28 per cent (104, 587) compared to female headed households at 71.78 per cent (44,645). Furthermore, female headed households were also more likely to boil water to make it safe for drinking at 25.57 per cent (15,902) unlike male headed households at 19.81 per cent (26,816). Top interventions to make drinking water safe was supplying households with piped water, protecting of water sources of water, and provision of water treatment facilities and chemicals to households.

**Figure 4.3: Access to safe drinking water by households**

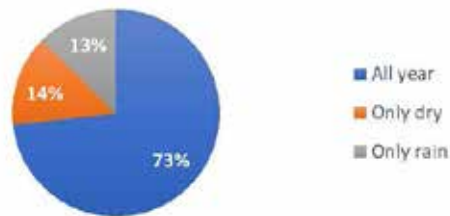


Source: KNBS 2015/2016

**Access and reliability of water sources**

Furthermore, majority of the households at 73 per cent (565,091) relies on the main sources of drinking water all-round the year while only a small portion of 14 per cent (109,779) relies to the source only in dry season and 13 per cent (97,195) in rain season (see Figure 42 main sources of water for drinking by households). This therefore calls for better management and conservation of the water resources that are highly dependable all round, this may include

**Figure 4.4: Household reliability to the main sources of water (%)**

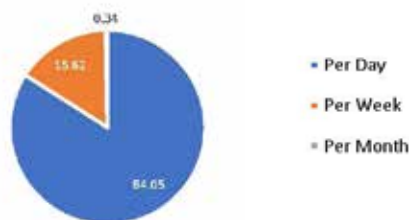


Source: KNBS 2015/2016

**Access and reliability of water sources**

According to KNBS, majority of the population (84.05%) have to go to fetch water from a source on a daily basis, this may be time consuming and therefore the need for the households to invest in water storage facilities to store water for use during dry periods. The county can support building water storage facilities closer to households to help reduce the number of times households go to water points as well as to help solve water shortage problems due to the ASAL nature of Baringo County.

**Figure 4.5: Access and reliability of water sources**

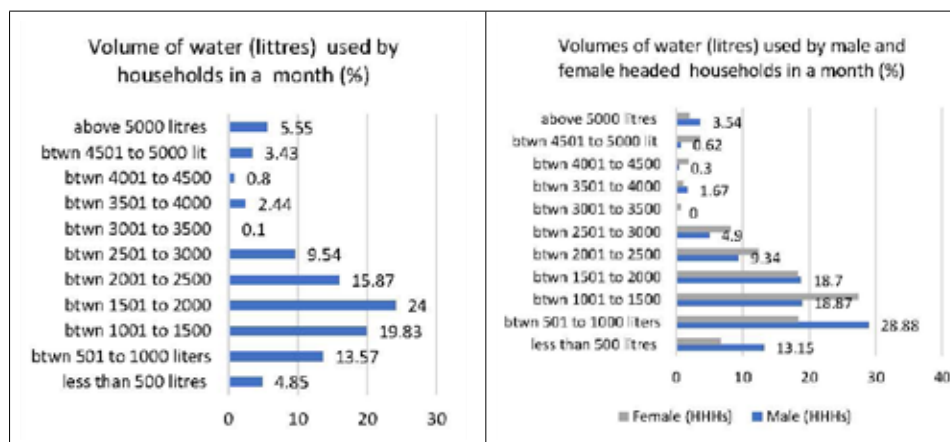


Source: KIHBS 2015/2016

**Volumes of water utilized by households in a month**

Majority of the households (24%) used between 1501 litres to 2000 litres of water in a month, this is followed by households that use less than 1001 litres and 1500 litres of water at 19.83 per cent, and 15.87 per cent of households that utilize between 1000 to 4999 litres of water. Only a small portion of households accounting to 5.5 per cent, use above 5,000 to 9,999 litres of water in a month. Additionally, more male headed households (28.88%) use between 501 to 1000 litres per month compared to the female headed households (27.39%) who use between 1001 and 1500 litres of water in the same period.

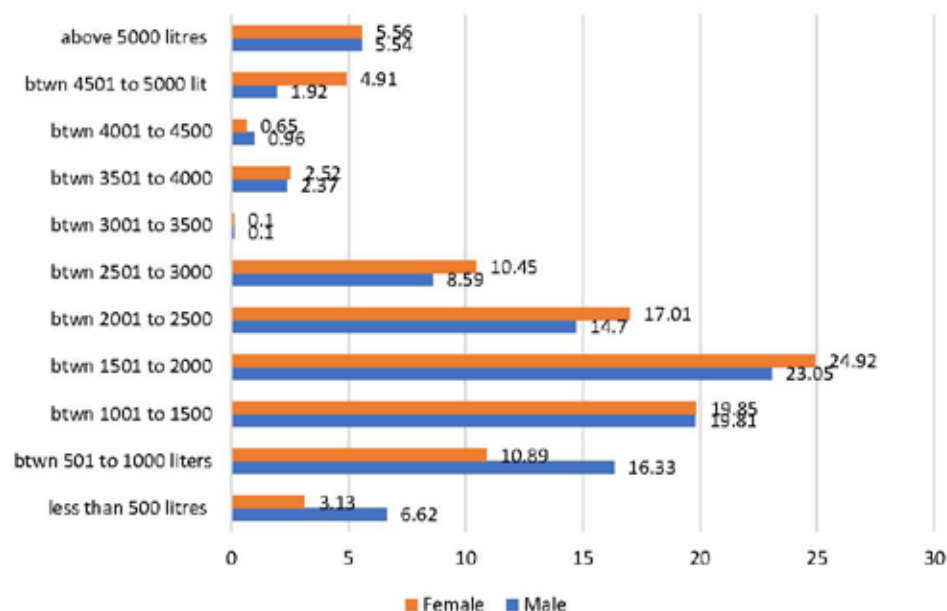
**Figure 4.6: Volumes of water used by households per month (%)**



Source: KIHBS 2015/2016

**Gender and volumes of water used in a month**

In regard to gendered approach to water usage, women use between 1501 and 2000 litres of water representing 24.92 per cent (97,761) compared to men at 23.05 per cent (87,988). Inequalities to water access may prevent people from hand-washing thus putting at risk of contracting COVID-19. This can be resolved by supplying water at low cost or making easy access to water especially among female headed households by digging boreholes.

**Figure 4.7: Volumes of water used by gender**

Source: KIHBS 2015/2016

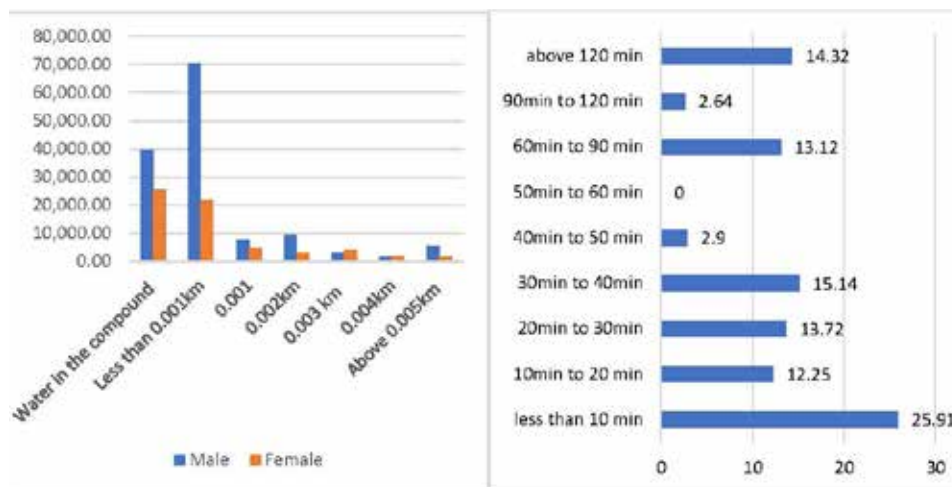
#### ***Distance covered and by households to drinking water sources***

Additionally, more male (60%) than women (40%) headed households have access to drinking water within their compounds. Similarly, more men headed households (76%) travel less than 0.001 km to the source of drinking water in comparison to women representing (24%). On the other hand, more men (62%) have access to water points within 0.001 compared to women (38%).

Additionally, majority of households (25.91%) take less than 10 minutes to and from water source, compared to 14 per cent who takes take 120 minutes to get to the water source and back. This means most of the households live close to water sources and are able to get water in a short period of time thus being in a good position to observe COVID-19 guidelines on WASH thus being at less risk of contracting the virus.

If water is available to households, schools, health institutions within the shortest distances and time 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 the shortest distances and this may make them vulnerable to contracting COVID-19 as well as other infectious diseases. To support hand hygiene among households there is need to have water supply closer to households headed by women.

**Figure 4.8: Distance covered and time taken by house-holds to drinking water source**



Source: KNBS 2015/2016

### Children and households' access to water

Children play an important role in supporting household chores, such as cooking, collecting firewood, and fetching water and looking after the animals. Currently stills are out of sessions and majority of children are at home and may be helping in fetching water thus increasing households' access to water thus observing COVID-19 guidelines on hand hygiene. According to KNBS (2020) survey on COVID-19, 112,172 households have a member who attends school representing 64 per cent while (36%) households do not have a member who is schooling.

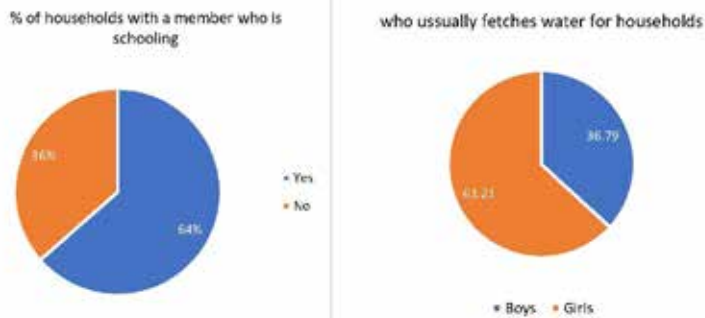
Additionally, 16,045 (36.79%) of boys and 27,567 (63.21%) of girls are involved in fetching water for the households. This means that households will be deprived of access to water when schools re-open since boys and girls play an important role in fetching water. Similarly, since girls are more involved in fetching water this means they spend most of their time in the activity and interfere with their schooling leading to school dropouts. Therefore, to ensure households access to water and hand hygiene, the county government can help with low-cost supply of water and provision of water storage facilities to those households with schooling members to help increase water access when schools re-open.

### Sanitation coverage

Sanitation coverage in the county remains low whereby majority of households ((58.62%), rural (56.4%) urban (67.7%) and peri-urban (60.4%) use pit latrine, on the other hand a small proportion of households (27%) have not toilet facility and relieves themselves in the open fields. Additionally, majority of the households (71.1%) have access to improved

sanitation facilities<sup>3</sup>. There is a little disparity between male and female headed households regarding access to sanitation, where larger proportions of female headed households have access to improved sanitation at 76.47 per cent, slightly higher than their male counterparts at 75.42 per cent.

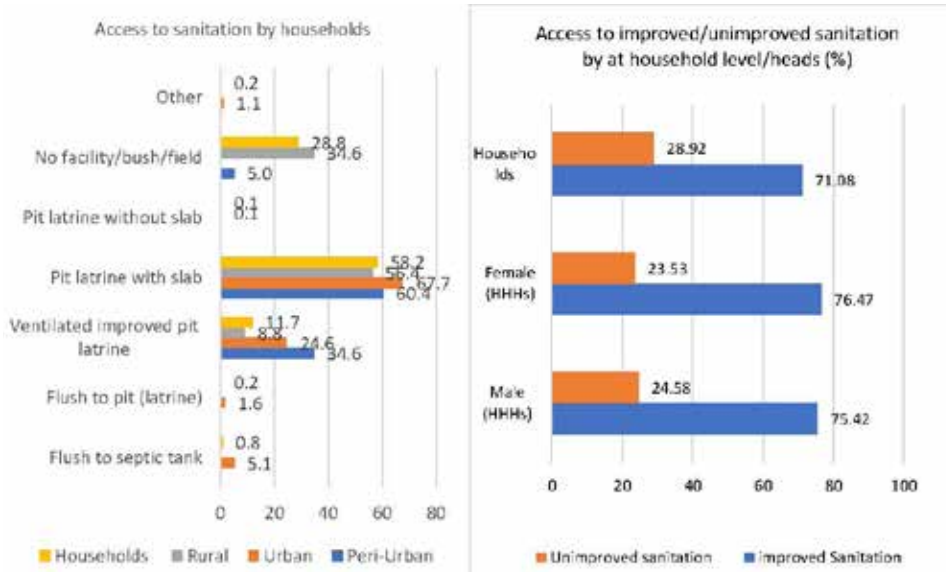
**Figure 4.9: Households with a member who is attending schools/learning institutions and who usually fetches water**



Source: KNBS 2015/2016

Good sanitation is important in helping to curb transmission of infectious diseases, since sanitation can help to detect the genetic residues of diseases in wastewater as those who are infected are thought to shed traces of the virus in faeces.

**Figure 4.10: Access to sanitation by households in the county**

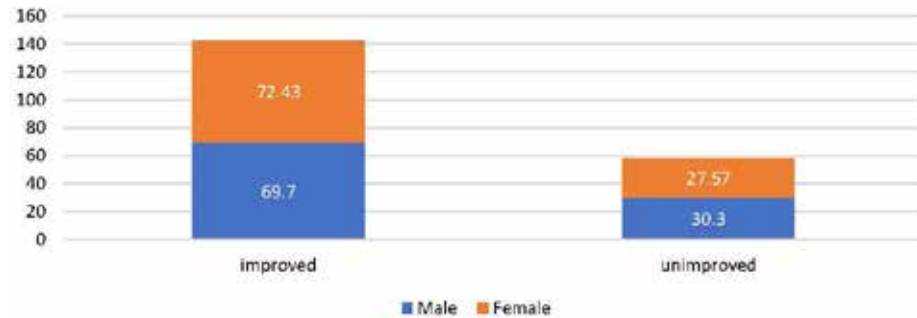


Source: KNBS 2015/2016

<sup>3</sup> 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 terms of a gendered approach to sanitation, female have more access to improved sanitation at 72.43 per cent compared to men (69.7%)

**Figure 4.11: Access to sanitation by sex (%)**

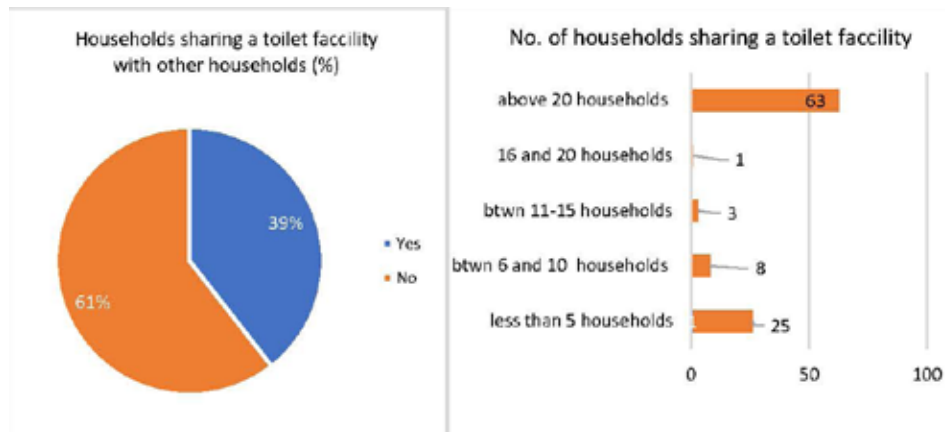


Source: KNBS 2015/2016

### Toilet Sharing

Similarly, 61 per cent of the households do share a toilet facility with other households, whereby (63%) of the households shared a toilet facility with more than 20 other households. Sharing of toilet facilities put increases the vulnerability of household members to COVID-19 and other infectious diseases in cases where proper hygiene is not maintained.

**Figure 4.12: Number of households sharing a toilet facility**



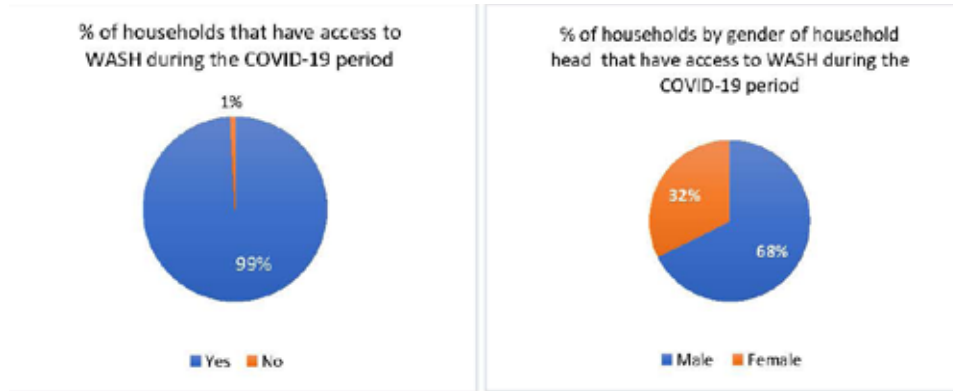
Source: KNBS 2015/2016

### Access to hygiene (hand washing) during the COVID-19 period

Access to hygiene remains high in the county during this period of the pandemic whereby households (99%) have access to WASH (Water, soap/sanitizer) during this period of COVID-19 compared with only a small proportion of households (1%) who did not have access to water and soap. Similarly, 39,824 women representing (68%) of the sampled

weighted population have access to WASH during COVID-19 period compared to 19,039 men representing (32%). Despite this most households (93%) in the county do not have a handwashing facility in their households (KNBS (2016).

**Figure 4.13: Access to wash during the COVID-19 period**

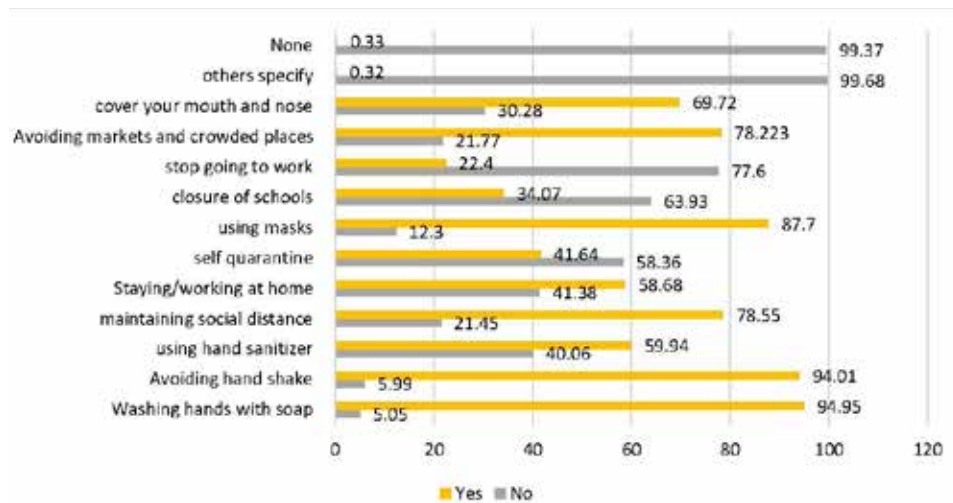


Source: KNBS COVID-19 wave 2, 2020

**WASH measures being utilized to prevent spread of COVID-19**

The topmost COVID-19 WASH prevention measures being undertaken by individuals were; handwashing with soap (94.95%), avoiding handshake (94%) using hand sanitizer (59.94%). 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 sanitizers.

**Figure 4.14: COVID-19 WASH prevention measures being undertaken by the population (%)**



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 can be facilitated by provision of water, soap/hand sanitizer to households. In terms of gender participation in WASH, Men are more involved in water sourcing than women, though women spend more time in water sourcing, an average of 41 minutes than men as shown below. Though there are there are also water vendors, who sell water to residents especially in urban centres and small market centres.

#### **4.2 Opportunities with COVID-19 in Water, Sanitation and Hygiene**

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 main sources of water in Baringo County are dams, lake, water pans, streams, wells, springs and boreholes. These sources have the potential of drying up during dry seasons thus leading to reduced access to water by households. On the other hand, with reduced revenue collected from water and sanitation services the maintenance and development of water and sanitation infrastructure may be affected.

#### **4.4 Recommendations**

To ensure continuous availability of water, the county can undertake the following:

- (i) The county to upscale the construction of water pans and dams as well as ground water in order to solve water shortage, especially during dry seasons. This will help to increase water supply in households, institutions and public places through drilling of boreholes in all the sub-counties.
- (ii) The county to upscale abstraction of water from rivers, spring protections, harvesting of rainwater from roof and other catchments to help achieve increase to water access.
- (iii) Supply water storage facilities to households in areas that are prone to droughts such as Lake Baringo and Lake Bogoria, parts of Kerio Valley, Mogotio, western slopes of Ng'elecha (Mochongoi) and the entire Tiaty (Kolloa to Tangelbei), this is to help in storage of harvested water during rainfall times.
- (iv) Expand and rehabilitate the existing piped water connection infrastructure to help increase access to water. There is low access to piped water stands at 23.40 per cent urban 6.67 per cent in rural areas and 43.9 per cent peri-urban. This means low revenue from piped water for the county. Similarly, it also implies low access to clean and safe water which is guaranteed through piped water system. There is need to increase piped water connectivity to households to increased access to safe water and increased revenue. This can be achieved by expanding water infrastructure.

The county government can collaborate with the private sector, Non-Governmental organization and the local community to expand the water infrastructure.

- (v) The county to support and promote water catchment protection
- (vi) The county to fast track the development of water governance and management policy
- (vii) Include both male and female in decision making on water management
- (viii) The county to undertake water trucking during times of prolonged drought and emergencies to households with water deficiencies
- (ix) Expand sewer infrastructure to accommodate more households, and yield safe sanitation coverage. Currently connectivity to piped sewer is less than 3.3 per cent both in rural urban and peri-urban areas. This denies the county the much-needed revenue from sanitation services as well as access to safe sanitation. Increased access to sanitation can be achieved through collaboration of the county government, development partners and PPP to expand sewer infrastructure and to accommodate more households.
- (x) Construct toilets in in communities, schools, health centres and other public places. Currently 34.63 per cent rural, and 4.99 per cent peri-urban do not have access to sanitation facilities. Additionally, 61per cent of households do share a toilet with other households, this is more in urban areas than rural and peri-urban. This puts individuals at risk of contracting COVID-19, and other infectious diseases in cases where proper toilet hygiene is not maintained. Similarly, only 48.68 per cent of households have access to improved sanitation. The county to consider collaborating with private sector and launch public toilet construction programmes.
- (xi) The county should promote awareness on proper hygiene and sanitation
- (xii) The county should fast track and implement policy on water governance and environment conservation and management
- (xiii) Provide water treatment facilities and chemicals to households to ensure access to clean and safe water. Long term measure to support access to water for all households is to have both male and female headed households to be part of the water management/governance team and in decision making in water management.
- (xiv) Promote the importance of handwashing and construct WASH facilities to increase access at the household level. Access to WASH (water and soap) is high at 59.97 per cent among households during this period of COVID-19. On the other hand, 93.4 per cent of the households do not have a designated handwashing facility in their households. This may compromise hand washing hygiene of households. Increased access to WASH can be achieved by sensitization on the importance of handwashing and construction of WASH facilities at the household level. Collaboration between County Government, Non-Governmental Organizations, local community, and the media is important to realize increased access to WASH.
- (xv) Provide maximum protection to employees working in water and sanitation through provision of personal protection equipment

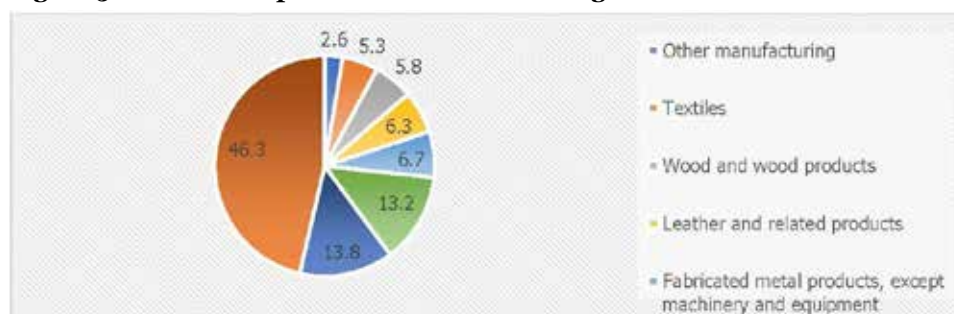
## 5. Manufacturing, Trade and MSMEs

### 5.1 Characteristic of Manufacturing Sector

Baringo County has interests in manufacturing in areas of meat processing, textiles, fruit processing, dairy processing and renewable energy. Some of the factories that exist in the county include; Goldox Kenya Limited (donkey slaughterhouse), Cummins Power Co-generation Company, Salawa cotton Ginnery and a Fruit processing factory in Marigat. Further, the County has potential in the following areas: honey refinery; diatomite mining; meat, leather, coffee, timber, dairy, and aloe processing. Baringo County has 1,717 (9.5%) establishments in the manufacturing sector with 1,695 (98.7%) being micro while 28 (1.3%) fall in the category of small-sized firms. The County has no manufacturing establishments in the 'medium' category (KNBS, 2016) (figure 5.1).

#### Sector of operation

Figure 5.1: Sector of operation in manufacturing



Source: KNBS, 2016

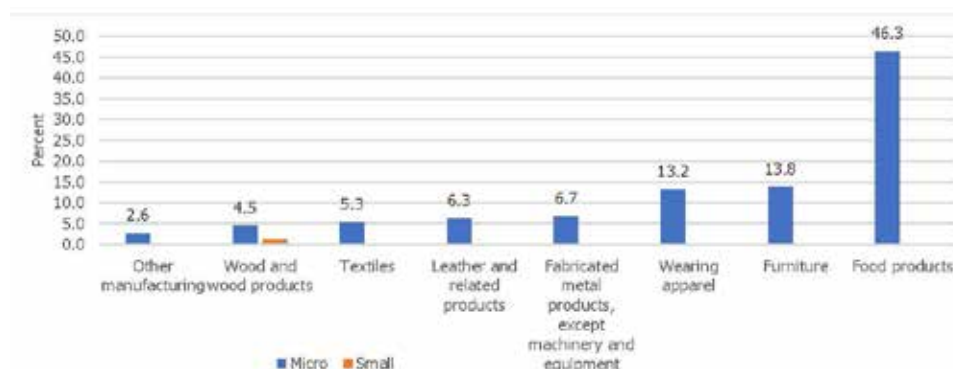
The key sub-sectors that drive the manufacturing sector in Baringo County include; food products (46.3%), furniture (13.8%), wearing apparel (13.2%), fabricated metal products (6.7%), leather and leather products (6.3%), wood and wood products (5.8%) and textiles (5.3%) among others (Figure 5.1). With the advent of COVID-19 and the demand for personal protective equipment such as masks increasing; sub-sectors such as textiles and wearing apparel are likely to experience more activity and create more jobs as well as contribute to income generation in Baringo county. The food products sub-sector is also important due to its essential nature hence may weather the COVID-19 shocks and rebound quickly thereafter.

The key products useful in value addition and driving manufacturing include honey refinery, livestock production, meat processing, textiles, fruit processing, dairy processing, leather, coffee, timber, and aloe processing.

## Sector of Operation by Size

Majority of the establishments in Baringo County are micro in nature and operate in the food products sub-sector (46.3%) (Figure 5.2). Small sized establishments operate in the wood and wood products sub-sector and comprise 1.3 per cent.

**Figure 5.2: Manufacturing firms by sector and size**

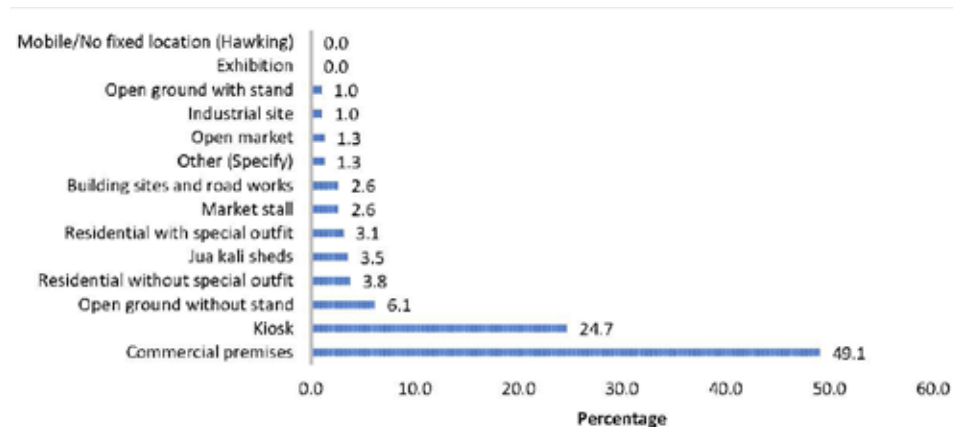


Source: KNBS, 2016

## Location of manufacturing firms by type of premises

Common premises used by manufacturing firms in Baringo County are commercial (49.1%), kiosks (24.7%) and open ground with stand (6.1%) (figure 5.3).

**Figure 5.3: Location of manufacturing firms by premises**



Source: KNBS, 2016

## Distribution of Manufacturing firms by gender and size

Ownership of manufacturing firms in Baringo County is largely male dominated (74.4%), females own 19.3 per cent and 6.3 per cent is owned jointly (Table 21). In terms of micro-

sized firms, 74.1 per cent are male owned, 19.5 per cent female owned and 6.3 per cent jointly owned. Small sized firms are fully owned by male proprietors.

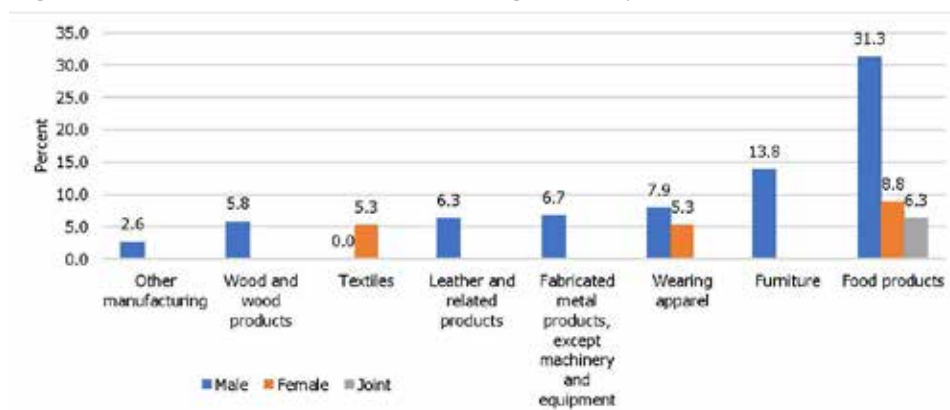
**Table 5.1: Location of Manufacturing Firms by Premises**

Gender	A11	Micro	Small
Male	1,278 (74.4)	1,256 (74.1)	22 (100)
Female	331 (19.3)	331 (19.5)	-
Joint	108 (6.3)	108 (6.3)	-
<b>Total</b>	<b>1,717 (100)</b>	<b>1,695 (100)</b>	<b>22 (100)</b>

Source: KNBS, 2016.

Most sub-sectors in manufacturing are male dominated with majority in the food products (31.3%); furniture (13.8%) and wearing apparel (7.9%) among others. Females dominate the textiles sub-sector (5.3%) and are found in wearing apparel (5.3%) and food products (8.8%) (Figure 5.4).

**Figure 5.4: Distribution of Manufacturing Firms by Gender and Sector**



Source: KNBS (2016)

The manufacturing sector predominantly employs males (83.1%) while females account for 16.9 per cent. In addition, they are broadly found among micro-sized firms (68.4%) while the rest are small sized firms (14.7%). Men who are mostly regarded as bread winners therefore the worst brunt if the manufacturing sector is adversely affected, this is likely to affect households and perhaps sink them into more poverty.

**Table 5.2: Employment by gender and size for manufacturing firms**

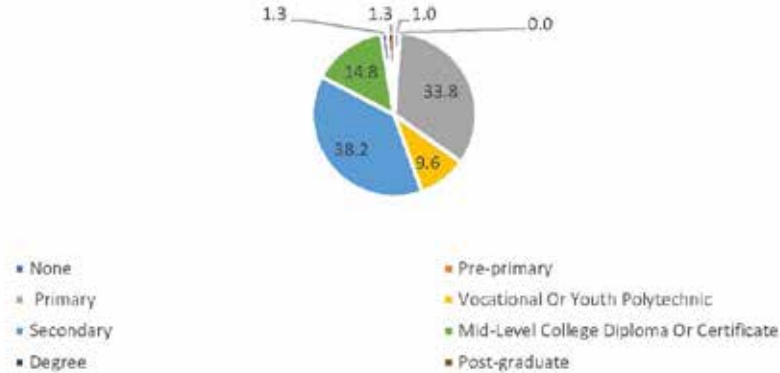
Number of employees	Micro	Small	Total
Male	2,714 (68.4)	581 (14.7)	3,295 (83.1)
Female	670 (16.9)	0 (0)	670 (16.9)
<b>Total</b>	<b>3,384 (83.7)</b>	<b>581 (14.7)</b>	<b>3,965 (100)</b>

Source: KNBS (2016)

### Education levels of manufacturing firm owners

Majority of owners of firms in manufacturing have primary (33.8%), secondary (38.2%) and mid-level college diploma or certificate (14.8%) education (figure 5.5). About 1 per cent of the manufacturing firm owners do not have a formal education.

**Figure 5.5: Education levels of manufacturing firm owners**



Source: KNBS (2016)

The County is keen on creating and maintaining an enabling environment to promote business growth and investment through development of markets. Recently established markets benefit about 660 enterprises creating 990 jobs (table 5.3 ).

**Table 5.3: Markets and job creation**

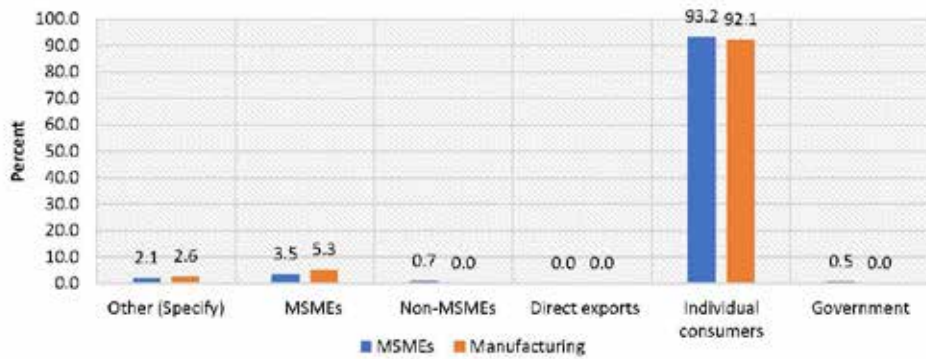
Type of markets	Status at baseline	No. of markets	No. of enterprises created	No. of jobs created	No. of Household beneficiaries
Number of Modern markets	2	11	660	990	4,950
Number of curio shops	0	2	20	30	150
Number of Honey stalls	0	18	18	27	135
Number of Retailer stalls	0	80	320	480	2,400

Source: Baringo County CIDP (2018-2022).

### Source of markets

Figure 5.6 shows that majority of the MSMEs and manufacturing firms in Baringo County rely on individual consumers as sources of markets at 93.2 per cent and 92.1 per cent respectively. A good percentage of manufacturing firms (5.3%) and MSMEs (3.5%) trade with other MSMEs (amongst themselves). According to the MSME 2016 data, none of the MSMEs or those firms strictly participating in manufacturing in Baringo County are involved in direct exports. This may likely reduce their exposure to external shocks due to COVID-19.

**Figure 5.6: Source of markets**

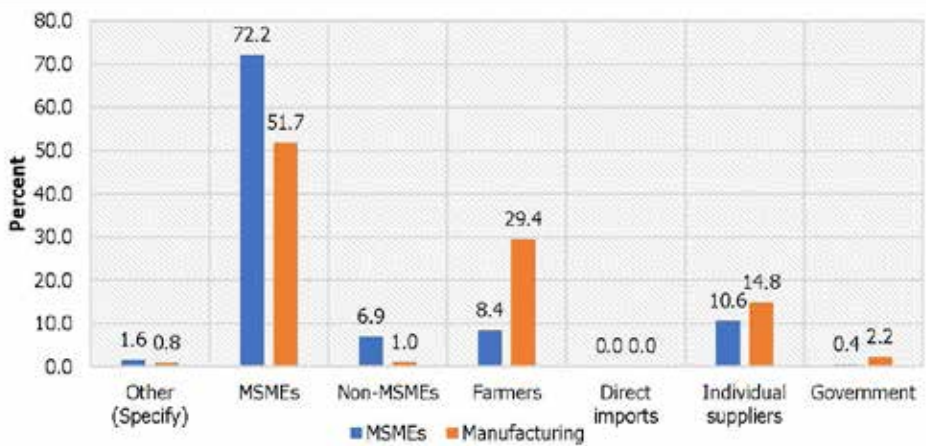


Source: KNBS (2016)

### Source of material inputs

MSME establishments source for their raw materials from related MSMEs (72.7%), individual suppliers (10.6%), farmers 8.4 per cent, non-MSMEs (6.9%) and none seem to be from direct imports (figure 5.7). Similarly, establishments that are strictly involved in manufacturing source for material inputs from; MSMEs (51.6%), farmers (29.4%), individual suppliers (14.8%) and government (2.2%). A huge disruption of MSMEs that leads to their closure is likely to disrupt the supply chain of inputs to the remaining MSMEs.

**Figure 5.7: Source of material inputs**



Source: KNBS (2016)

### Level of innovation by firms in manufacturing

For firms engaged in manufacturing, only those under the micro category were involved in some innovations (Table 5.4) specifically; product (9.6%), process (10.4%) and market (8.7%).

**Table 5.4: Level of innovation by firms in manufacturing**

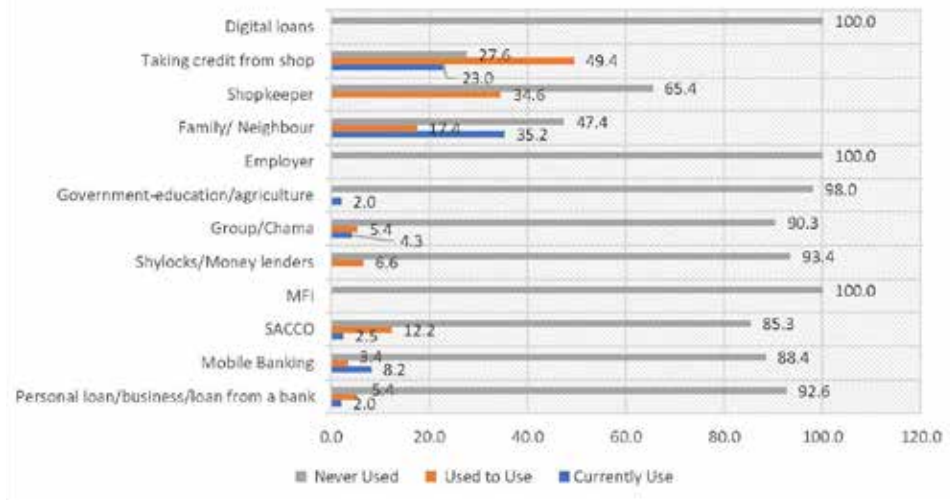
Type of innovation	Micro			Small		Total
	Don't know	No	Yes	No	Yes	
Product	0 (0)	1,530 (89.1)	165 (9.6)	22 (1.3)	0 (0)	1,717 (100)
Process	0 (0)	1,516 (88.3)	179 (10.4)	22 (1.3)	0 (0)	1,717 (100)
Market	0 (0)	1,545 (90)	150 (8.7)	22 (1.3)	0 (0)	1,717 (100)

Source: KNBS, 2016.

### Access to credit for manufacturing and MSMEs firms

Recent evidence from FinAccess 2019 provides further insights on sources of credit for businesses in Baringo County. Businesses commonly obtain credit from the conventional sources such as family/neighbour (35.2%), shops (23%), group/chama (4.3%), SACCO (2.5%), and personal/business loans from banks (2%). Emerging sources of credit for businesses in Baringo County include mobile money (8.2%) (figure 5.8).

**Figure 5.8: Recent sources of credit**

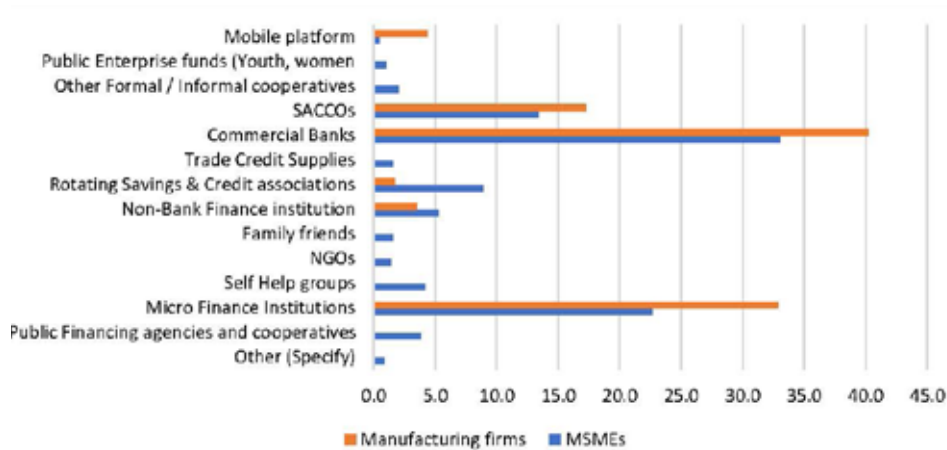


Source: KNBS (2016)



According to the MSME survey, 52.9 per cent of MSMEs and 51.5 per cent of those in manufacturing applied for credit in the last three years. Of those MSMEs that applied for credit, the main source was commercial banks (33.1%), micro finance institutions (22.6 %) and SACCOs (13.4%). Manufacturing firms in Baringo County also mainly sourced for credit from commercial banks (40.2%), micro finance institutions (32.9%) and SACCOs (17.3%) (Figure 5.9).

**Figure 5.9: Sources of finance (%)**

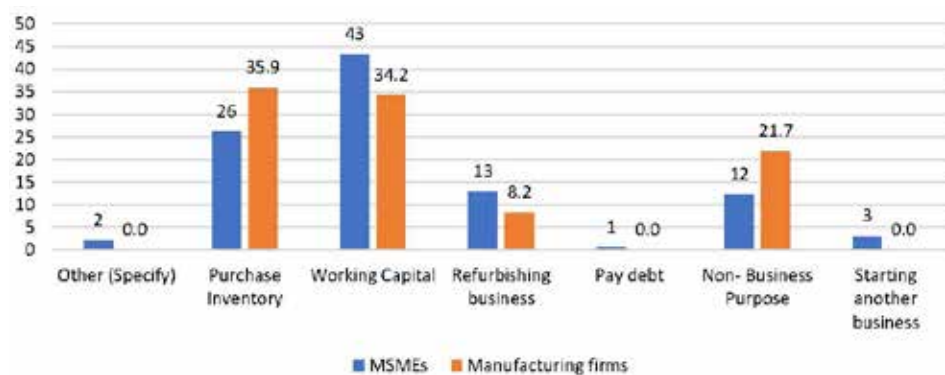


Source: KNBS (2016)

### Purpose of credit

Figure 5.10 presents the main purpose of credit by both MSMEs and firms in manufacturing. Broadly, MSMEs in Baringo County required credit for working capital (43%), purchase of inventory (26%) and business refurbishment (13%) (Figure 28). Similarly, establishments in manufacturing required credit for purchase of inventory (35.9%), working capital (34.2%), and business refurbishment (8.2%).

**Figure 5.10: Main purpose of credit**

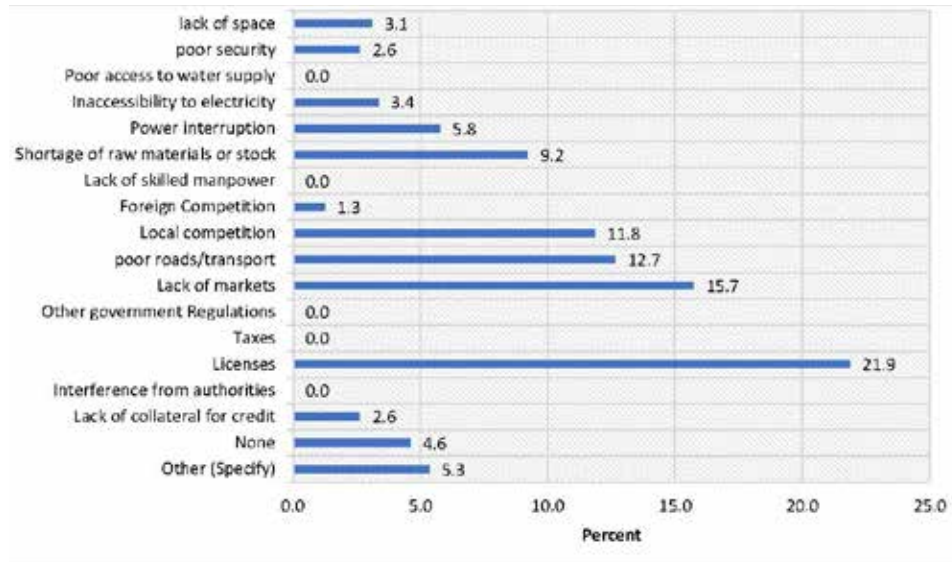


Source: KNBS (2016)

### Constraints faced by manufacturing firms

The key constraints faced by firms involved in manufacturing include: licenses (21.9%), lack of markets (15.7%), poor roads/transport (12.7%), local competition (11.8%) and shortage of raw materials (9.2%) (Figure 5.11).

**Figure 5.11: Constraints faced by manufacturing firms**



Source: KNBS (2016)

### Industrial Parks/ Jua Kali Sheds

The county does not have an industrial park to facilitate manufacturing activities. However, the County has two operational Jua Kali sheds which accommodates about forty (40) businesses mainly in carpentry and welding and employs at least 60 people, directly or indirectly<sup>4</sup>.

### b) Micro, Small and Medium Enterprises (MSMEs)

MSMEs play an important role as sources of wealth and employment creation within Baringo County. MSMEs are found in various sectors as indicated in table 5.5 below.

<sup>4</sup> Baringo County CIDP (2018-2022)

**Table 5.5: Business categorization in Baringo County**

Business Category	Number of Businesses
Hospitality (Hotels, guesthouses, etc)	30
Private Schools	30
Private hospitals	10
Agro processors	5
Agro vets	50
Timber millers	15
Export market	3
Construction	200
Telecommunication	2
Petrol stations	25
Financial & Non-financial service providers (Banks, Insurance, SACCOs)	74
Transport business (Matatu Operators SACCO's)	20

Source: Baringo County CIDP (2018-2022).

### Sector of Operation by MSMEs

Majority of the MSME operators in Baringo face access to credit and knowledge gap constraints. Between 2013-2018, the County disbursed Ksh 29.6 Million to 358 beneficiaries. They included 78 Men; 146 women; 108 youth and 26 Persons with Disability. The county also supports MSMEs through training in business and financial management. Overall, according to the MSME 2016 survey estimates, Baringo County has 19,064 establishments<sup>5</sup> (KNBS, 2016). Out of this: 18,065 (94.8%) are micro; 908 (4.8%) are small; and 90 (0.5%) are large enterprises (Figure 5.12).

**Figure 5.12: Distribution of MSMEs by size**



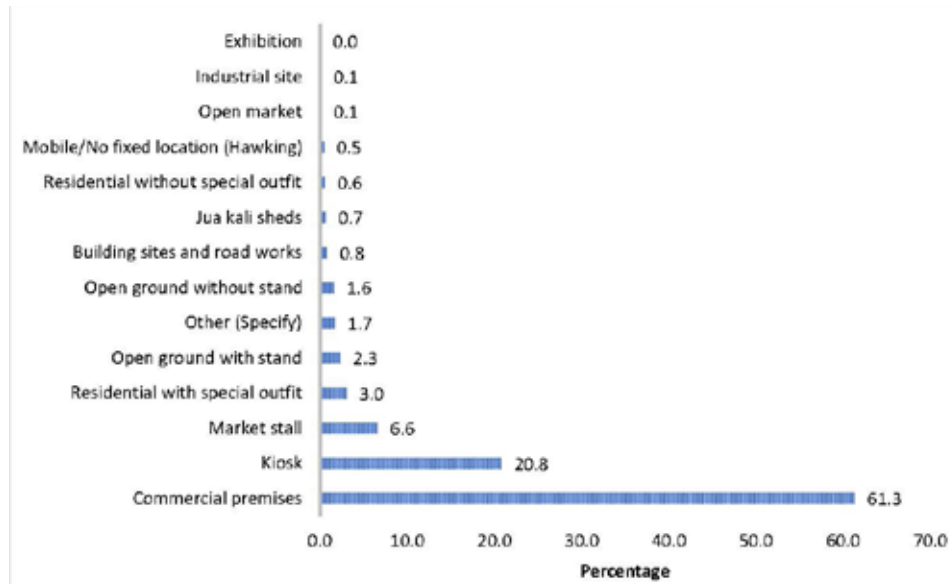
Source: KNBS (2016)

<sup>5</sup> After applying weights

### Location of the businesses by type of premises

Majority of the businesses in Baringo County are in commercial premises (61.3%), kiosks (20.8%) and market stalls (6.6%) (Figure 5.13). This infers most of the businesses in the County faced difficulties in meeting their rental obligations due income disruptions caused by COVID-19. According to the May 2020 KNBS COVID\_19 survey, all the non-farm businesses attributed non-payment of household rental obligations to reduced incomes/earnings. For those involved in farm businesses, 66.7 per cent attributed the same to reduced incomes/earnings while 33.3 per cent were affected by delayed incomes/earnings. Considering that, COVID-19 has disrupted businesses causing sporadic flow of income, a good percentage of the firms especially those, which could be paying rents in commercial buildings, are bearing the most brunt.

**Figure 5.13: Location of the businesses by type of premises**



Source: KNBS (2016)

### Distribution of MSMEs by gender and size

Table 5.6 shows the distribution of MSMEs in Baringo county by gender: 45.2 per cent are male owned, 38.1 per cent are female owned, while 16.7 per cent are jointly owned (male/female). For Micro establishments; 45.7 per cent are male owned, 39.3 per cent are female owned, while 15 per cent are jointly owned.

**Table 5.6: Distribution of MSMEs by gender and size -N (%)**

Gender	A11	Micro	Small	Large
Male	8,624 (45.2)	8,250 (45.7)	374 (41.2)	0 (0)
Female	7,255 (38.1)	7,097 (39.3)	159 (17.5)	0 (0)
Joint	3,185 (16.7)	2,719 (15)	376 (41.4)	90 (100)
Total	19,064 (100)	18,065 (100)	908 (100)	90 (100)

Source: KNBS (2016)

Regarding small-sized enterprises, male owned firms comprise 41.2 per cent; female owned 17.5 per cent while jointly owned form 41.4 per cent. For large enterprises, ownership is purely joint. Broadly, there are more men owned than female owned establishments in Baringo County. Table 5.7 indicates that more males (66.4%) are employed across MSMEs in Baringo County than females (33.6%). Micro sized establishments employ 19.7 per cent and 17.6 per cent males and females respectively. Small sized establishments employ 7.5 per cent male and 9.2 per cent female while large firms employ 39.1 per cent male and 6.9 per cent female. Large firms (46%); micro (37.3%) and small (16.7%) employ more people.

**Table 5.7: Employment by gender and Size - N ( per cent)**

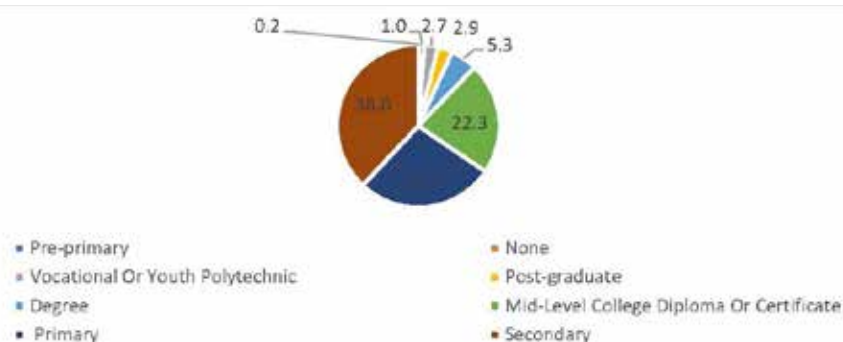
	Micro	Small	Large	Total
Male	19,433 (19.7)	7,382 (7.5)	38,517 (39.1)	65,333 (66.4)
Female	17,281 (17.6)	9,043 (9.2)	6,781 (6.9)	33,105 (33.6)
Total	36,714 (37.3)	16,425 (16.7)	45,299 (46)	98,438 (100)

Source: KNBS, 2016

### Education levels of MSME owners

Figure 5.14 indicates that MSME owners in Baringo County are fairly educated with majority of them having at least primary (27.3%); secondary (38%), and mid-level college diploma or certificate (22.3%) education. At least 1 per cent of the owners did not have a formal education.

**Figure 5.14: Education levels of MSME owners**



Source: KNBS, 2016

### Level of innovation by MSMEs

Table 5.8 presents the levels of innovation by MSMEs according to size. Generally, there were low levels of innovation across MSMEs with 9.7 per cent involved in product, 3.5 per cent for process, and 2.3 per cent in market innovation for micro-sized enterprises.

Regarding small-sized enterprises, 1.2 per cent engaged in product, 0.6 per cent process and 0.1 per cent market innovation. With regards to large sized enterprises, only 0.5 per cent were involved in process and market innovations each.

**Table 5.8: Level of innovation by MSMEs**

Type of Innovation	Micro				Small				Large			Total
	Refused to answer	Don't know	No	Yes	Refused to answer	Don't know	No	Yes	Don't know	No	Yes	
Product	0 (0)	90 (0.5)	16,122 (84.6)	1,853 (9.7)	0 (0)	0 (0)	673 (3.5)	235 (1.2)		0 (0)	90 (0.5)	19,064 (100)
Process	0 (0)	45 (0.2)	17,362 (91.1)	658 (3.5)	0 (0)	0 (0)	797 (4.2)	111 (0.6)	0 (0)	90 (0.5)	0 (0)	19,064 (100)
Market	0 (0)	45 (0.2)	17,589 (92.3)	431 (2.3)	0 (0)	0 (0)	894 (4.7)	14 (0.1)	0 (0)	0 (0)	90 (0.5)	19,064 (100)

Source: KNBS, 2016.

## E-commerce

Participation in e-commerce by households in Baringo County is below the national average. About 2 per cent of the households participate in online e-commerce against a national average of 4.3 per cent (KPHC 2019). In comparison, men participate more in online e-commerce (2.5%) than women (1.4%) do. With the introduction of stay at home protocols due to COVID-19 online trade has been expected to thrive, little may be impacted in Baringo County since fewer households participate in the same.

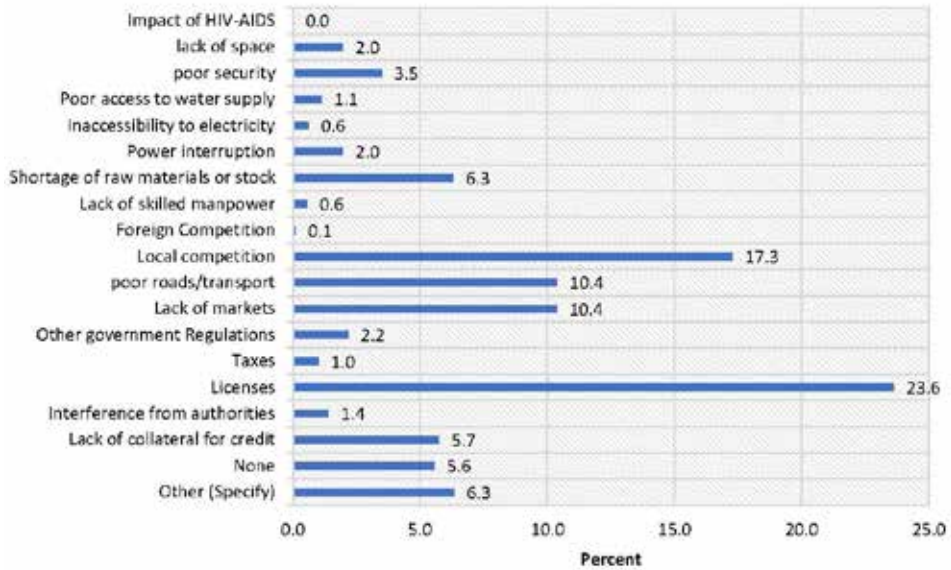
## Turnover tax

Going by the MSME 2016 survey, only 6.8 per cent of MSMEs in Baringo County (1,292) had a previous monthly turnover of above Ksh 83,333 which translates to Ksh 1 million a year. Holding all other factors constant, 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 (Figure 5.15) faced by MSMEs in Baringo County include: licenses (23.6%), local competition (17.3%), poor roads/ transport (10.4%), lack of markets (10.4%) and lack of raw materials (6.3%).

**Figure 5.15: Main constraints faced by MSMEs**

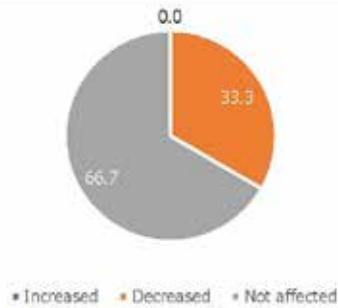


Source: KNBS, 2016.

A study on County Business Environment for MSEs (CBEM) identified other constraints faced by MSMEs in Baringo 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 practices which manifest through; contract enforcement, counterfeiting, dumping (substandard goods) and misrepresentation (through weight, price, ingredient). MSEs also face bottlenecks related to; insecurity; multiple licenses and permits; numerous procedures for obtaining licenses; and shortage of raw materials.

## Effects of COVID-19 on household non-farm and farm businesses

**Figure 5.16: Effects of COVID-19 on household non-farm and farm businesses**



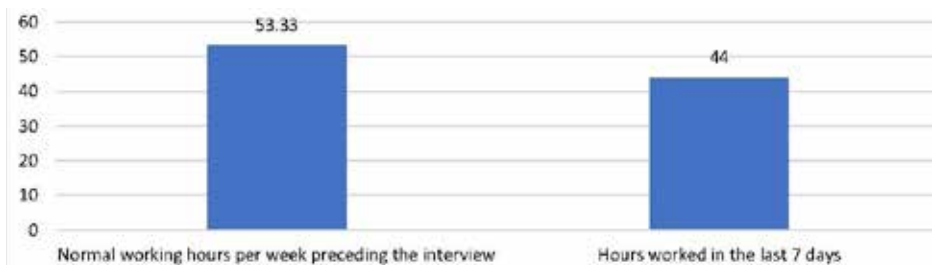
Source: KNBS, COVID\_19 Survey 2020

Figure 5.16 presents the effects of COVID-19 on household non-farm and farm businesses in Baringo County. 33.3 per cent of the respondents report a decrease in their business activities due to the pandemic while 66.7 per cent were not affected. Equally 33.3 per cent of the respondents have had a decrease in their income due to COVID. This is an indicator that COVID-19 is already having a negative toll on the non-farm and farm businesses even though the situation is still evolving.

## Labour dynamics

During the period considered in wave 2 data collection, respondents reported a reduction of 9.33 hours in the household non-farm and farm businesses in Baringo County (Figure 5.17).

**Figure 5.17: Labour dynamics on household non-farm and farm businesses**



Source: KNBS, COVID\_19 Survey 2020

The survey also indicates the accommodation and food services was worst hit and lost 55.6 hours while the wholesale and retail trade sector lost 7.7 hours in usual and actual hours worked in a week. This is an indicator of the adverse effects on the service sector of Baringo County due to the pandemic which could imply loss of productivity, output and employment. The manufacturing sector lost 14 hours.



**Key messages**

- (a) Important sectors that drive the economy of Baringo County include; agriculture, and services (which includes commerce and tourism) and manufacturing. Targeted interventions aimed at supporting these sectors will ensure re-engineering of the economy of Baringo County with likelihood of supporting more employment and growth going forward.
- (b) Establishments in manufacturing largely operate in food products, furniture and wearing apparels. These are in the category of providing essential products and are expected to weather the pandemic effects with appropriate demand and supply.
- (c) Majority of MSMEs in Baringo County trade amongst themselves through selling their products to individual consumers and sourcing for material inputs from peer MSMEs. Little exports and imports seem to drive the economy of the county. Disruption of activities and income(s) of households as well as businesses occasioned by COVID-19 is likely to affect commerce and lead to more poverty within the county if not mitigated.
- (d) MSMEs and establishments undertaking manufacturing activities report low levels of innovation broadly. Going forward, and in the face of pandemics like COVID-19 innovation as well as uptake of technology are game changers in promoting trade, manufacturing and mitigating against supply chain disruptions. This would allow establishments to be more imaginative with their sales and marketing efforts.
- (e) Access to credit perennially remains a constraint to MSMEs, which hinders growth and expansion of businesses, even more so now during the pandemic. There is need to provide financial support to MSMEs that have demand, employ large number of people, and those that provide essential goods and services.
- (f) Males who are largely considered as heads of households comprise the biggest proportion (83.1%) of those employed by manufacturing firms. Hence, closure of such establishments and disruption of activities as a result of COVID-19 will affect their jobs and disposable incomes of the households disproportionately.
- (g) COVID-19 presented opportunities that could be harnessed like development and support of innovations to address the pandemic. These include production of essential goods such as; masks, Personal Protective Equipment (PPEs), and sanitizers, disinfectants, canned foods, immunity-boosting products, hospital beds and ventilators. However as the pandemic subsides, the transition need to be managed smoothly.
- (h) Manufacturing establishments must also adopt to cope with the new guidelines, which could include rearranging floor plans to allow for social distancing.
- (i) Training and capacity building are important in assisting MSMEs to surmount the shocks faced during the pandemic but also allow for re-emergence.
- (j) 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) The crisis offered an opportunity to address structural issues, for instance, private sector development and collaboration and design new growth models such as – industrial/manufacturing development and innovation and participation in national and global value chains
- (ii) Agro - processing for value addition with important areas of focus include honey refinery, livestock production, meat processing, textiles, fruit processing, dairy processing
- (iii) The textile and wearing apparel sectors can be enhanced to provide Personal Protective Equipment (PPEs) for use within the County and potentially for the domestic and export market.
- (iv) Exploration of renewable energy and diatomite mining.
- (v) Other areas for consideration include; leather, coffee, timber, and aloe processing.
- (vi) There exists an opportunity to be self-reliant in all aspects including food production.
- (vii) COVID-19 has increased demand for locally produced goods. It is an opportunity for industry and MSMEs development and generation of jobs for the youth.

### **Effects of COVID-19 on this sector**

There have been both positive and negative effects of COVID-19 on this sector. These are outlined below:

- (i) There has been an increased wave of innovations during the pandemic. Examples include production of masks by polytechnics in the County. So far, about 60,000 masks have been produced and sold, providing additional revenue streams to the County.
- (ii) The MSMEs have been faced with declining sales and revenues due to depressed demand and low circulation of money in the County, which is caused by loss of incomes by the residents.
- (iii) The County has waived licenses and fees paid by the MSMEs. While this measure helps the struggling MSMEs and traders, the County's revenues have also been affected negatively.
- (iv) There is a decrease in trade activities in the County due to restrictions on movements due to fear of attending physical markets, where there is fear of contracting the disease.
- (v) Businesses at the counties cannot get the required goods, which has been occasioned by the lockdown in Nairobi.
- (vi) Businesses are faced with challenges of increased costs resulting from the need to

comply with new protocols in form of; provision of handwashing and sanitization points, wearing of masks even for workers, rearrangement of floor plans for social distancing especially for manufacturers and awareness creation. Considering, Baringo County thrives in the manufacture of food products, hygiene becomes critical leading to increased costs in compliance.

### **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 Baringo 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 Baringo 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) Exploit the opportunity presented by the pandemic especially in production of essential goods such as masks, Personal Protective Equipment (PPEs), and sanitizers, disinfectants, canned foods, immunity boosting products, hospital beds and ventilators.
- (ii) Consider an emergency rescue package for businesses and traders hard-hit by the effects of COVID-19. 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.
- (iii) Adopt the new pandemic guidelines including rearranging floor plans to allow for social distancing in manufacturing establishments.
- (iv) Operationalize Cummins Power Co-generation Company for renewable energy and Leverage on Public Private Partnerships to invest other sources of renewable energy.
- (v) Collaborate with the National government to ensure security is enhanced to reduce on crime and create a peaceful business environment.

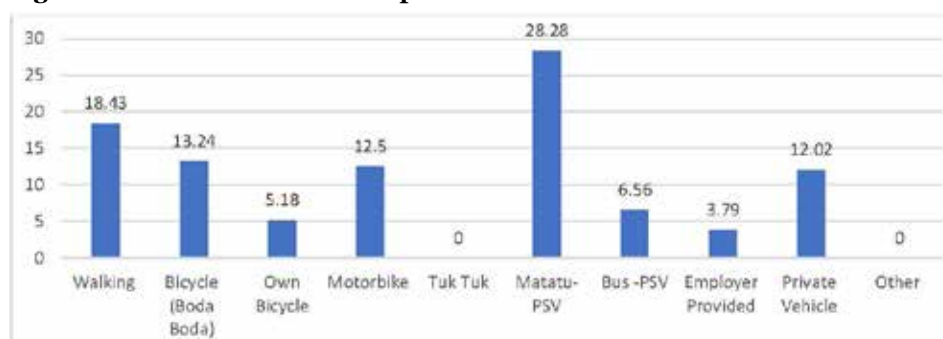
## 6. Infrastructure

### 6.1 Transport and roads

#### 6.1.1 Characteristics of the sector

In Baringo County, majority of households own a motorcycle (8.2%) and a bicycle (7.1%). Car ownership is at 4.1 per cent (KNBS, 2019). The main means of transport used in the County is public service vehicles (PSV) matatus at 28.8 per cent, followed by walking at 18.4 per cent, bicycle at 13.2 per cent, motorcycle 12.5 per cent and private car at 12 per cent, figure 6.1, and 96.8 per cent of the population has not changed the main means of transport (KNBS, 2020a/b). On average, residents travel 3.03 kilometres to their workplace at an average cost of Ksh 187. For the commute to school, residents spend on average Ksh 627 (KIHBS, 2015/16).

**Figure 6.1: Main means of transport**

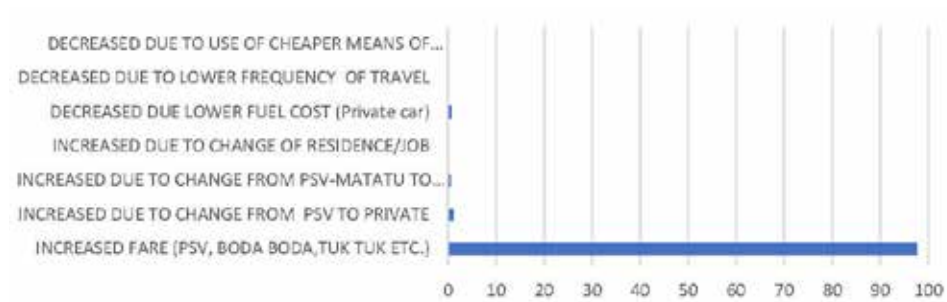


Source: KNBS COVID-19 Impact Survey 2020

In response to the COVID-19 pandemic, Baringo County is scaled down activities in the transport sector in order to focus on areas that address mitigating the effects of the pandemic. There is investment in machinery and equipment to ensure there are low costs incurred in constructing roads in the county. The county is focused on enhancing access to roads leading to revenue generating areas. Getting revenue from quarriers is considered to compensate on revenue lost from sectors such as tourism.

The KNBS COVID-19 Impact Survey 2020 revealed that 56.8 per cent of the population reported a change in the cost of travel/commute, figure 6.2. The expenditure on transport increased by 66 per cent from Kshs 96 before February 2020 to Ksh 159 in May 2020 for a on way trip. The main change (97.6%) in transport cost was attributed to increased fares for PSV, Boda Boda and Tuk Tuk.

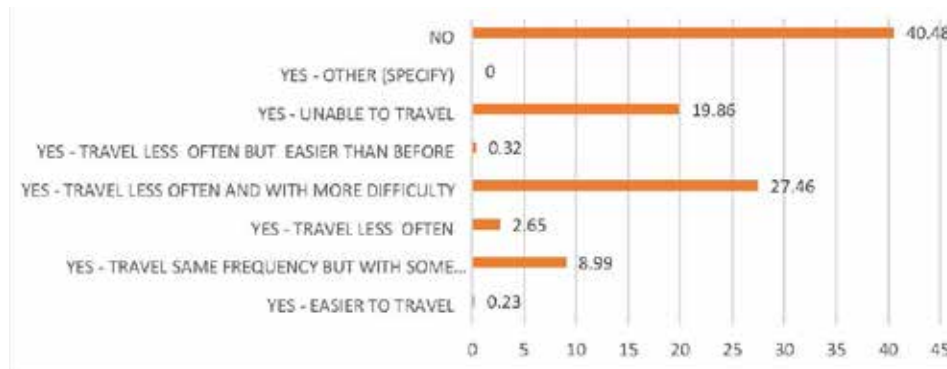
**Figure 6.2: Change in Cost of Main Means of Transport**



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

Residents had changed their travel patterns with 27.5 per cent of the population travelling less often and with more difficulty, while 19.9 per cent were unable to travel. However, 40.5 per cent of the population did not change their travel pattern, figure 6.3.

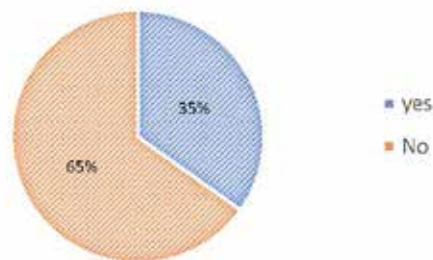
**Figure 6.3: Change in Travel Patterns**



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

The pandemic has affected delivery of goods and services for 35 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

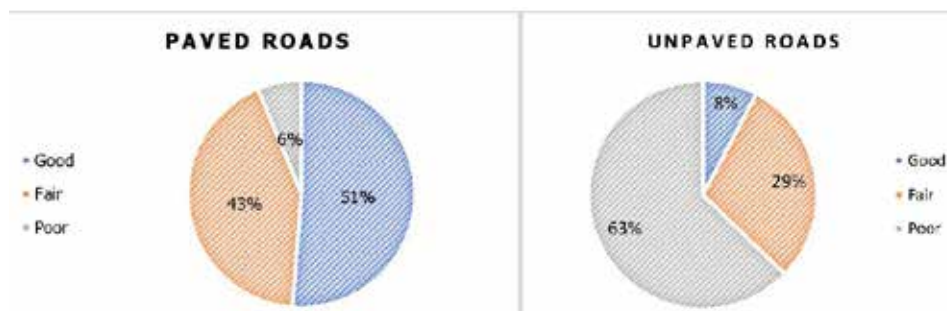
## Potential for Revenue Collection

Baringo County was allocated a total of Ksh 189,199,286 from the Road Maintenance Levy Fund towards road maintenance in the Financial 2017/18 (OCOB, 2019).

## Road network in Baringo County

Baringo County has a total of 3,824.42 Kilometres of classified road network. The paved County road network covers 86.64 Km, while the paved National roads cover 388.98 km. Out of the total paved road network of 475 km, 51 per cent is in good condition, 43 per cent in fair condition and 6 per cent in poor condition. The unpaved road network in Baringo County covers 1887.68 (county roads) and 679.91 (National roads), of this, 8 per cent is in good condition, 29 per cent fair and 63 per cent in poor condition as depicted in figure 6.5 (KRB, 2019).

**Figure 6.5: Road Condition Mix-Classified Road Network**



Source: KRB, 2019.

The unclassified road network in Baringo County covers 781 km, with 443 km of narrow roads, that is, road with a reserve of between 4-9 meters, while there is a total of 337 km 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 road<sup>6</sup>. Baringo has a RAI of 46.0 which is below the National Average of 70 per cent, indicating that access to transport in rural areas in Baringo is low (KRB,2019). This has adverse implications with regard to sectors that rely on accessibility such as agriculture, trade and overall development. Coupled with road condition mix discussed in section 1.6 where 63 per cent of the unpaved road are in poor condition, the transport sector in Baringo is a constraint to overall economic development.

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

### **6.1.2 Opportunities with COVID-19 in Transport Sector**

With reference to the 8-point stimulus programme by the National Government<sup>7</sup> and resources allocated to road development and maintenance, Baringo 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 programme<sup>8</sup> 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) approach<sup>9</sup> offers a strategic and cost-effective approach to improve rural accessibility in Baringo.

### **6.1.3 Emerging Issues**

The transport sector measures instituted in response to the pandemic saw an increase in fares charged to cover the operating costs of service providers as well as affecting mobility options for commuters. As a result of the COVID-19 pandemic, passengers using public transport services saw expenditure on transport increase by 66.0 per cent. Residents responded by changing their travel patterns with 27.5 per cent of the population travelling less often, while 19.9 per cent were unable to travel due to the pandemic.

### **6.1.4 Recommendations**

- i) Apply labour based and local resource-based approaches for road development and maintenance, where technically and economically feasible, in line with the Roads 2000 national policy<sup>10</sup>.
- ii) 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.
- iii) Identify a core rural road network for prioritization to improve the rural access index (RAI) from the current 46 per cent with a target to match the national average of 70 per cent.
- iv) Improve and expand infrastructure for Non-Motorized Transport (NMT) in urban areas and along roads with heavy -highspeed 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 Goals<sup>11</sup>.
- v) Adopt climate smart road engineering designs to safeguard road and bridge infrastructure from floods and to harvest storm water for irrigation and productive use.
- vi) Develop better synergies between car, bus, and non-motorized transport and between public and private transport within Baringo County. This will be integrated with the environment, selecting the most environmentally friendly solutions possible.

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<sup>7</sup> 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/>

<sup>8</sup> Roads 2000 programme <http://krb.go.ke/our-downloads/roads%202000%20strategic%20plan.pdf>

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

<sup>10</sup> Roads 2000 programme <http://krb.go.ke/our-downloads/roads%202000%20strategic%20plan.pdf>

<sup>11</sup> Sustainable Mobility for All: <https://sum4all.org/implementing-sdgs>

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## 6.2 Information and Communication Technology

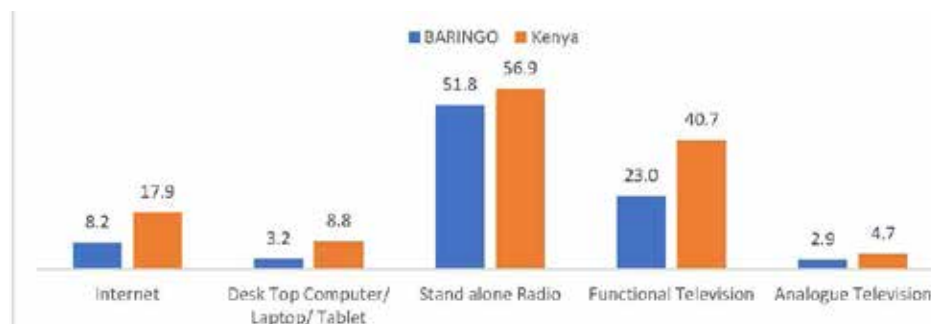
### 6.2.1 Characteristics of the Sector

At county level, ICT plays a catalyst role by supporting automation of service delivery for services that are devolved including health, education, agriculture, trade, education, transport and other socio-economic sectors. ICT systems are also pivotal in revenue collection and fiscal prudence by the different county departments. In addition, the Corona Pandemic has triggered an unprecedented demand for e-government solutions and presented a path to a transition a digitized future in service delivery.

Baringo County Headquarters Kabarnet is currently connected to the National Optic Fibre Backbone (NOFBI) II. This supports bridging the digital divide and presenting an opportunity for reduced cost of business, and spurring ICT product and services in the county.

The analysis of the 2019 KPHC reveals that only 8.2 per cent of the 141, 877 conventional households in Baringo County 'own' internet with 3.2 per cent owning a desktop, computer laptop or tablet. Baringo Central and Koibatek sub counties have comparatively higher ownership while Tiaty East and East Pokot have comparatively lower ownership of ICT devices and internet. Notably all the sub counties have comparatively lower than the national average internet ownership of 17.9 per cent and desktop computer/laptop/tablet ownership of 8.8 per cent. 51.8 per cent of the households own a standalone radio while, 23 per cent own a functional TV and 2.9 per cent own an analogue TV. 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.

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



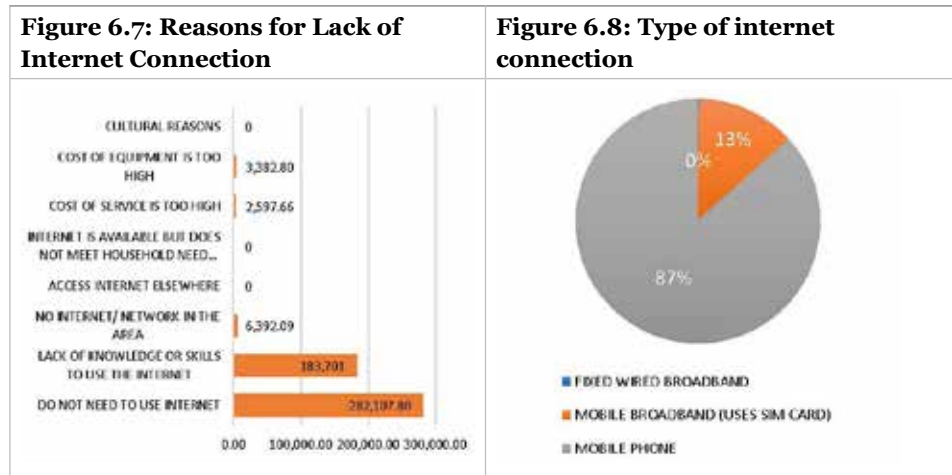
Source: KNBS (2019), Population and Housing Census

Online shopping is not prevalent in Baringo County. 7.2 per cent of the conventional households searched and bought goods/services online. There exists gender disparity in online shopping with more men (7.9%) than women (6.5%) undertaking online shopping.

The perception 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 Baringo do not have internet connection (KIHBS, 2015/16). Other key factors include the lack of internet/network in the area, and the high cost of service and equipment, figure 6.6.



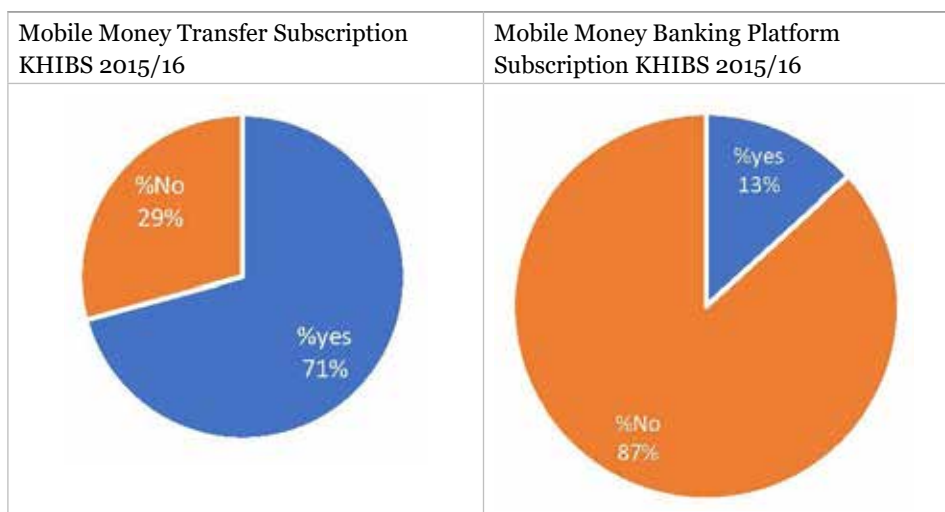
About 87 per cent of the internet users in Baringo County rely on mobile phone, with a marginal population relying on mobile broad that uses a sim card, figure 6.7.



Source: KHIBS 2015/2016

Only 35 per cent of the population 3 years and above own mobile phone, which is lower than the national average of 47.3 per cent. Mogotio, Baringo Central and Koibatek recorded a mobile phone ownership of 40 to 47 per cent while the other sub counties recorded mobile ownership of less than 40 per cent with East Pokot recording the least mobile ownership of 11.1 per cent. Consistent with the national trend, more men own mobile phones (35.9%) than women (34.1%). 71 per cent of the people in Baringo County have a mobile money subscription compared with only 13 per cent that has a mobile money banking platform subscription (KHIBS 2015/16), figure 6.8.

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



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

The county experience gender divide in ownership of internet and ICT devices as well as mobile money subscriptions. Both internet and ICT devices ownership was higher among the male with 17.8 per cent of the men and 12.8 per cent of the women using internet while 7.1 per cent of the men and 5.3 per cent of the women using Desktop/Laptop/Tablet (KPHC 2019). While the usage was below the national averages, the county recorded a similar gender disparity with the national averages in internet and ICT usage. This offers a platform for enhanced revenue collection through digitization of government services. The ICT infrastructure and services provide support to various sectors such as health, education, governance and security among others.

#### **Constraints faced**

- (i) Refocusing of CIDPs and Reallocation of funds to fund core sectors such as health, ICT and food security.
- (ii) Constraints in government revenue streams due to stalling or reduced business activities.

### **6.2.2 Opportunities with COVID-19 in ICT**

- (i) The county can benefit from the Universal Service Fund to enhance access to ICT.
- (ii) GOOGLE LOON and Telkom Kenya have launched the aerial balloons that transmit internet connectivity via wifi. This can help in improving access to internet services for households.
- (iii) Google Loon Internet enabling digital inclusion for remote unserved and under-served communities. The google loon have approximately 30 times greater than a ground-based system coverage.
- (iv) ICT systems for communications between the remote health clinics and county's referral hospitals and emergency services

### **6.2.3 Emerging issues**

Baringo County Headquarters Kabarnet is currently connected to the National Optic Fibre Backbone (NOFBI) II. Approximately 83.9 per cent of public primary schools are installed with ICT capacity under Digital Literacy Programme. That said, only 8.2 per cent of the conventional households in the county 'own' internet with 3.2 per cent owning a desktop, computer laptop or tablet. Further, only 7.2 per cent of the households participate in online e-commerce, with men participating more in online e-commerce (7.9%) than women (6.5%). Further, there is a gender divide in use of internet where 17.8 per cent male and 12.8 per cent of the women using internet.

### **6.2.4 Recommendations**

- i) 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 the low of 35 per cent to 100 per cent in line with the global agenda for Universal Access to Mobile Telephony<sup>12</sup>
- ii) Adopt programmes to ensure ubiquitous access to reliable and affordable internet (internet everywhere) by applying aerial and satellite-based communication technologies. Leverage technology as a powerful basis for innovation and productivity improvements in Baringo County particularly through digital solutions to business and policy challenges.
- iii) Negotiate with the public primary schools for community access to ICT infrastructure and collaboratively build and equip ICT innovation and incubation hubs in public schools. The IT personnel in public primary schools can be deployed to support the development of ICT competence and skills among the public.
- iv) 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. This is in line with the CIDP programme to facilitate internet connectivity, system utilization and ICT resource sharing in 85 County Offices and interlink all county entities by 2022.

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<sup>12</sup> Universal access to mobile telephony: <http://www.itu.int/itu-news/manager/display.asp?lang=en&year=2007&issue=07&ipage=universal-telephony>

- v) Make ICT a standalone sector for planning and budget allocation. This is aimed at giving strategic prominence to planning, budgeting and investment in ICT.
- vi) Develop and implement ICT policies and procedures to mitigate the cyber threats and 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.

## 7. Housing and urban development

Majority of households are headed by men (69%) compared to women (31%) in Baringo County (KIHBS, 2015/16). There are six urban centres in Baringo County with a total population of 65283, table 7-1. The urban land area covers 62 square kilometers with a population density of 1218 persons per sq.km

**Table 7.1: Distribution of population by urban centres by gender**

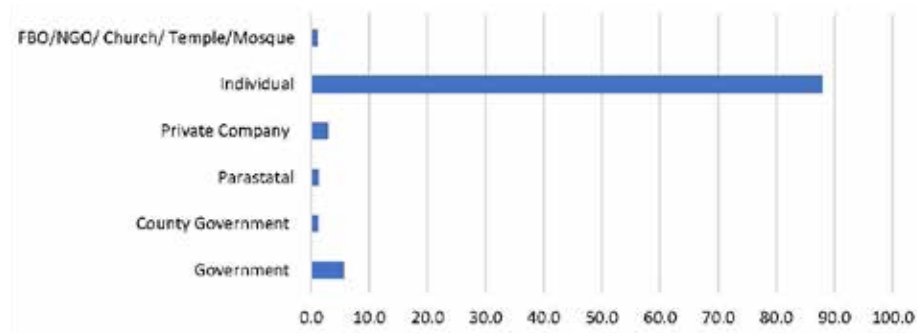
Urban Center	Total	Male	Female
Kabarnet	22,474	10,943	11,531
Eldama Ravine	21,385	10,482	10,903
Marigat	9,395	4,536	4,859
Maji Mazuri	5,138	2,640	2,498
Timboroa	4,744	2,359	2,385
Makutano	2,147	1,059	1,088

Source: KNBS, 2019- Kenya Population and Housing Census

### 7.1 Characteristics of the sector

The housing tenure in Baringo is predominantly owner occupied at 80 per cent, with 20 per cent of the households under rental tenure. Individuals are the primary providers of rental housing at 88 per cent, followed by private companies (3%); National Government (5.6%); Parastatals (1.3%); County Government (1.1); and FBO/NGO/Church based housing at (0.8%), figure 7.1. For those who own homes, 96 per cent constructed the houses while 1.6 per cent purchased the house and 2.0 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

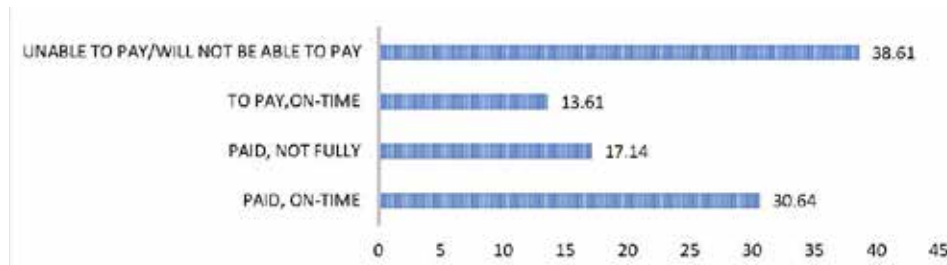
## Housing Quality

On average, the main dwellings of houses in Baringo have 1.92 habitable rooms against an average household size of 4.23 persons in a household, translating to approximately 2.2 people per room. According to the UN-Habitat, overcrowding occurs when there are more than three people per room<sup>13</sup>. In terms of housing quality (building material), 53 per cent of houses are constructed using finished materials for walls, floor and roofing compared to 47 per cent constructed using rudimentary materials (KIHBS, 2015/16). Majority of households (74%) have iron sheets for roofing, mud/cow dung walls (36%) and earth/sand floors (47%) (KNBS, 2019).

## Rent Payment

On average, rental households spend approximately Ksh 3784 on rent with a minimum of Ksh 700 and the maximum of Ksh 20000 (KNBS, 2020b). The county recorded a rent to income ratio of 12.29 per cent which is within the acceptable threshold of 30 per cent (KNBS, 2012/13).

**Figure 7.2: Has your household paid the rent for April 2020 on the agreed date**

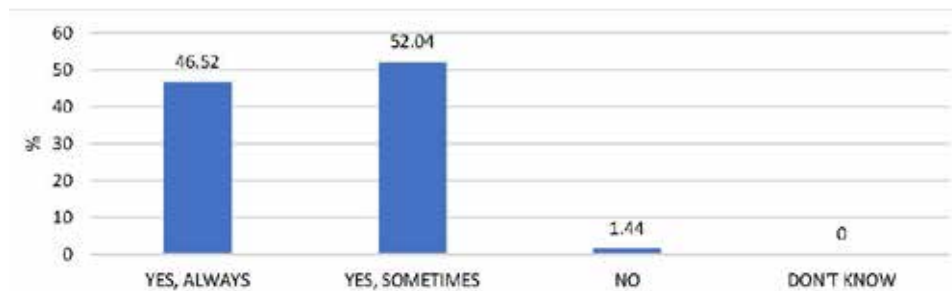


Source: KNBS COVID-19 Impact Survey 2020-Wave2

With the advent of COVID-19 pandemic, households' ability to pay rent has been affected, with 38.6 per cent of the population indicating inability to pay rent on the agreed date for April 2020, figure 7.2, compared to 46.5 per cent of the population that were able to pay rent on the agreed date and 52.0 per cent who sometimes paid rent on agreed date before COVID-19 pandemic, figure 7.3.

13 Household crowding measure: [https://www.ncbi.nlm.nih.gov/books/NBK535289/table/ch3.tab2/#:~:text=Overcrowding%20occurs%20if%20there%20are,per%20habitable%20room%20\(88\)&text=Crowding%20occurs%20if%20there%20is,%2Drooms\)%20\(89\)](https://www.ncbi.nlm.nih.gov/books/NBK535289/table/ch3.tab2/#:~:text=Overcrowding%20occurs%20if%20there%20are,per%20habitable%20room%20(88)&text=Crowding%20occurs%20if%20there%20is,%2Drooms)%20(89))

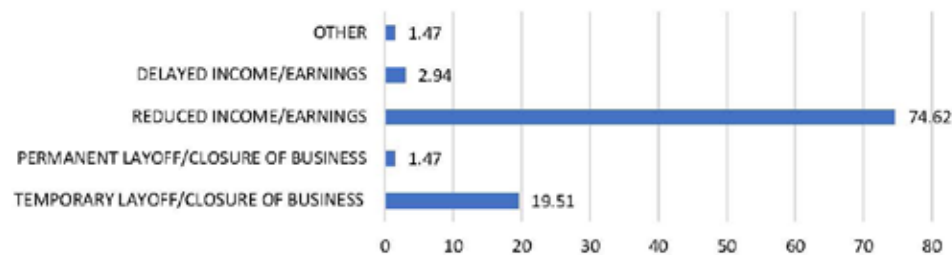
**Figure 7.3: Proportion of residents paying rent per terms of contract**



Source: KNBS COVID-19 Impact Survey 2020 wave 2

The main reason that has mad households unable to pay rent was attributed to reduced incomes /earnings, reported by 74.6 per cent of the population. The inability to pay rent was attributed to the COVID-19 pandemic by 92.7 per cent of the population, figure 7.4.

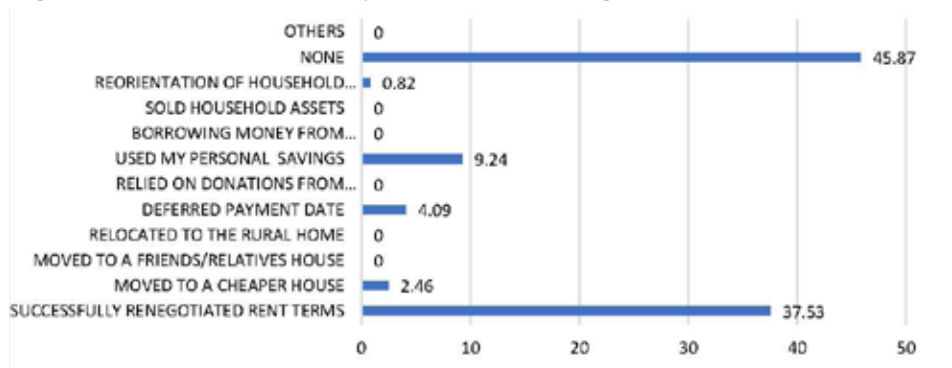
**Figure 7.4: Reasons for not Being Able to Pay Rent**



Source: KNBS COVID-19 Impact Survey 2020-Wave2

Majority of the households (85.7%) did not receive a waiver or relief on payment of rent from the landlord, with 6.7 per cent reporting a partial waiver and 5.1 per cent reporting a full waiver. To overcome the effects of Corona virus on payment on rent, majority 45.9 per cent of households did not take any measures while 37.5 per cent successfully renegotiated rent terms, and 9.24 per cent used personal savings to pay rent, figure 7.5.

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



Source: KNBS COVID-19 Impact Survey 2020-Wave2

### ***Energy source for cooking***

With regard to primary energy source for cooking, 96 per cent of households rely on unclean sources of energy for cooking such as firewood, kerosene and charcoal, which could adversely affect respiratory health of women and children.

## **7.2 Constraints and opportunities**

- (i) Housing inadequacy for the home-based isolation and care.
- (ii) Unclean energy sources could increase vulnerability to respiratory health complications
- (iii) House improvement and upgrade of houses using finished materials for roof, floor and walls.
- (iv) Enhancing access to clean energy – Mwananchi Gas Programme to access LPG for cooking; and Last Mile Connectivity project for lighting.
- (v) Majority of households own their homes, however, close to 40 per cent of these homes are constructed using rudimentary materials. This translates to inadequate housing conditions. The low access to clean energy sources is an issue of concern for the health and wellbeing of households in Baringo. It has adverse consequences on respiratory health.

## **7.3 Emerging issues**

Majority of households (80.0%) own the housing units they occupy while 20 per cent of the households under rental tenure. Individuals are the primary providers of rental housing at 88.0 per cent, followed by private companies (3.0%); National Government (5.6%); Parastatals (1.3%); County Government (1.1%); and FBO/NGO/Church based housing at (0.8%). With the advent of COVID-19 pandemic households' ability to pay was affected, with 38.6 per cent of the population indicating inability to pay rent on the agreed date. The main reason that made households unable to pay rent was attributed to reduced incomes / earnings, reported by 74.6 per cent of the population.

## **7.4 Recommendations**

- (i) Integrate the “build back better” principles into the pandemic recovery process to fit in resilience-building in County Spatial Planning.
- (ii) Fastrack implementation of the affordable housing programme with a focus on improving living conditions and building quality applying finished materials for walls, floors and roofing. This is in line with the CIDP programme to construct new housing units in Kabarnet and renovate existing housing stock.
- (iii) Undertake spatial planning of urban areas, and fast-track identification and designation of urban centres for upgrade (Kabarnet, Eldama Ravine and Marigat,



Chemolingot, Kabartonjo and Mogotio) pursuant to provisions of the Urban Areas and Cities (amendment) Act, 2019.

- iv) Collaborate with National Government, Physical Planning Department and Universities to train county staff to address inadequate technical staff-physical planners, surveyors and housing officers as identified in the CIDP.
- v) Adopt programmes aimed at an increasing household access to clean energy sources and technologies for cooking to mitigate against exposure to respiratory diseases.
- vi) Support financially the inaugurated Municipality Board to undertake its functions.

## 8. Tourism

### 8.1 Characteristic of the Sector

Tourism is one of the key economic sectors of Baringo County. There are numerous physical attractions including Lake Baringo and its 13 Islands, Lake Bogoria, Tugen Hills, Laikipia escarpment, Eldama Ravine sceneries, Korossi dormant volcano, Kapedo hot springs, and Kursalal falls located within Lembus forests. The county is also endowed with diverse wildlife, tortoises, large aquatic and terrestrial game, flamingos and ostriches found in the Ruko Wildlife Conservancy; Lake Bogoria national park; Lake Baringo conservation area; Lake Kam-narok national reserve; Ruko, Kaptuya, Ngenyin, Morop/Ta-rambus, Kimwochoch and Kiborit conservancies. Other tourist attractions include beekeeping, reptile park and birdwatching, cultural villages (e.g. Njemps village), Kabarnet National Museum and Kipsaraman Community Museum. The county is a melting pot of diverse cultures and Kenyan communities which reinforces its competitiveness as a tourist destination. However, cultural tourism is under-developed and under-exploited along with other under-developed tourist sites and products with great potential. Hence revenue collected is below potential.

In 2018, the county has 10 registered hotel facilities including Lake Bogoria hotel and Spa Resort, Papyrus Inn hotels, Soi Safari Lodge, Sportline hotel, Sinkoro hotel, Kabarnet hotel, Taidy's hotel, Chambai hotel and Lake Baringo Club with a total of 310 rooms and 602 hotel beds. This is a 22.4 per cent growth in bed capacity over the figure recorded in 2013. However, the county has underutilized potential for conference tourism. Lake Baringo has a variety of accommodation options to suite all tastes and budgets. There are several comfortable lodges and hotels set on the shores of Lake Baringo, including campsite, cottages and self-catering bandas for hire. In addition, there are 20 guesthouses in the county. However, none of the registered hotel facilities in the county are classified (star-rated).

Baringo County is known for beekeeping. Many women and youth groups are involved in producing, packaging and selling high quality honey through cooperative societies<sup>14</sup>, especially in honey-rich Radat and Marigat areas. Other activities include tour-guiding and working in hospitality in the lodges, cottages and hotels.

However, there still exist challenges to gender mainstreaming and participation of women in tourism activities in the county including:

- (i) Cultural practices that relegate females to the background
- (ii) Low literacy levels of girls
- (iii) Early marriages/teen pregnancies
- (iv) Dominance of males in all activities
- (v) Cultural practices that limits girls from participation in some sports

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<sup>14</sup>

Baringo County has an estimated total working population of 376,098 in the 15-64 age bracket. Out of those in wage employment, 56 percent are men and 44 per cent are women. Pending receipt of data from county on employment in the tourism sector, over 59 per cent of the labour force is engaged in small scale farming.

With regard to tourist numbers, the county registered a decline of 13.7 per cent in 2018 in total visitor numbers, which was mainly attributed to decline in 20.7 per cent decline in domestic tourists, although arrivals by foreign tourists grew by 61.1 per cent over the previous year.

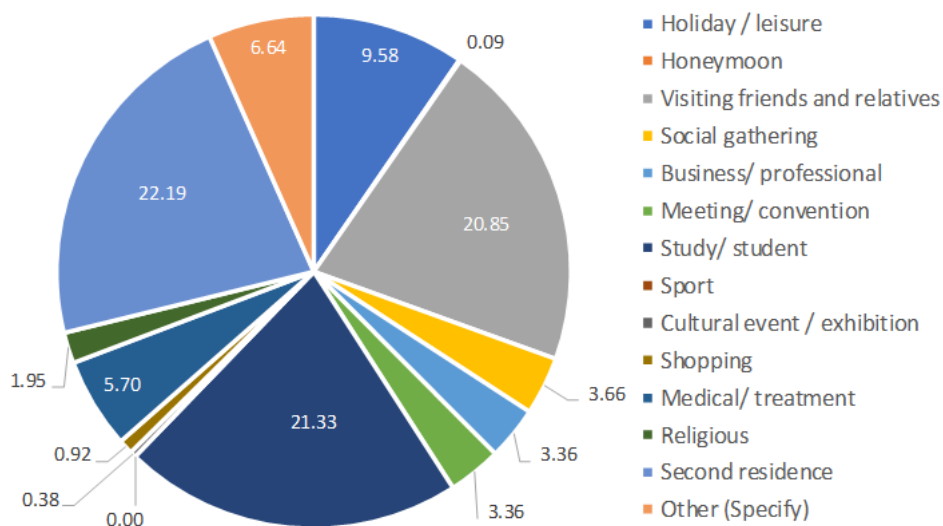
**Table 8.1: Foreign and domestic visits**

Year	Domestic	Foreign	Total	Growth (%)
2016/17	75,962	7,101	83,063	
2017/18	60,218	11,441	71,659	(13.73)

Source: Baringo County CIDP 2018-2022

The main reasons for travel within the county and country are attending school (21.33%); visiting friends and relatives (20.85%) and visiting to a second residence (22.19%). Limited time is spent on cultural or M.I.C.E tourism activities (figure 8.1), despite the county having diverse cultures.

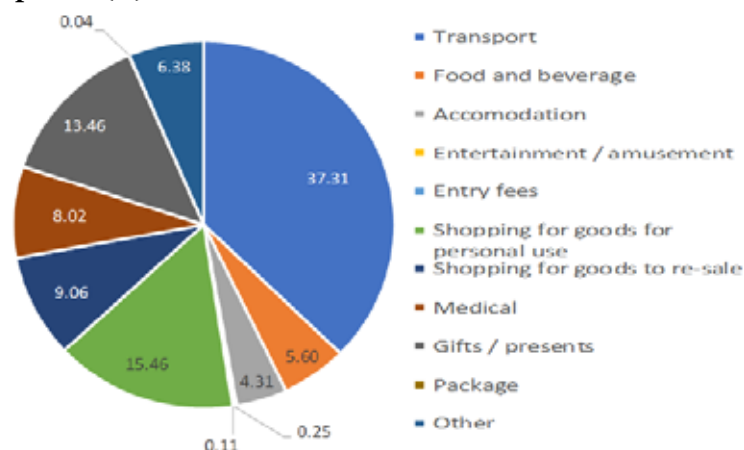
**Figure 8.1: Number of days spent on domestic tourism activities over a 3-month period (per cent)**



Data source: KIHBS Survey 2015/16

The average expenditure on domestic tourism activities per household in Baringo County is Ksh 5,022, main spent on transportation (37.3%); shopping for goods (24.5%); and purchase of gifts and presents (13.5%). Only 0.1 per cent and 4.3 per cent is spent on entry fees (e.g. to amusement parks, national parks and game reserves) and accommodation respectively.

**Figure 8.2: Household expenditure on domestic tourism activities over a 3-month period (%)**



Data source: KIHBS Survey 2015/16

The reasons advanced for not travelling or participating in domestic tourism activities are: attending school 32.19 (per cent); cannot afford to travel (26.42%); time constraint (19.31%); too old/young to travel (15.41%); no reason to travel (5.13%); health reasons (0.84%); and other reasons (0.7%).

Going forward, the county needs to invest more in packaging and promoting products targeting the domestic travellers (from Baringo and other counties), including repackaging cultural tourism. This will improve visitor arrivals in the county during the period of restricted global travel due to COVID-19 pandemic.

While Gross County Product (GCP) from accommodation and food services as accounts for a paltry 0.67 per cent of the total GCP, depicting low importance among other income generating activities in the County, in recent years, the total taxes, levies and fees collected from all county tourism establishments has grown by 40.7 per cent. This suggests that tourism has potential for even higher economic contribution.

**Table 8.2: Potential for revenue collection**

Year	Tourism revenue (Ksh 000)	Growth in revenue collection (%)
2015/16	44,298.390	
2016/17	62,320.050	40.68

Source: Baringo County CIDP 2018-2022

The raw materials for Baringo as a tourism destination include picturesque sceneries, lake-side 'beaches', folklore, monuments, archaeological sites, parks and game reserves, cultural artifacts and sport which need to be developed and marketed to different markets.

Culture and tourism have a mutually beneficial relationship which can strengthen the attractiveness and competitiveness of Baringo. The county is a melting pot of cultures and the many communities including the Pokot, Ilchamus, Tugen and a host of other Kenyan communities makes them ideal definition of social and cultural diversity. However, cultural

tourism is under-exploited along with other under-developed tourist sites and products with great potential. Hence revenue collected is below potential. These include conference tourism, water sports, excursions, hiking, guided tours, scenic drives, and cultural tours, villages and festivals.

The county has a total road network of 3824.42 km, out of which 12 per cent is paved and 88 per cent is unpaved. Of the unpaved road network, 63 per cent is in poor condition, which is a deterrent to accessing available tourism attraction sites. Furthermore, lack of star-rated (1 – 5 star) accommodation facilities is a hindrance to growth in tourism, in that tourists may prefer visiting attraction sites during daytime and seeking accommodation in neighbouring counties such as Nakuru with high-end hotels. This could also hinder development of M.I.C.E tourism product due to lack of suitable conference facilities to accommodate large number of participants.

Despite existence of cultural diversity in the county, existence of item-based rather than market-based tourism poses a danger to cultural and festival (showcasing cultural clothing, traditional homestead, folk songs and dances, traditional food, beads and jewelry) tourism development.

Tourism in Baringo County is linked to the forestry and fishing sector. Tourist hotels in the county benefit from supplies of fish sourced from Lake Baringo fresh-water lake. The fish is also a source of income for local community. Tourists enjoy fishing, boating, water sports (ski, windsurfing), camel rides and day trips to the nearby Lake Bogoria National Reserve. Lake Baringo hosts over 470 bird species including flamingos, hence providing a great opportunity for bird-watching. The lake and its rich biodiversity attract tourists, from which the hotels generate income. As direct beneficiaries, the hotels in turn participate in lake management, thereby also contributing to the sustainability of the lake which also helps to sustain their businesses.

## **8.2 Opportunities with COVID-19 in various sectors**

The tourism sector in the county has been paralyzed by the COVID-19 pandemic. The county has an opportunity to renovate infrastructure around the tourism attraction sites along with improving sanitation conditions. Other opportunities include:

- i) Providing incentives for investments in star-rated hotel facilities;
- ii) Promoting cultural festival tourism;
- iii) Promotion of domestic tourism to cushion county from decline in number of foreign visitors due to restrictions on travel attributed to the COVID-19 pandemic;
- iv) Implement WASH programme in and around tourism attraction sites and cultural events and market the county as a safe to visit (in terms of sanitation).

## **8.3 Emerging Issues**

Sanitation is becoming a key component in enhancing gains from travel and tourism, hence need to be enhanced in the county. Hospitality facilities will need to make regular cleaning and disinfecting a routine. Travelers are very much concerned about their health and safety and secure environment for their stay following COVID-19 outbreak.

## **8.4 Recommendations**

There is an opportunity to develop various under-utilized tourism products with potential to attract both foreign and domestic tourists centred around the scenic lakes and landscape, wildlife, water sports, cultural tourism, excursions, M.I.C.E tourism (and modern accommodation facilities), private/community conservancies as well as agro-eco-tourism tourism.

The recovery strategies include;

- (i) Develop a county tourism master-plan diversify into conference tourism, water sports, excursions, hiking, guided tours, scenic drives, and cultural tours, villages and cultural festivals.
- (ii) Development of tourism information centres; marketing the county as a tourist destination.
- (iii) Renovate infrastructure around the tourism attraction sites along with improving sanitation conditions.
- (iv) Provide incentives in establishment of star-rated accommodation and M.I.C.E facilities to leverage the rich endowment in scenic tourist attraction sites.

## 9 Health

### 9.1 Characteristics of the sector

In 2019/2020, the number of health facilities in the county was 279 which comprised of 270 primary health facilities and 9 hospitals. This was an improvement from a total of 169 health facilities in the previous year, 2018. The number of beds per 10,000 population is 12 against the WHO recommendation of 30 beds per 10000 population.

**Table 9.1: Health provision**

Year	2018	2019/20
Health facility density		
Primary health facilities	162	270
Hospitals	7	9
Number of health facilities	169	279
Health facility density	2.9	4.0
Bed density		
Hospital beds	816	824
No. of Beds per 10,000 population	12	12
Human resource density		
Total workforce	1,102	1,933
Human Resources for Health (Technical)	905	1,074
Number per 10,000 population	15.3	15.6

*Source: Ministry of Health (2021)*

The health facilities and personnel serve a growing population of 901,777 people according to 2019 census. In 2020, total health workforce was 1,933 representing 15.3 health workers per 10,000 population which is below 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	18.3
Government health centre	13.7
Government dispensary	52.9
Faith Based (church, Mission) Hospital / Clinic	4.4
Fhok/ Fpack Health	0.1
Private hospital / clinic	13.7
Nursing/ Maternity Home	0.0
Pharmacy/ chemist	0.0
Community health worker	0.2
Shop/ Kiosk	3.7
Traditional healer	0.0
Faith healer	0.0
Herbalist	1.0
Other	0.4
Number of Individuals ('000)	147

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 Baringo County residents who reported illness visited government dispensaries, 52.9 per cent followed by those who visited government hospitals/clinics at 18.3 per cent. 13.7 per cent of Baringo County residents who reported illness also visited government health centres and 13.7 per cent visited private hospitals/clinics.

### 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, 20.4 per cent of the county population has some form of health insurance cover. The National Hospital Insurance Fund (NHIF) is the leading health insurance provider reported by 96.3 per cent of the population. Employer contributory insurance cover was reported by 4.0 per cent of the population. Private contributions to insurance cover were reported by 7.1 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)	704
Share of population with health insurance (%)	20.4
NHIF	96.3
Private-Contributory	7.1
Private-Non-Contributory	0.0
Employer-Contributory	4.0
Employer-Non-Contributory	0.0
Other	1.4
Number of Individuals ('000)	144

Source: KIHBS 2015/16

### Place of delivery

In the 2015/16 KIHBS, women in Baringo 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 Baringo County. 40.5 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 is 42.5, 11.5, and 4.6 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 (%)
Hospital	42.5
Health Centre	11.5
Clinic/ Dispensary	4.6
Maternity Home	0.6
At Home	40.5
Other	0.0
Not stated	0.3
Number of Individuals ('000)	98

Source: KIHBS 2015/16

## Immunization for children

The 2015/16 KIHBS collected data on measles immunization for children below 5 years at; 9 months (Measles I) and at 18 months (Measles II). 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). In Baringo county, 39.7 per cent of the children aged 12-23 months were fully immunized against measles at 9 months while 14.3 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	57.4
	Yes, Not Seen	38.7
	No	3.9
	Not stated	0.0
Measles Vaccination	Measles I (At 9 months Card)	39.7
	Measles II (At 18 months Card)	14.3
	Measles II (Mother/ Guardian memory)	38.8
	Either (card or memory)	78.5
Number of Individuals ('000)		98

*Source: KIHBS 2015/16*

## Health outputs

A review of the health sector status as reflected by selected health indicators reveals mixed performance (Table 9.6) Life expectancy for Baringo County population was 58 years which was close to the National average of 59 years. Infant mortality, under-five mortality and maternal mortality rates for the county were relatively high. Similarly, the indicators for deliveries under skilled health workers (54%), latrine coverage (43%), and contraceptive prevalence (31%) indicate that more than half of the county population have limited access to skilled health deliveries, sanitation and reproductive health services. The county performed relatively better than national averages in terms of the prevalence of communicable conditions including HIV, Malaria and TB.

**Table 9.6: Health output indicators**

<b>Impact Level Indicators</b>	<b>Baringo County Estimates</b>	<b>National Estimates</b>
Life Expectancy at birth (years)	58	59
Neonatal Mortality Rate (per 1,000 births)	31	22
Infant Mortality Rate (per 1,000 births)	62	39
Under 5 Mortality Rate (per 1,000 births)	60	52
Maternal Mortality Rate (per 100,000 births)	374	362
County latrine coverage	43%	51%
Open Defecation Rate	70%	14%
Immunization Coverage	69%	68%
per cent of deliveries by skilled birth attendants	54%	61%
Contraceptive Prevalence	31%	40%
HIV Prevalence	1.3%	4.8%
Malaria (as per cent of all 1st outpatient visits)	11.8%	27.7%
TB Prevalence (in every 10,000 persons)	6	39

Source: KDHS, 2014; DHIS 2018

Regarding mortality for under 5 years, the major causes are lower respiratory infections, other conditions during the perinatal period, prematurity and low birth weights, malaria, protein allergy malnutrition, birth asphyxia and trauma, diarrhoea, meningitis. The risk factors associated with these conditions include anaemia, malnutrition as well as poor health-seeking behaviour, particularly on immunization. Across all ages, HIV remains the leading cause of death among those admitted in Baringo County. This is attributable to the lack of awareness of HIV status leading to late diagnosis and enrolment to care. Lower respiratory infections also account for a significant number of deaths owing to poor case management. Malaria mortality is due to poor uptake of mosquito nets. Tuberculosis is reemerging as a leading cause of mortality and morbidity due to a variety of factors such as overcrowding in school dormitories, poor immunity due to malnutrition and low socioeconomic status.

The main conditions causing morbidity; outpatient health facility visits and mortality in Baringo County across all ages were upper respiratory tract infections, malaria, skin diseases, and diarrheal diseases. The conditions are attributed to several risk factors in the environment in which the people of Baringo live in, such as inadequate water, and inadequate ventilation. The prevalence of injuries is attributed to poor road condition largely while malaria is attributed to seasonal flooding. An underlying factor across the conditions among populations with low socio-economic status include; low immunization coverage, lack of adherence to exclusive breast feeding, and poor nutrition.

In terms of inpatient morbidity cases, the main contributors to the burden are both communicable and non-communicable diseases such as diarrhoea diseases, malaria, pneumonia, peptic ulcers, hypertension, psychosis, poisoning, diabetes, anaemia, and road injuries. Notably, abortion is also a contributor to admissions indicating that there is gap in provision of family planning and other reproductive health services. The associated risk factors for other conditions include inadequate water, inadequate ventilation, lifestyle habits, poor health seeking behaviours, drugs, and alcohol abuse as well as inadequacies in diagnosis and treatment.

The county has 1,210 staff in the health services department distributed across the levels of the healthcare system. Of these (1,210), about 200 staff were recruited over the last five years by the county government in a bid to address the capacity gaps in staffing. The distribution of staff across cadres indicates that there are nine specialists, 19 doctors, 535 nurses, and 113 clinical officers. Distribution of staff across the sub-counties also reveals significant inequity on staff distribution for selected cadres.

There is still a gap in the numbers and skills of staff in the county health sector. Compared to the prevailing norms and standards, the gap is most pronounced for nurses at 191 and clinical officers at 104. The sector acknowledges that production has improved significantly which scaled up the capacity of health training institutions within and outside the county across a range of programs, and thus the major contributor to non-filled gaps is a budget constraint. Human resources in health department and facilities have acquired skills through on job training, workshops, and experiential learning and the capacity to perform the county health services continues to grow. However, gaps were acknowledged in the areas of specialty areas like rehabilitation, emergency care, and integrated management of child illness as well as support services like maintenance of specialized medical equipment. This includes in managing COVID-19 condition.

The health status of the County's population was on an increasing trend since 2014 following devolution and implementation of UHC interventions by the County. The share of fully immunized children in the county improved from 69.4 per cent in 2014 to 75 per cent in 2018. The number of women who had access to skilled delivery increased from 41.7 per cent in 2014 to 49.6 per cent in 2018 following the introduction of free maternity services in 2013. The sector has linkages with WASH, Agriculture and nutrition; electricity sectors.

The county proportion of stunted children of 29.5 per cent, wasted children of 6.9 per cent and underweight children of 20.2 per cent are higher than the national averages of 26 per cent, 4 per cent and 11 per cent respectively. The proportion of overweight or obese women in the county stood at 23.2 per cent, which is lower than the national average of 28.9 per cent.

The population of households with electricity was estimated at 9 per cent and most of the households use solid fuels thus putting the population especially children at higher risk of respiratory infection if the rooms are not well ventilated. Inadequate psychological support to the frontline health care workers working under undue pressure of increased patient load and inadequate PPEs. The frontline healthcare providers lack proper accommodation plans within the health sector thereby there is increased possibility of cross- infection to their families.

Under-nutrition is prevalent in some sections of the county such as Tiaty, East Pokot and Baringo North. Households adopt survival mechanisms of taking one to two meals especially in the pastoral and agro-pastoral zones in response to the challenge. Climatic conditions characterized by drought diminish pastures and browsers, and lead to tribal conflicts thus worsening the situation.

The county with a population of over 666,763 people covers a vast area mostly characterized by arid and semi-arid conditions. Residents travel an average distance of 10-15 kilometres to the nearest health facility and in extreme cases the distance goes up to 30 kilometres.

Health data is recorded at the facilities using tools (standardized forms, registers, cards, file folders, and summary forms), analyzed and shared either manually or electronically depending on the facility's level of computerization. For most health centres and dispensaries, that are not computerized, data is collected, analyzed, stored and transmitted to the next level manually. At the community level, the community health workers maintain registers of activities albeit with delays in providing updates. Notably, the level of reporting by private facilities has been poor perhaps because of apathy on the benefits that accrue from such reporting.

At all levels, the capacity to utilize the information generated for decision making has been challenged. These challenges are attributed to factors that include; the slow transition from manual to electronic medical records hindering accessibility of data and minimal capacity on the ICT system on the part of staff as they are computer illiterate. Additionally, there are inadequacies in ICT equipment and maintenance owing to limitations in funding dedicated to health ICT. Other factors include incidences of stock outs of health information system material (forms, cards), limitations in the management of power outages, limited system intra-and-interconnectivity, and poor information sharing across departments and facilities.

The county government continues to build the capacity of staff in data management. One of the priority areas identified is improving staff understanding of the indicators and documentation protocols and policies. The establishment of a county health department's M&E unit is one of the efforts the county is making towards enhancing the production of information products for supporting planning and decision making. The frequency and quality of data quality audits has also been flagged as a priority, as well as scaling up of the county's data systems including electronic medical records (EMR).

### **Effects of COVID-19**

Out of fear, the number of people seeking health services has gone down significantly impacting on the overall health outcomes. Health revenue stream have also reduced leading to Ksh 100 million declines. In terms of preparedness, however, the county has put in place measures to mitigate the pandemic, key of which is the use of community-based workers in undertaking sensitization of the public about the virus.

The county has put up 300- bed capacity in Mogotio and Marigat as advised by the national government through the ministry of health. To cut cost and to empower locals in the county, the county has embarked on innovative ways such as productions of mask locally. With collaboration with local polytechnic through the ministry of education, 60,000 masks have so far been produced at affordable cost of ksh 37 per mask thus saving the county more money.

Baringo County had incorporated a strong focus on outreach into their County Integrated Development Program. Their aim was to facilitate and run 60 outreach health facilities within the next five years. The county government recognizes that transformation will only be successful if it integrates healthcare financing, adequate human resources and proper data collection to inform the health interventions needed in the county to recovery from COVID effects.

It had also become difficult to conduct public health community interventions, notably community health promotion campaigns, door to door health campaigns and immunization campaigns. There is therefore potential for an increased threat of outbreaks of other diseases like cholera, air borne diseases as well as malaria and immunizable diseases such as polio. Access to other services like patient support centres (PSC) for People Living with HIV (PLHIV) is also at risk as people shy away from health facilities; causing another risk of likely surge in new HIV infections and reduced viral suppression.

In some of the sections of the county, community members also consult traditional healers on issues relating to retrogressive practices. Though anecdotally estimated to have minimal prevalence, such cultural beliefs influence health for example the way people seek health care and prevent illness.

Health System Strengthening building blocks have a critical role in the production of desired health outcomes and impact. This section analyses the status of the county health system building blocks - human resources for health, health infrastructure and equipment, health products and essential technologies, health financing, health information system, health leadership management and governance, and service delivery support systems. Key issues and priorities are identified for each of these blocks.

The overall availability of tracer drugs has improved over the five years, however, shortage of other drugs and medical supplies such as laboratory reagents, radiological supplies, and dental oxygen continue to afflict delivery of quality health services at county health facilities. The major contributing factors have been inadequate capacity in quantification and forecasting facility needs for drugs and other medical supplies; lengthy procurement process exacerbated by delayed reporting, order processing and delays in supplier payments, poor specifications, weak logistical information system and overall inadequacy and unpredictability of funding for medicines and medical supplies. There have also been instances of uncoordinated donations of medicines and medical supplies.

The county procures most of its pharmaceutical and non-pharmaceutical supplies from KEMSA and MEDS. Facility orders are generated monthly based on facility needs and past consumption; they are then compiled into a consolidated county order that informs quarterly replenishments August, November, February and May.

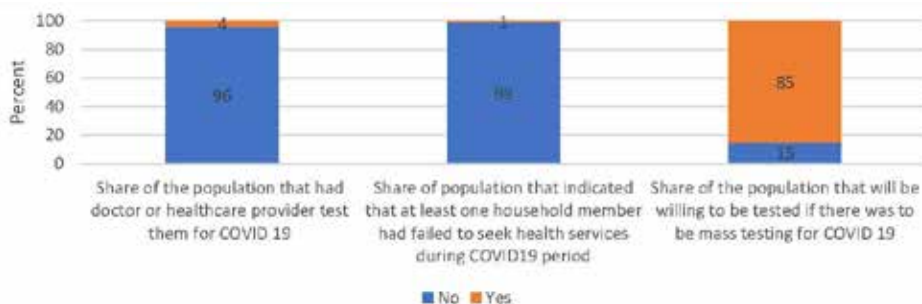
Generally, the vaccines for preventable early childhood diseases are available at all the immunizing health facilities and theatre supplies are available in the functional theatres in the county. However, the supply of laboratory commodities for specialized laboratory diagnosis at level 4 facilities is inconsistent. The delivery of laboratory and medical imaging services in support of the delivery of essential health package in Baringo County is significantly affected. Notably, the county government is putting up a bulk liquid oxygen supply unit at Baringo County Referral Hospital for the supply of oxygen to the hospital and other facilities within the county.

The absence of a robust online stock system to track status perhaps with close linkage to the services workload makes the estimation of requirements cumbersome and inhibits timely forecasting. At the same time, there are challenges with regards to therapeutics with nonessential prescriptions still made. The need to strengthen therapeutics committees and build capacity of facility staff on therapeutics is therefore imminent.

The key priorities in this area are strengthening capacity in quantification and forecasting; increasing budgetary allocation for health commodities and ensuring that emerging needs are addressed. For instance, rising burden of Hepatitis B calls for test kits for screening and vaccines; anti-snake venom for managing snake bites.

Share of the population that had doctor or healthcare provider testing or confirming to them the status in regards COVID-19 was estimated at 4 per cent in 2020 (COVID-19, Wave 2 survey). Further only 1 per cent of the population indicated that at least one household member had failed to seek health services and 85 per cent of the population indicated they will be willing to be tested if there was mass testing for COVID-19.

**Figure 9.1: COVID-19 Testing, 2020**



Source: KNBS, June 2020 COVID\_19 survey

## 9.2 Opportunities with COVID-19 in Health Sector

The Baringo County Government had in its plan of action under the Financial Year 2019/2020 to continue improving the health sector by enhancing the infrastructure needed to more support to the facilities across the county. COVID-19 has also provided an opportunity for the country to upgrade the facilities to have the capacity to undertake any eventuality. This will enhance the strengthening of referral system from primary care units and services in various health facilities. The county has the opportunity to exploit the benefits within the regional economic block as a market for her health services.

DANIDA Health Sector Programme Support III (Kenya) introduced Nomadic Clinics which can help handle community support for any emerging health issues including COVID 19 cases. The clinics offer basic health services such as immunization and skilled birth attendance. To ensure further outreach motorbikes are attached to each clinic and these are sent out into the community in special circumstances such as to ensure that children do not miss their immunization shots.

World vision has donated hundreds of water tanks, over 1000 liquid hand soaps, 700 litres of hand sanitizers and 10 fumigating equipment in a programme aimed at creating awareness on the need to do regular hand washing. The World Vision also partnered with the public health officials in the county to train and sensitize the public over COVID-19.

The Safaricom foundation has also handed over PPEs to benefit around 300 HealthCare Workers in two health centres and an isolation facility. The PPEs included N95 Masks, Surgical masks and protective clothing. The Kenya Red Cross in partnership with Safaricom foundation also supports the county in helping the households affected by flood.

### 9.3 Emerging issues

Hepatitis B and Snakebites are two emerging conditions which are of public health concern in the county. There is an upsurge of cases of Hepatitis B in the lowland areas of the county. Inadequate community awareness on the prevention of transmission of Hepatitis B is considered a contributing factor. Snakebite's incidences are also common and are attributable to human animal wildlife conflict. There is an acknowledged gap in capacity of health care workers to treat snakebites and lack of supply of anti -venom. This situation could be worse given that there is a limited number of health workers who can handle COVID19 hence implying expected demand for referral services.

Other causes of referral services were injuries and road traffic accidents; inadequate capacity in terms of specialized diagnostic equipment (MRI and CT Scan), and attendant specialized treatment (orthopedics and ICU care) are the main reasons for such referrals. The other most common cases of referrals relate complications in the County are chronic kidney diseases, broncho-pneumonia, intestinal obstruction, and acute anemia. Chronic kidney diseases require specialist care by nephrologists and renal nurses who offer dialysis. Whereas acute anemia is attributable to blood products shortages at the county referral facilities, these critical conditions do require a functional ICU and a blood transfusion unit which have yet to be completed and operationalized. The population of households with electricity was estimated at 9 per cent and most of the households use solid fuels thus putting the population especially children at higher risk of respiratory infection if the rooms are not well ventilated.

Health operation in Baringo County has been adversely affected by the pandemic. The ongoing pandemic has exposed the Baringo healthcare system in a number of ways:

- (i) There is acute shortage of Doctors, Nurses and specialists within Baringo County which could deal a massive blow in an effort to mitigate the virus.
- (ii) Most of the healthcare workers at Baringo County are not adequately trained on the management protocols of COVID-19 and infection prevention control.
- (iii) There are only two isolation centres in the whole county.
- (iv) Inadequate PPEs among the frontline healthcare workers working in high-risk areas.
- (v) Inadequate psychological support to the frontline HealthCare Workers working under undue pressure of increased patient load and inadequate PPEs
- (vi) The frontline healthcare providers lack proper accommodation plans within the health sector thereby there is increased possibility of cross- infection to their families



The county should strengthen preventative and curative health services through: malaria control; expanded programmes on immunization; integrated management of childhood illness; and control and prevention of environmentally communicable diseases.

To realize these new milestones, the county will need to address various challenges including: limited funds relative to health needs for the county including those associated with COVID 19; those for children and mothers; sexual and reproductive health needs for all; and access to medical and psychosocial support for survivors of Gender Based Violence (GBV).

#### **9.4 Recommendations**

There is need to 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 fear of contracting COVID-19 in event of visiting a health facility. 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.

- i) There is a gap in the numbers and skills of staff under the county health sector therefore there is need for the county to invest in employing more Doctors, Nurses and the health Specialists.
- ii) The County needs to adopt community health outreach programs to sensitize its members to adopt proper health seeking behaviours that could have been affected due to the stigmatization that comes along with the pandemic.
- iii) The county government, through the Department on planning, need to secure full board accommodation to the frontline healthcare workers to minimize cross-infection.
- iv) The county government needs to secure adequate PPEs to the HealthCare workers working in the high-risk zones.
- v) The county government needs to sensitize expectant women on the need to attend regular antenatal clinics for checkup and also the caregivers of children need to be sensitized on the importance of immunization.
- vi) There is a need to set up of isolation centres in all the six sub-counties within Baringo County.
- vii) The county government needs to focus on regular training of the Healthcare workers on various management protocols and infection prevention control across the levels of healthcare system in Baringo County.

#### ***Key Highlights***

Majority of Baringo County residents who had reported illness visited government dispensaries, 52.9 per cent followed by those who had visited government hospitals/clinics at 18.3 per cent. Approximately, the Government health centres and private hospitals/clinics had the same number of hospital visitations (13.7%) which was higher than county residents who had visited herbalists (1.0%).

In general, 20.4 per cent of the county population has some form of health insurance cover. The National Hospital Insurance Fund (NHIF) is the leading health insurance provider reported by 96.3 per cent of the population.

In the 2015/16 KIHBS, 40.5 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 is 42.5, 11.5, and 4.6 per cent respectively.

In addition, about 39.7 per cent of the children aged 12-23 months were fully immunized against measles at 9 months while 14.3 per cent were fully immunized against measles at 18 months.

## 10 Education and Training

### 10.1 General Characteristics of the Sector

#### General education provision in the county

Baringo County has a total of 900 pre-primary centres, 805 primary and 188 secondary schools. Infrastructure is in place to support water and sanitation efforts in learning institutions by the county. The county rolled plans to provide hand-washing facilities in all learning institutions. The county had also budgeted for the water tanks to be bought to enhance water supply within the county and more so the schools when they are re-opened. However, the main challenge is the urban dwellings hosting several informal settlements hence need to improve infrastructure to help in supporting sanitation and hygiene.

The county has 13 vocational training institutions with 48 teachers and enrolment of 1520 students in 2017. Low uptake of technical training, inadequacy of facilities, and inadequacy of training tools and materials in the county contributes to the low enrolment rates. The county teacher/pupil ratio of 1:29 remains higher than the standard 1:25, while the 444 ECDE classrooms are below the county requirement of 2,034 ECDE classes implying infrastructure constraints. Further the county experiences lower secondary and tertiary school transition rates due to inadequate social investment in bursaries to meet demand.

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

Gross Attendance Ratio (GAR) is 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. Table 10.1 presents the GAR by sex and schooling level for Baringo County. GAR for pre-primary school was 102.0 per cent while that of primary school and secondary school was 115.8 and 60.2 per cent respectively. The GAR for pre-primary school was higher for males, 107.6 per cent, compared to that for females, 96.8 per cent. The GAR for primary school was higher for males, 124.8 per cent, compared to that for females, 108.5 per cent. The GAR for secondary school was higher for females, 68.4 per cent, compared to that for males, 52.9 per cent.

**Table 10.1: Gross Attendance Ratio and Net Attendance Ratio by Educational Level in Baringo County**

Education Level	Gender	Gross Attendance Ratio	Net Attendance Ratio
Pre-Primary School	Male	107.6	76.7
	Female	96.8	66.4
	Total	102.0	70.5

Primary School	Male	124.8	85.9
	Female	108.5	80.5
	Total	115.8	82.9
Secondary School	Male	52.9	20.0
	Female	68.4	34.5
	Total	60.2	26.9

Source: KIHBS 2015/2016

### Basic education gross and net enrolment rate

The pre-primary gross enrolment rate in the county was 74.9 per cent in 2019 and while the net enrolment rate was 50.3 per cent. The Gross Primary and Secondary enrolment rates stood at 90.5 per cent and 70.0 per cent respectively in 2019 while the Net enrolment rates (NER) were 68.5 per cent and 39.7 per cent for primary school and secondary school respectively during the same period.

**Table 10.2: Gross and net enrolment rate (per cent), 2019**

<b>Pre-primary</b>	<b>2019</b>
Gross Enrolment rate (GER) (%)	74.9
Net Enrolment rate (NER) (%)	50.3
Gender parity index	0.97
<b>Primary</b>	
Gross Enrolment rate (GER)(%)	90.5
Net Enrolment rate (NER) (%)	68.5
Gender parity index	0.99
<b>Secondary</b>	
Gross Enrollment rate (GER) (%)	70.0
Net Enrolment rate (NER) (%)	39.7
Gender parity index	1.06

Source: KNBS (2022)

### 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 is 86.3 per cent with the male population more literate (87.7%) compared to their female counterparts (79.6%).

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

	<b>Ability to Read and Write</b>		<b>Percentage Distribution</b>	
		Literate		86.3
		Illiterate		15.1
		Not Stated		1.3
Male	Literate		87.7	
	Illiterate		12.0	
	Not Stated		0.4	
Female	Literate		79.6	
	Illiterate		18.2	
	Not Stated		2.2	

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 52.7 per cent of the population do not have any educational qualification. This is high than the national percentage of 49.7. Only 1.6 per cent of the population has attained university degree. The proportion of the population with CPE/KCPE qualification is 24.9 per cent and that of KCE/ KCSE qualification is 13.0 per cent.

## Highest education

**Table 10.4: Percentage distribution of population by highest educational qualification**

<b>Highest Educational Qualification</b>	<b>Percentage Distribution of Population</b>
None	52.7
CPE/ KCPE	24.9
KAPE	0.1
KJSE	0.1
KCE/ KCSE	13.0
KACE/ EAACE	0.1
Certificate	2.5
Diploma	2.1
Degree	1.6
Basic/post literacy certificate	0.0
Other	0.1

Not Stated	2.9
Number of individuals ('000)	724

Source: KIHBS 2015/16

Just over 16 per cent of the population in the county have secondary level education and above, those with primary education account for about 48 per cent while those without formal education stand at 16 per cent. Though the teacher pupil ratio in the county is relatively fair at 1: 27 for public schools, enrolment is at 85 per cent and gender parity index at 0.60 below the national average of 0.963. The HDI was estimated at 0.6 out of a maximum of 1; life expectancy was 63.8 years while Mean of Years of schooling was 7.9 years.

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

Educational Level	Gender	Percentage Distribution of Population 3 Years and above
Pre-primary	Male	10.4
	Female	11.5
Primary	Male	55.2
	Female	57.9
Post primary vocational	Male	0.5
	Female	0.2
Secondary	Male	23.1
	Female	19.5
College (Middle-level)	Male	5.0
	Female	5.9
University	Male	2.5
	Female	2.4
Madrassa / Duksi	Male	0.1
	Female	0.1
Other	Male	0.0
	Female	0.0
Not Stated	Male	3.3
	Female	2.5
Number of Individuals ('000)	Male	283
	Female	293

Source: KIHBS 2015/2016

According to the National Adolescents and Youth Survey (NAYS, 2014), drugs and substance abuse, child labour, absenteeism of teachers and students were the main education problems affecting young people. The participants attributed the problems to peer pressure among youth as well as poverty which leads to school dropout as students cannot afford school fees.

Just like other counties, many people in Baringo County lost their jobs because of the COVID-19 pandemic. Private schools were forced to lay off both teaching and support (casuals) staff because they could not sustain their salaries. Public schools faced challenges in making payment for the other expenses such as electricity, water and security bills. Apart from the other expenses, public schools could not pay teachers who were hired on contracts and were under boards of management.

Private schools in Baringo County were severely affected as a result of the COVID-19 pandemic because they could no longer receive income in form of school fees. Suppliers and vendors who sold their goods and services to schools lost their target market after the government ordered all schools to shut down.

### **ICT in education**

A total 533 public primary schools in Baringo County have been installed with ICT infrastructure and devices under the Digital Literacy Programme (DLP)<sup>15</sup> (ICT Authority, 2019). The infrastructure includes learner digital devices (LDD), teacher digital devices (TDD) and the Digital Content Server and Wireless Router (DCSWR). According to the national survey on gender-based violence (Health Action for Kenya-HAK, 2020), 3 cases of GBV were reported for Baringo County. Youth unemployment was also reported as a major challenge affecting the youth in the County.

The directive to close schools and all learning institutions as a way to curb the spread of the pandemic affected learning in pre-primary education, primary education, secondary education, Technical, Vocational Training Centers (VTCs) and University Education in the County. Students lost approximately an academic year at all levels. Staying long at home has far reaching implication on learners including such challenges as teen pregnancies and usage of drugs among the youth. However, in preparation for re-opening, the county has put elaborate plans to provide hand-washing facilities and enough water tanks prior to re-opening of schools in compliance with COVID-19 safety requirements.

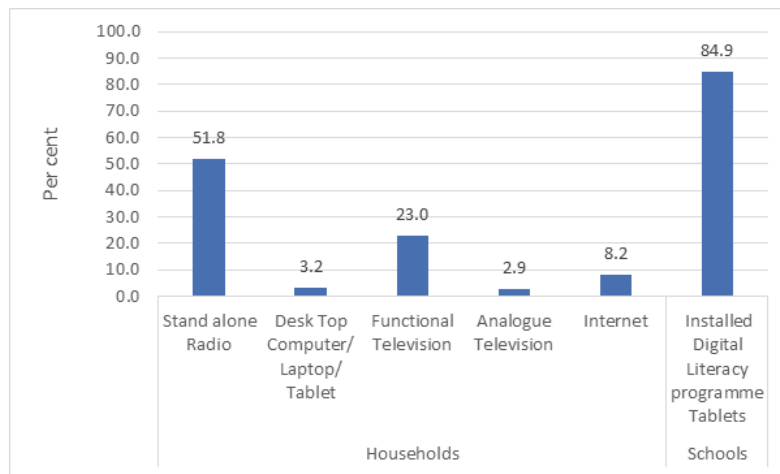
Closure of all schools has led to loss to learning time and teaching time. With the limited and poor quality of school infrastructures in place, the future of education to many of the majority poor in limbo should the schools re-open taking cognizance of the requisite guidelines. The e-learning program at home has too been strained because of limited access and capacity in ICT integration in education hence no learning for students in most homes during this COVID-19 pandemic.

### **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 vocational technical training centres (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.

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<sup>15</sup> Digital Literacy Programme <http://icta.go.ke/digischool/>

**Figure 10.1: Access to ICT in households and schools**

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

The pandemic brought an opportunity for the Baringo County Government and societies to continue investing in learning amidst the pandemic. This means revisiting response plans, shifting from emergency measures to chronic vigilance, adapting flexibility for hybrid learning by increasing network coverage, especially in the poorest households and continually upgrading ECDE and VTCs centres based on COVID-19 experiences.

### 10.3 Emerging Issues

The County with support from stakeholders to continue investing 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.

The county government is keen on enabling youths to leverage on ICT in skills as a driver for enterprise development. In this regard, the county is working with partners to roll out free Wi-Fi in all our urban centers, starting with Kabarnet and Eldama Ravine. This is fundamental if the county enables its resident to take up offshore business and employment opportunities and keep up with the contemporary world.

The County government with support from stakeholders to sustain investment in early childhood development through infrastructural development to allow for adequate social distancing when schools reopen; The county is also deploying more of ECDE teachers, proving of sanitation facilities and plans of enhancing school feeding programme.



## **10.4 Recommendations**

The county education sector focus was to enhance the quality and access to Early Childhood Development and Education (ECDE), promote high transition rates and promote tertiary education through Technical and Vocational Education Training (TVETs). However, this has been disrupted by COVID-19. Some of the strategies once schools reopen include provision of WASH, PPEs, feeding programme in ECDE sections, ECDE capitation grants, capacity building of ECDE teachers and staff and parents on effects of COVID19 awareness, and establishment of ECDE teacher's college. For primary and secondary education, the county needs to increase primary and secondary enrolment rates. For TVETs, the main objective is to fill the gap in training of middle level and technical employees through improved construction of new centres and incorporation of modern infrastructure. Concerted efforts will also be required to ensure adequate water provision in the learning institutions in the County. Specific recommendations include:

- (i) The County with support from stakeholders to continue investing 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 to 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 to 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) 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 to 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.

### ***Key Highlights***

About 84.9 per cent of public primary schools in Baringo County have been installed with ICT infrastructure and devices under the Digital Literacy Programme (DLP) (ICT Authority, 2019). The infrastructure includes learner digital devices (LDD), teacher digital devices (TDD) and the Digital Content Server and Wireless Router (DCSWR). The proportion of literate population in the county is 86.3 per cent with the male population more literate (87.7per cent) compared to their female counterparts (79).

In 2018 the county had 13 vocational trainings with an enrolment of 1,520 learners. The county has 13 vocational training institutions with 48 teachers and enrolment of 1520 students in 2017.

## 11 Social Protection

### 11.1 Characteristics of the sector

#### Sources of vulnerabilities in the county

Baringo County has a poverty estimate of 39.6 per cent against a national average of 36.1 per cent with severity estimate of 4.2 per cent in terms of extreme poverty. Hardcore poverty estimate is 8.5 per cent against a national average of 8.6 per cent; Food poverty estimate is 41.4 per cent against the national estimate of 32 per cent. These estimates indicate that there are still cases of extreme poverty in the county and that the general population is poor. In addition, the county has an estimated number of 8,666 PWDs (1.5%) and 3.6 per cent older persons aged 65 years and above of which 50.5 per cent are females (KNBS Census ,2019).

#### Severe shocks to the households

Severe shocks have had negative impact to the household's economic and social welfare of Baringo County residents. Table 11.1 presents the proportion of households by the first severe shock in Baringo County. Theft of livestock was experienced by 20.8 per cent of households followed by crop disease or crop pests at 19.0 per cent. Droughts and floods were the third most experienced shock at 16.7 per cent.

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

First Severe Shock	The proportion of households
Droughts or Floods	16.7
Crop disease or crop pests	19.0
Livestock died	11.5
Livestock were stolen	20.8
Household business failure, non-agricultural	1.7
Loss of salaried employment or non-payment of salary	3.8
End of regular assistance, aid, or remittances from outside the household	4.2
Large fall in sale prices for crops	1.7
Large rise in price of food	3.1
Large rise in agricultural input prices	0.3
Severe water shortage	4.0
Birth in the household	10.5

Death of household head	1.0
Death of working member of household	0.6
Death of other family Member	0.2
Break-up of the household	2.2
Bread winner jailed	0.4
Fire	7.7
Robbery / Burglary / Assault	0.6
Carjacking	0.1
Dwelling damaged, destroyed	0.9
Eviction	2.6
Ethnic/ Clan Clashes	1.2
Conflict	0.2
HIV/ AIDS	0.3
Other	4.8
Number of households with shock	140,000

Source: KIHBS 2015/2016

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 groups.

The county revenue collection declined as a result of outbreak of COVID-19. Closing of markets affected business activities and revenue collected by the county government. The county will therefore need to capitalize on other sources of revenue. The county also needed to diversify its source of revenue by engaging in other activities such as tourism. 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 likely to be affected.

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 among others. 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 an individual is informed of existing welfare schemes. Educated people were aware of the need 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 was the main source of revenue in the country and most of the counties and had potential of ensuring food security which is critical for the population's welfare. The

county's climatic conditions make it a key agricultural location. In light of the pandemic, subsistence farmers in the county discovered opportunities within the agriculture as majority of the population employed in other sectors such as private school teachers had to turn to agriculture for livelihoods. Agricultural sector also created employment opportunities among many county residents who would otherwise have been jobless. Trade and industry played 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 was used in feeding the family members as well as ensuring their future following the COVID-19 effects.

There are minimal efforts in social protection and human resources as more focus is on education, health and water. However, the county continues to monitor the situation as it plans to ensure markets are accessible to people to continue with their activities. Due to limited resources the county has no plans currently on employment benefits. Apart from waving the charges on licenses and market fees, the county has also undertaken to boost the Small and Medium Enterprises players with loans at low interest rates to get them revived. Those whose business has been adversely affected by COVID-19 are provided with food to cushion their families during the pandemic.

### **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, 35 per cent of the households received cash transfers. A higher proportion of households received transfers from within the country (69%), mainly from individuals (70%) while external transfers constituted 31 per cent.

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

	<b>Beneficiaries 2015/16</b>
Total Number of Households	152,000
Households receiving transfers (per cent)	35
From Inside Kenya: Individual	10,126
Non-Profit Institution	1,389
National Government	3,164
County Government	244
Corporate Sector	1,288

Inside Kenya	16,212
Outside Kenya	3,267
Total	19,405
Number of households that received transfers	53,000

Source: KIHBS 2015/2016

## 11.2 Opportunities with COVID-19 in Social Protection

The county set aside budget to fight the pandemic of which part of it was directed towards food items and water for vulnerable persons, estimated to be 200,000 persons. The pandemic brings opportunity to build more comprehensive social protection systems and joined up approaches within the county social protection sector (across social assistance, insurance and labour markets). To protect the vulnerable members, the county will identify new sources of finance while ensuring current financing is maintained in the face of intensified competition for limited funds.

In addition, the pandemic reveals an opportunity of progressively expanding social assistance coverage to include both pre-existing and newly poor and vulnerable populations, and ideally create a broader base of potential beneficiaries, to facilitate expansion and contraction in response to future crises.

## 11.3 Emerging Issues

The County Government of Baringo is committing to the development of sports infrastructure and is improving them further in the coming financial year. The department is investing in completing construction of Kabarnet Stadium, upgrading Eldama Ravine Stadium as well as the development of three athletics camps at Sirwa, Otany and Ossen. This, among other intervention like supporting our sporting teams and persons will go a long way in enhancing the development of young people on matters sports.

Furthermore, the department is making strides towards ensuring that more of old citizens and persons with disabilities (PWDs) are given support. So far, the County government through the Baringo persons with disabilities and elderly grant programme gives a monthly stipend of Ksh 2000 to 210 beneficiaries drawn across the County besides NHIF cover of Ksh 500 every month

## 11.4 Recommendation

- (i) Promote the Universal Healthcare Programme (UHC), to support the vulnerable communities and register them with NHIF to help them access health service at minimal cost.
- (ii) Build resilience and promote affirmative action for addressing challenges facing vulnerable groups; promote gender mainstreaming, protection and response against gender-based violence and involvement in all sectors.

- (iii) Extend sickness benefit coverage to all, with attention given to informal employment, the self-employed and vulnerable groups.
- (iv) Ensure basic income security, for persons whose jobs or livelihoods have been disrupted by the crisis, also coordinate social protection providers and strengthen linkages across various social protection interventions in the county.
- (v) Protect vulnerable groups in the population from health costs by enhancing NHIF coverage; improving knowledge of the existing insurance schemes to improve uptake; and subsidizing NHIF premiums for targeted vulnerable populations.

### **Key Highlights**

The County had an estimated population of 901,777 people of which of 8557 are living with disabilities (1.1%) and 3.7 per cent older persons aged 65 years and above. Overall poverty levels in the county were at 42 per cent, while 32 per cent and 30 per cent of the population were multi-dimensionally and food poor. The proportion of stunted children in the county was 29 per cent of the total population.

Baringo County has a poverty estimate of 39.6 per cent against a national average of 36.1 per cent with severity estimate of 4.2 per cent in terms of extreme poverty.

Food poverty estimate is 41.4 per cent against the national estimate of 32 per cent.

In addition, the county has an estimated number of 8,666 PWDs (1.5%) and 3.6 per cent older persons aged 65 years and above of which 50.5 per cent are females (KNBS Census, 2019).

## 12 Labour participation

### 12.1 Characteristics of the Sector

#### Sources of employment in the County

The economy of the county is mainly agro-based. The main food crops grown are maize, pigeon peas, beans, Irish potatoes, sweet potatoes, sorghum, cassava and finger millet while the cash crops are coffee, cotton, macadamia and pyrethrum. Livestock products include honey, beef, mutton as well as hides and skins. However, little value addition is done to these products.

The Honey production is mainly in Marigat which covers an area of 1,677.4 km<sup>2</sup> (KNBS, 2019), Baringo Central constituency to the west, Mogotio constituency to the south, Laikipia and Nyahururu constituencies to the east and east Pokot (Tiaty) constituency to the north east. The Honey production has alleviated poverty levels because of its favourable climatic condition, abundant natural flora, non-application of agro-chemicals, rich indigenous knowledge of local people, huge honey market locally.

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

	Male	Female	Total
Population	285,431	282,528	567,970
Working	135,615	137,885	273,503
Seeking Work/ No Work Available	16,907	11,696	28,604
Persons outside the Labour Force	132,891	132,922	265,820
Not Stated	18	25	43
per cent Working	88.9	92.2	90.5
per cent Seeking Work/ No Work Available	11.1	7.8	9.5

*Source: KNBS, 2019*

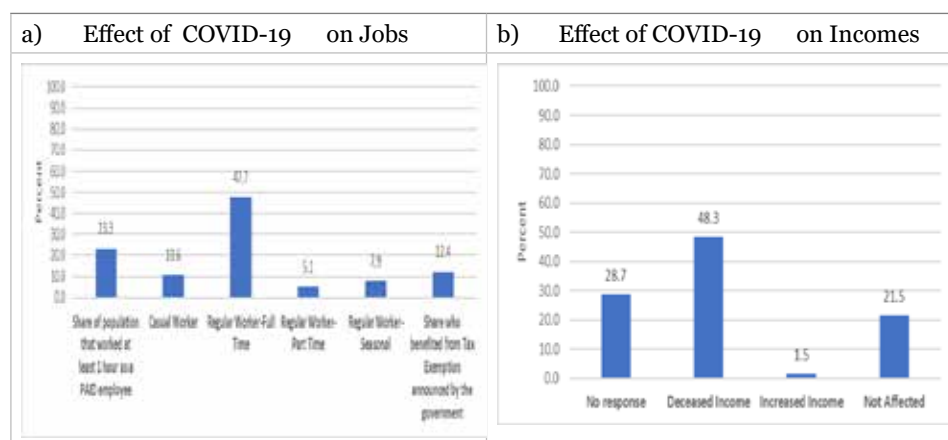
Distribution of Population Age 5 Years and above by Activity Status, and Sex in the County is shown in Table 12.1 above. The County population aged 15-64 years (labour force) was estimated at 302,107 people of whom 273,503 million were working and 28,604 were seeking work but work was not available representing an unemployment rate of 9.5 per cent (Kenya Population and Housing Census, 2019).

The economy of the county is mainly agro-based. The main food crops grown are maize, pigeon peas, beans, Irish potatoes, sweet potatoes, sorghum, cassava and finger millet while the cash crops are coffee, cotton, macadamia and pyrethrum. Livestock products include honey, beef, mutton as well as hides and skins. However, little value addition is done to these products.

## Effects of COVID-19

According to the May 2020 KNBS COVID\_19 survey data, 23.3 per cent of workforce in Baringo County work as paid employees; 47.7per cent were regular full-time workers while 5.1 per cent worked on part-time basis (Figure 12.1). Further, 76.7 per cent of the employees worked but for no pay. About 6.0 per cent of employees did not attend to work due to COVID-19 related issues. About 17.2 per cent reported that they had never worked and 59.5 per cent worked in the informal sector. On average, workers in the County lost 17 hours per week due to COVID-19. The pandemic led to loss of jobs with over 48.0 per cent of workers reporting a decrease in income, (May 2020 KNBS COVID\_19 survey).

**Figure 12.1: Effects of COVID-19, 2020**

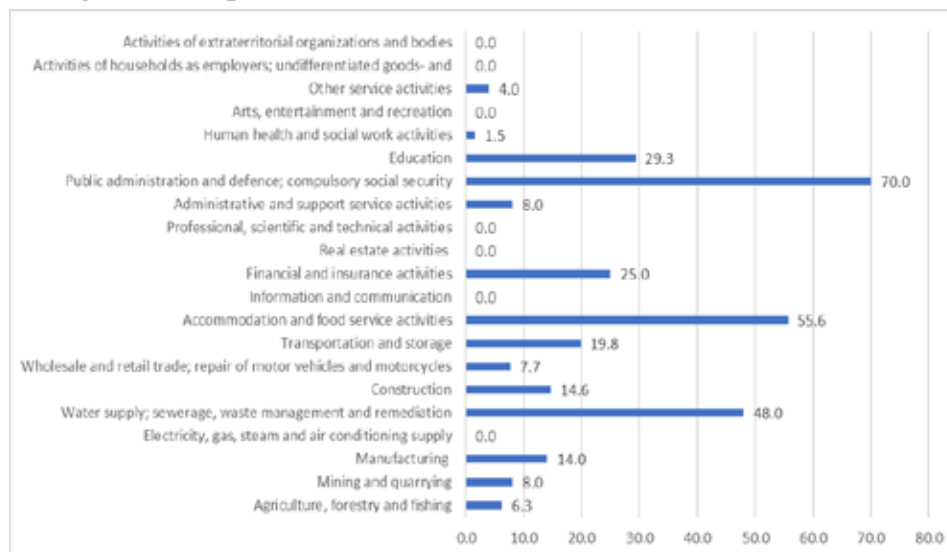


Source: May 2020 KNBS COVID\_19 survey

According to the May 2020 KNBS COVID-19 survey, public administration and defense; compulsory social services reported the highest level of loss of hours worked (70 hours per week). The high number of hours lost in administration and defense sector was in respect to the fact that most of workers in the sector were working beyond normal working hours and during weekends to enforce security in the areas prone to cattle raids and insecurity. Accommodation and food services activities lost an average of 55.6 hours in week (Figure 12.2). This is because there were many guests who were walking in and workers in the sectors were expected to work over longer hours in a day. Water supply; sewerage management and remediation recorded a loss of 48 hours per week while manufacturing sector and education reported a loss of 14 hours and 29.3 hours per week, respectively. The high number of hours lost in sewerage management and remediation sector above the expected 40 hours per week, imply workers in the sector were working overtime.



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



Source: May 2020 COVID-19 Survey

The average years of schooling was 7.9 years out of the target of at least 12 years if entire population was to attain basic education up to complete secondary education (KIHBS 2015/16). Human development index was 0.6 compared to 0.52 at national level and maximum of 1. This means the county lost about 40 per cent of her economic potential due to lack of adequate education and health. About 58.1 per cent of the children were stunted. Childhood stunting is associated with developmental delays that can significantly and adversely impact a person’s ability to learn (both during and after the years in school), thereby limiting their ability to reach their full potential. As such, this perpetuates inequality across generations.

The County has high gender inequalities and low women empowerment. The county will promote women’s empowerment through income generating initiatives and affirmative action programmes for better health outcomes for youth and women. Continued investment and partnerships in awareness raising initiatives towards ending violence against women and girls will promote social inclusion, leading to transformative development for the county.

As a result of pandemic, a large number of young energetic youths who are athletes has been forced to suspend their trainings and thus have resorted to menial jobs to sustain their livelihoods thus having a drawback on their source of income. Further, other Young boys have been recruited as perpetrators of cattle rustling and banditry.

Some of the challenges faced include:

- i) A large number of young energetic youths who are athletes has been forced to suspend their trainings and thus have resorted to menial jobs to sustain their livelihoods thus having a drawback on their source of income.

- ii) There have been cases of girls fleeing their homes in an effort to escape the harsh community customs on FGM.
- iii) Young boys have been recruited as perpetrators of cattle rustling and banditry.
- iv) Around 4000 people have been displaced due to floods caused when Lake. Baringo broke its bank.

There have been notable efforts by some NGOs such as the World Vision to train the Baringo women on soap making through the Livelihood and Resilience Programs thus enabling households to generate incomes. The challenge with such initiative was on the fact that most of the residents were unaware of the initiatives thus unable to effectively participate in the program.

### **12.2 Opportunities with COVID-19 in Labour Participation**

There have been notable efforts by some NGOs such as the World Vision to train the Baringo women on soap making through the Livelihood and Resilience Programs thus enabling households to generate incomes. The challenge with such initiative was on the fact that most of the residents were unaware of the initiatives thus unable to effectively participate in the program.

There is a greater opportunity within the NOREB region which needs to be exploited by the county. County leadership across needs move with speed in ensuring full operation of the block to enhance inter-county trade. This will also provide opportunities for sharing expertise across and expansion of human resource base.

The county government was 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

### **12.3 Emerging issues**

There has been reframing of the way the county government segment its workforces to include essential and frontline workers especially in health sector. As it continues, the county will consider long-term strategies to determine which changes will be temporary versus those that will be permanent.

With the widespread stay-at-home orders, most of county employers are adjusting operations and shifting workforces online, all of which have affected overall employee well-being. The County has high gender inequalities and low women empowerment. The County will need to promote women's empowerment through income generating initiatives and affirmative action programmes for better health outcomes for children, youth and women. Continued investment and partnerships in awareness raising initiatives towards ending violence against women and girls will promote social inclusion, leading to transformative development for the county.

The economy of the county is mainly agro-based. The main food crops grown are maize, pigeon peas, beans, Irish potatoes, sweet potatoes, sorghum, cassava and finger millet while the cash crops are coffee, cotton, macadamia and pyrethrum.

According to the May 2020 KNBS COVID\_19 survey data, 23.3 per cent of workforce in Baringo County work as paid employees; 47.7 per cent were regular full-time workers while 5.1 per cent worked on part-time basis (Figure 70). Further, 76.7 per cent of the employees worked but for no pay. About 6.0 per cent of employees did not attend to work due to COVID-19 related issues. About 17.2 per cent reported that they had never worked and 59.5 per cent worked in the informal sector. On average, workers in the County lost 17 hours per week due to COVID-19. The pandemic led to loss of jobs with over 48.0 per cent of workers reporting a decrease in income, (May 2020 KNBS COVID\_19 survey).

#### **12.4 Recommendations**

- i) Transform human capital outcomes for greater productivity through investing in health, nutrition and producing requisite skills for all sectors of the County economy.
- ii) County government to promote the implementation of a stronger labour market interventions and policy reforms that drive employment creation. The County will deepen technical education, training and skills development.
- iii) Ensure protection of incomes and jobs and promote decent work by using employment protection schemes and other mechanisms to support enterprises in retraining workers and providing income support to unemployed workers, as well as adapting public employment schemes to the effects of the pandemic on the labour force.

## 13 Conclusion and Key Recommendations

### 13.1 Conclusion

#### Fiscal policy

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. Total county revenue has significantly increased from Ksh 3.97 billion in 2013/14 to Ksh 8.69 billion in 2018/19 before a slight decline to Ksh 7.03 billion in 2019/20, an average annual growth rate of 12.8 per cent. Actual expenditure in the county doubled, rising from Ksh 2,810.7 million in 2013/14 to Ksh 6,324.2 million in 2019/20 before slowing to Ksh 4,596.0 million in 2020/21, an average growth rate of 9.1 per cent. Analysis of the annual OSR indicate that the county has maintained an increasing trend over the years save for 2019/20 and 2020/21. In addition, it has always achieved more than 80 per cent of its targets except for 2013/14 and 2020/21. In 2019/20, the county had raised Ksh 301.7 million, which is 76.7 per cent of the annual target. The collection was 16 per cent lower than Ksh 359.3 million collected in 2018/19, which may be attributed to the effects of COVID-19 pandemic experienced. During 2020/21, the County generated Ksh 205.20 million as OSR, representing a 32 per cent decrease from the amount realized in 2019/20. The low performance, similarly, may have resulted from economic disruptions occasioned by the effects of the COVID-19 pandemic, that affected economic activities across the country. Easing of containment measures and recovery of economic activities is expected to boost the growth OSR, going forward.

#### 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 COVID-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; land fragmentation; invasive species on crop and pasturelands; low adaptive capacity of farmers to Climate change ; low agro-processing and value addition opportunities; low access to quality and affordable inputs; low marketing opportunities; low access to major off-farm services including extension, climate and market information, and credit services; and 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, springs, and water from dug well, there are few households with access to piped water. To minimize the risks of households missing water, it's important to put in place measures to ensure protection of water resources for continuity of access to clean and safe water by households.

## **Manufacturing, Trade and MSMEs**

Baringo 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 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 public service vehicles (PSV) matatus followed by walking. Households reported a change in the cost of travel/commute due to the pandemic. Baringo has a Rural Access Index that is below the National Average, indicating that access to transport in rural areas in Baringo is low. The status of ICT access and use in the county is low, especially among households. Majority of internet users in Baringo County rely on mobile phone, with a marginal population relying on mobile broad that uses a sim card. The housing tenure in Baringo is predominantly owner occupied. The county has challenges in quality of the housing stock where close to half of the houses are constructed using rudimentary materials.

## **Tourism**

Tourism is one of the key economic sectors of Baringo County. There are numerous physical attractions including Lake Baringo and its 13 Islands, Lake Bogoria, Tugen Hills, Laikipia escarpment, Eldama Ravine sceneries, Korossi dormant volcano, Kapedo hot springs, and Kursalal falls located within Lembus forests. The county is also endowed with diverse wildlife, tortoises, large aquatic and terrestrial game, flamingos, and ostriches. Other tourist attractions include beekeeping, Reptile Park, and birdwatching. The county is a melting pot of diverse cultures and Kenyan communities which reinforces its competitiveness as a tourist destination. However, cultural tourism is under-developed and under-exploited along with other under-developed tourist sites and products with great potential. Hence revenue collected is below potential.

## **Health**

The county had improved its health status in some of key health indicators. The most affected groups during COVID-19 pandemic were the infant, young children, mothers, adults and elderly. For instance, the 72 per cent of children are fully immunized which below the expected national target of 90 per cent, 40.5 per cent of the mothers had accessed skilled delivery in 2018 while 23 per cent of children are still being born at home. It will be important for the County to address access to health care for improved health outcomes

## **Education and training**

Baringo County has a total of 900 pre-primary centres, 805 primary and 188 secondary schools. A total 533 public primary schools in Baringo County have been installed with ICT infrastructure and devices under the Digital Literacy Programme (DLP)<sup>16</sup> (ICT Authority, 2019). Infrastructures are in place to support water and sanitation efforts in learning institutions by the county. The county had rolled out plans to provide hand washing facilities in schools. About 85 per cent of public primary schools in the County had been installed with ICT infrastructure and devices under the Digital Literacy Programme (DLP).

## **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 had 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.

## **Labour participation**

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 stronger labour market interventions especially those working tea sector which is a major employer in the county and policy reforms that drive employment creation. The County shall deepen technical education, training, and skills development.

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<sup>16</sup> Digital Literacy Programme <http://icta.go.ke/digischool/>

## **13.2 Key Recommendations**

### **Fiscal policy**

To support effectiveness of spending at the county , the county to consider: ensuring that the on-going projects are completed before launching new project and clear any pending bills and arrears owed to suppliers; improve budget execution and absorption of development budget by harmonizing project implementation cycles to budgeting and fast-track exchequer releases; reduce expenditure on compensation of employees within the PFM requirement and monitoring and prompt payment of pending bills as they limit execution of planned activities in subsequent budgets.

### **Agriculture, Livestock and Fisheries**

To successfully build resilience and enhance growth of the agriculture sector, the County to: explore partnerships to develop agro-processing and value addition capacities at the County; promote drought tolerant production; link farmers to diverse product markets; strengthen the County's institutional capacity in disaster surveillance and management; strengthen water harvesting, sustainable and efficient irrigation; enhance farmers access to critical agricultural inputs and services and build their technical capacity to act on information obtained; improved standards of County roads; provision of storage and cooling facilities; and strengthen agricultural cooperatives.

### **Water sanitation and hygiene**

To build resilience and mitigate the effect of COVID-19, the county to; 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, and promote handwashing as a stop gap measure against COVID-19.

### **Manufacturing, Trade and MSMEs**

In sustaining growth in the Manufacturing, Trade and MSMEs sector, the County to: exploit the opportunity presented by the pandemic especially in production of essential goods such as masks, Personal Protective Equipment (PPEs), and sanitizers, disinfectants, canned foods, immunity boosting products, hospital beds and ventilators; Consider an emergency rescue package for businesses and traders hard-hit by the effects of COVID-19. 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 to inject some stimulus to cushion the businesses and traders through affordable credit; waiver of some County taxes, cess, and other charges; Adopt the new pandemic guidelines including rearranging floor plans to allow for social distancing in manufacturing establishments; Operationalize Cummins Power Co-generation Company

for renewable energy and Leverage on Public Private Partnerships to invest other sources of renewable energy; and Collaborate with the national government to ensure security is enhanced to reduce on crime and create a peaceful business environment.

### **Infrastructure, housing, and urban development**

In responding to the challenges faced in infrastructure, housing and urban development, the county to focus on increasing the share of unpaved roads in good and fair condition to above 62 per cent, which is the national average; support programmes that will increase mobile phone ownership; integrate the “build back better” principles into the pandemic recovery process to fit in resilience-building in County Spatial Planning.

### **Tourism**

There is an opportunity to develop various under-utilized tourism products with potential to attract both foreign and domestic tourists centred around the scenic lakes and landscape, wildlife, water sports, cultural tourism, excursions, M.I.C.E tourism (and modern accommodation facilities), private/community conservancies as well as agro-eco-tourism tourism. The recovery strategies include developing a county tourism masterplan diversify into conference tourism, water sports, excursions, hiking, guided tours, scenic drives, and cultural tours, villages and cultural festivals and renovating infrastructure around the tourism attraction sites along with improving sanitation conditions.

### **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. Under-nutrition is prevalent in some sections of the county such as Tiaty, East Pokot and Baringo North. Households adopt survival mechanisms of taking one to two meals especially in the pastoral and agro-pastoral zones in response to the challenge. There is need for the county government to support the nutrition programs such as school meal program, special milk program and establish Food Stamp Program improve the diets of people with low incomes in the county.

### **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.

### **Labour participation**

The county to 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 to 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 long term.

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