National Drought Management Authority

MERU (MERU-NORTH) COUNTY

DROUGHT EARLY WARNING BULLETIN FOR FEBRUARY 2021

A Vision 2030 Flagship Project

FEBRUARY 2021 EW PHASE

Drought Situation & EW Phase Classification

Biophysical Indicators

Rainfall: Below normal average rains were recorded across the livelihood zones with erratic and unevenly distribution in terms of time and space.

Vegetation condition: Above normal greenness condition was recorded in Igembe central and Tigania west, while Igembe central and Tigania East recorded normal greenness. Pasture condition ranged from good to fair in the Rain fed and Mixed farming livelihood zones while in the Agro Pastoral livelihood zone the condition was fair to poor. Browse condition was good to fair across all the livelihood zones.

Socio Economic Indicators (Impact Indicators)

Production Indicators: harvesting of maize as farmers were doing land preparation for the long rains. Livestock body condition was good for small stocks, for the cattle it was good to fair. There were no cases of reported livestock diseases. There were both internal and external livestock migrations.

Access Indicators: Average return distance to water sources for household and grazing areas significantly increased. Terms of Trade remained favorable. Milk consumption per HH per day remained stable.

Utilization Indicators: Nutritional status of children below the age of five years was within the long term average. Household food consumption score fell within acceptable band while coping strategies employed by households significantly decreased across the livelihood zones.

Early Warning Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming	Normal	Deteriorating
Agro - Pastoral	Normal	Deteriorating
Rain Fed Cropping	Normal	Stable
County	Normal	Deteriorating
Biophysical Indicators	**Value**	**Normal Range/ Value**
Rainfall (% of Normal)	73	80 - 120
VCI-3Month	56.18	35 - 50
Production indicators	**Value**	**Normal**
Maize Crop Condition	Fair	Good
Livestock Body Condition for cattle	Good to fair	Good
Milk Production per HH/ day	1.9	1-2Litres
Livestock Migration Pattern	Internal and external migration	Normal
Access Indicators	**Value**	**Normal**
Terms of Trade (ToT)	137	121
Milk Consumption per HH/ day	1.4	1.4 Litres
Return HHs distance to water sources	5.5	7.7 Km
Water source return distance from grazing areas	9.2	9.9 Km
Cost of water (20 litres)	Kshs 2.00-3.00	Kshs 3.00 - 5.00
Utilization indicators	**Value**	**Normal**
Nutrition Status, MUAC (% at risk of malnutrition)	G 99.3%, Y= 0.7%	0
Copying strategy Index(CSI)	9.96	<15

▪ Short rains harvests ▪ Increased HH Food Stocks ▪ Short dry spell ▪ Reduced milk yields ▪ Land preparation	▪ Planting/Weeding ▪ Long rains ▪ High Calving Rate ▪ Milk Yields Increase	▪ Long rains harvests ▪ Increased HH Food Stocks ▪ A long dry spell ▪ Land preparation ▪ Kidding (Sept)	▪ Short rains ▪ Planting/weeding

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1. CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- Rains received within the first and second dekad of the February was below normal.
- The rains received were erratic and poorly distributed across all the livelihood zones
- The sentinel rainfall stations recorded zero rainfall.

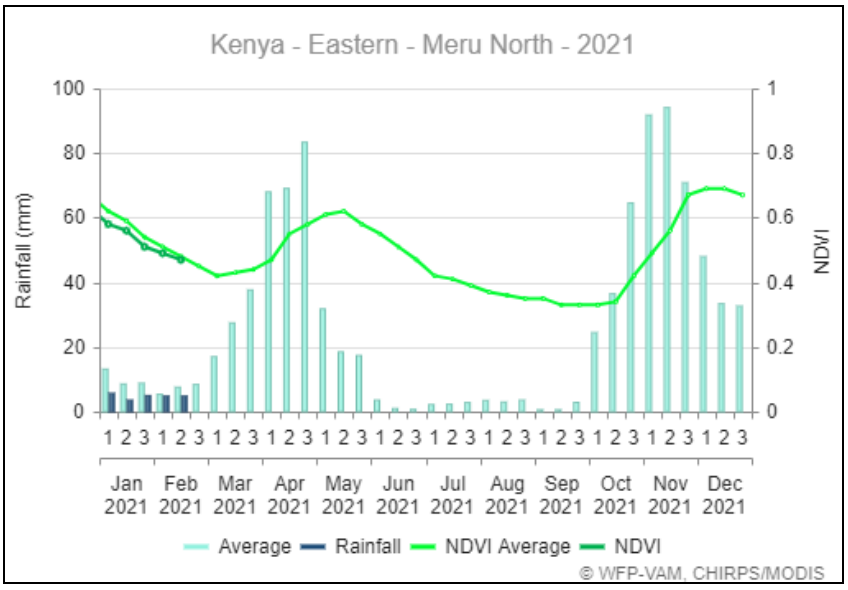

Figure 1: Rainfall estimates in Meru North

- From the figure 1 shown above, dekadal rainfall for estimate (RFE) amounts for the first and second dekad was below normal when compared to their respective long-term averages. The County received an average of 4.7 mm of rainfall in the Month of February compared to normal average amount of 6.4 mm for the same period.
- Normalized Difference Vegetation Index (NDVI) for the first and second dekads were normal when compared to their respective long term dekadal NDVI values.

2. IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

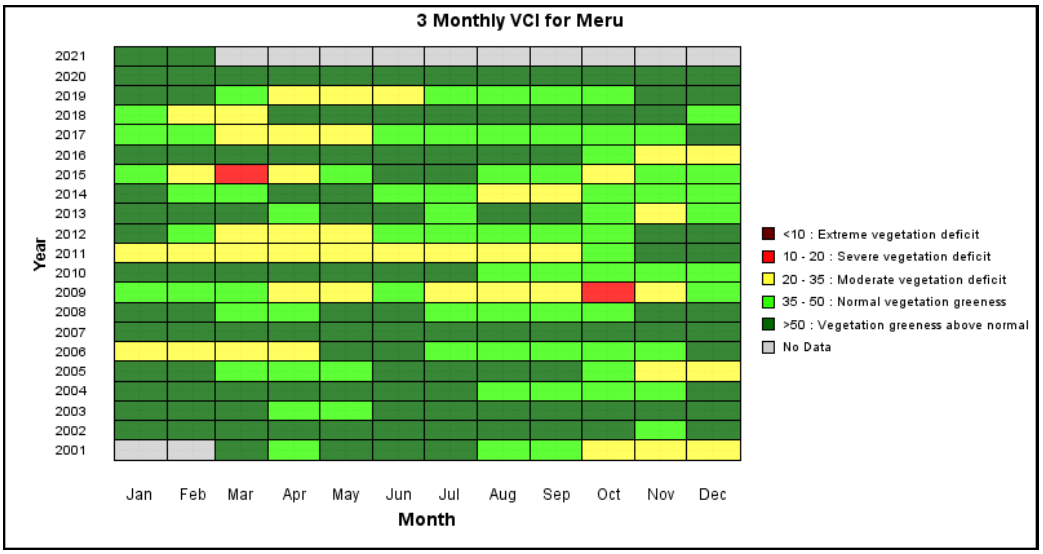

Figure 2: Three-monthly VCI for Meru County [Source: MODIS Data]

- From the figure {2} shown above, the County vegetation condition in the month under review is within vegetation greenness above normal as depicted by a vegetation condition index (VCI).
- Igembe Central and Tigania west Sub Counties depicted vegetation greenness above normal while Igembe North and Tigania East depicted normal vegetation greenness.
- The combined 3-month Vegetation Condition Index (VCI) was at 56.18 compared to 57.8 recorded previous month of January.
- The 3-monthly vegetation condition index for Meru Igembe Central was at 52.09 Igembe North at 44.78, Tingania East at 45.26 while that of Tigania West was at 61.45.

2.1.2 Pasture Condition

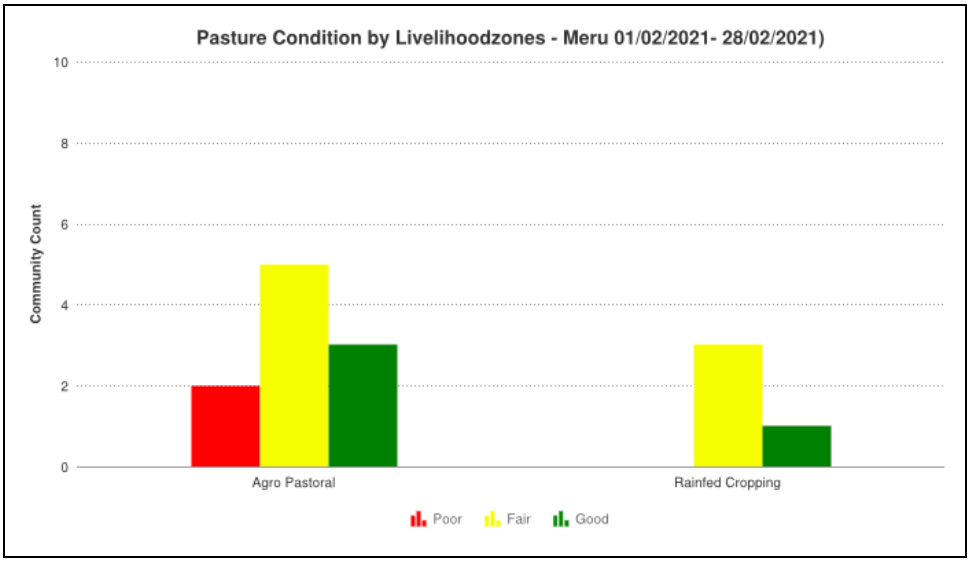

Figure 3: Pasture condition in Meru County

- The pasture condition ranged from good to fair in the Rain fed and mixed farming livelihood zones. In the Agro pastoral livelihood zones the condition was fair to poor. The offseason rains received revived pasture condition in some parts of agro pastoral areas of Tigania

west. The Agro pastoral livelihood zones recorded poor condition in the areas of: Ndubai and Rikiau of Igembe Central and Ntululi in Tigania West.

- The deterioration was due to onset of the dry spell.
- The pasture condition remains below normal at this time of the year.
- The available pasture is estimated to last for 1-2 months in the mixed farming and rain fed livelihood zones, while in the Agro pastoral the pastures will not last more than a month.

2.1.3 Browse

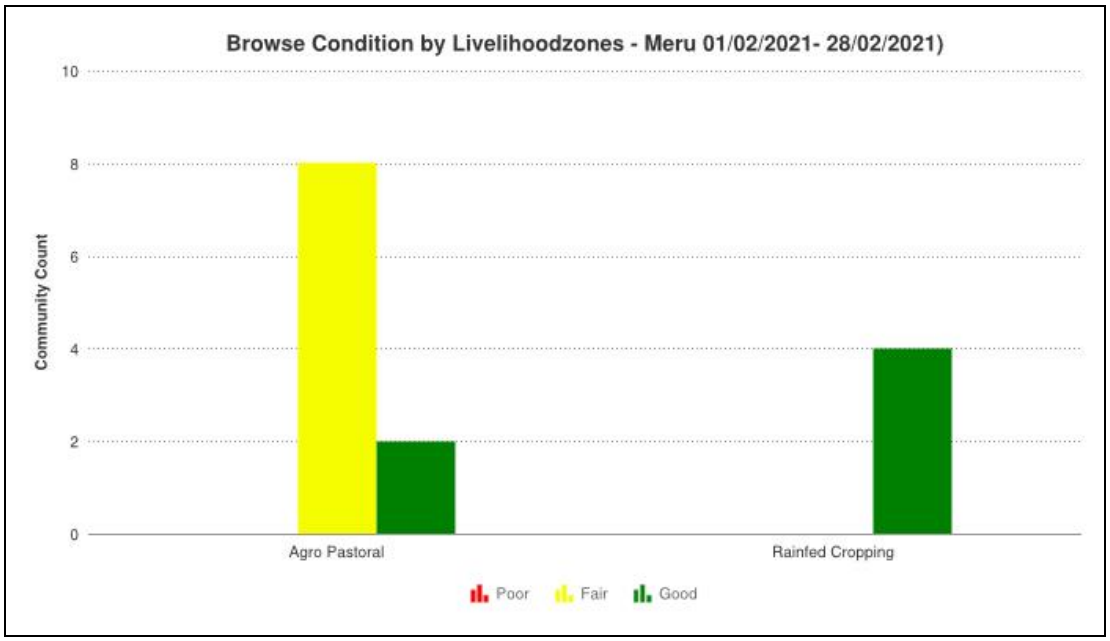

Figure 4: Browse condition in Meru County

- The browse condition was good to fair across all the livelihood zones.
- The browse condition is normal at this time of the year and is estimated to last for 2-3 months.

2.2 WATER RESOURCE

2.2.1 Sources

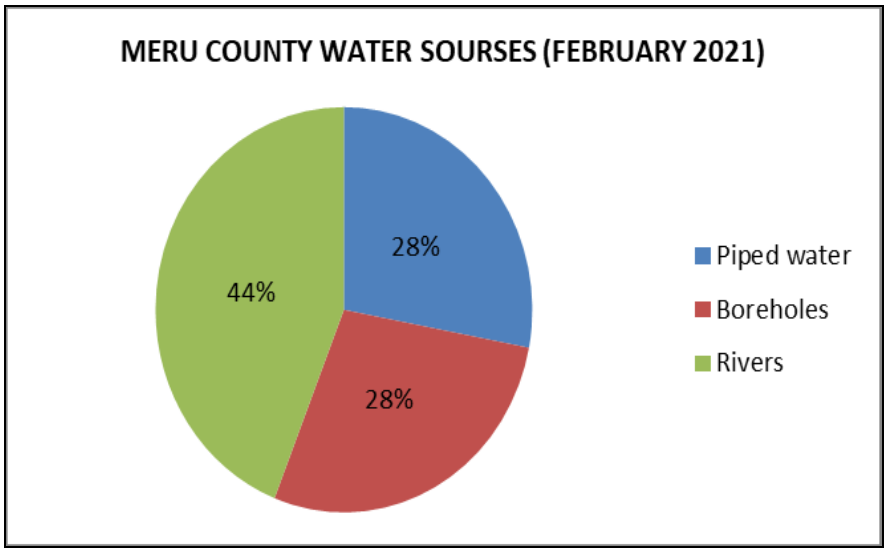

Figure 5: Water sources for Meru County

- From figure 5 shown above, the three main sources of water within the period under review were; rivers, boreholes and piped water. Other sources included; pans and dams, springs and shallow wells which were also relied upon as major water source during the review period. In the Agro pastoral livelihood zones in areas of Kachiuru in Igembe North, households relied on water trucking/ vendors as source of water.
- The quality of water in boreholes was good while that of rivers and other surface sources was poor due to ground rain water run-off.

2.2.2 Household Access to Water

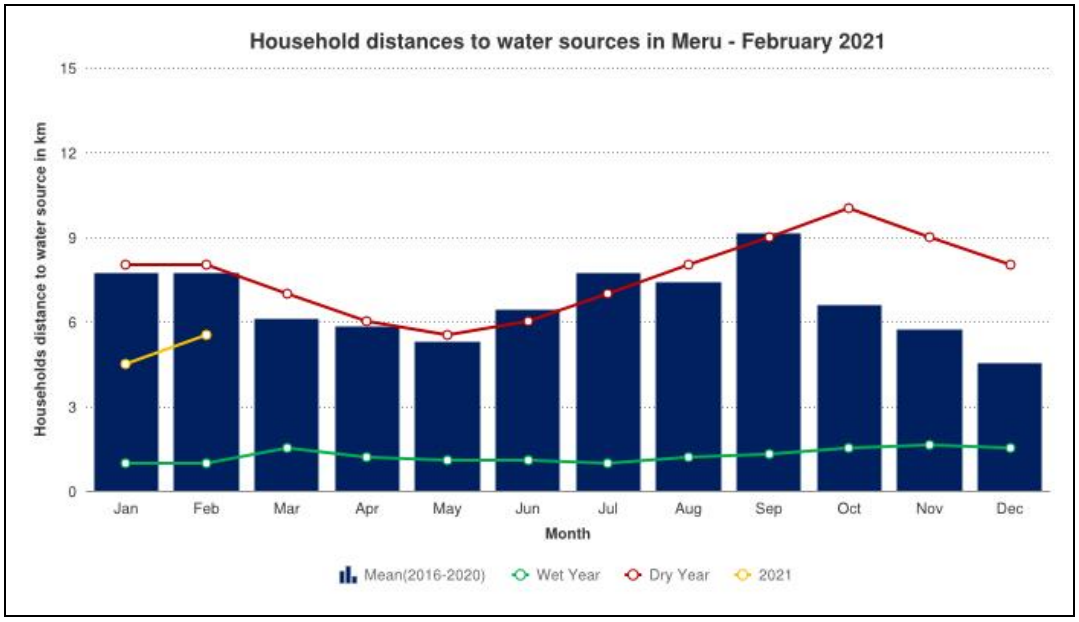

Figure 6: Household average distances to water sources

- From the figure {6} shown above, the average return distances to household water sources slightly increased to 5.5 kms compared to previous month 4.5 kms. The increase is attributed to drying up of water sources and breakages of boreholes.

- When compared to similar periods, the current household water distance of 5.5 km is 28.5 percent shorter than the long term average.
- The current average water consumption across all livelihood zones is 15-20 litres per person per day which is normal.
- The average cost of 20 litre jerry can at water kiosks was ranging between Kshs 3.00 to Kshs 5.00 which is normal at this time of the year. However in Kachiuru in Igembe North households where households depend on vendors, the average cost of 20 litre jerry can ranges between Kshs 30-Kshs 50.
- Based on key informant and households interviews, 45 percent of households treat water. Treatment of drinking water was by use of chemicals and boiling.

2.2.3 Livestock Trekking Distance to Water Sources from Grazing Areas

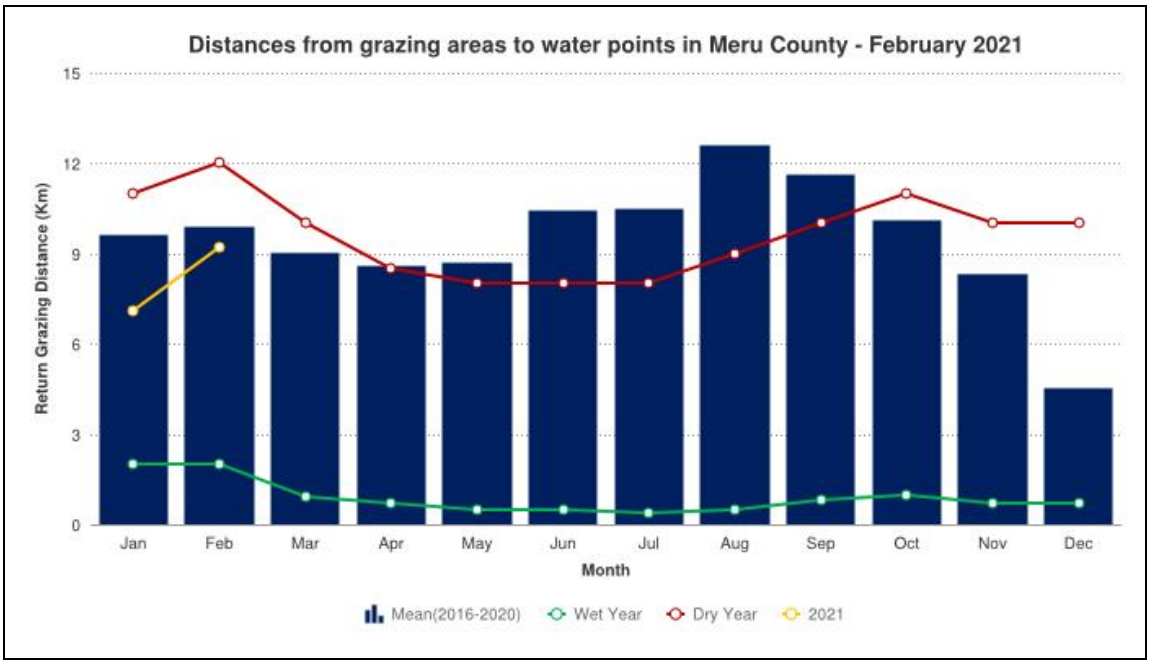

Figure 7: Livestock average return distances to water sources

- From (Figure 7) shown above, the average return distance to water source from grazing areas significantly increased to 9.9 km when compared to the preceding month's distance of 7.1 km.
- The increase was due to increased distances to grazing areas in search of pasture and drying up of water pans and dams.
- The watering frequency for livestock was on daily basis in the mixed farming and rain fed livelihood zones, while in the agro pastoral livelihood, watering frequency was on alternate days.
- The current average return distance to water sources was normal compared to long term average.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The body condition of the small stock was good across all the livelihood zones. For the cattle the condition was good across the Rain fed and mixed farming livelihood zones while in the agro pastoral livelihood zone the condition was good to fair. This is normal when compared to similar periods.
- The livestock body condition is expected to deteriorate occasioned by the dry spell and deteriorating pasture and browse condition.

3.1.2 Livestock Diseases

- No livestock diseases were reported in the period under review
- During the reporting month, the County government conducted ring vaccination for FMD, Rabies and Anthrax.
- Routine surveillance measures by the County government continued in the month under review.

3.1.3 Livestock Migration

- There were internal and external migrations of livestock mainly cattle goats and camel within the reporting month.
- The migration was mainly from Isiolo Migration route Kinna- Kinanduba- Kisimani – Tharaka.

3.1.3 Milk Production

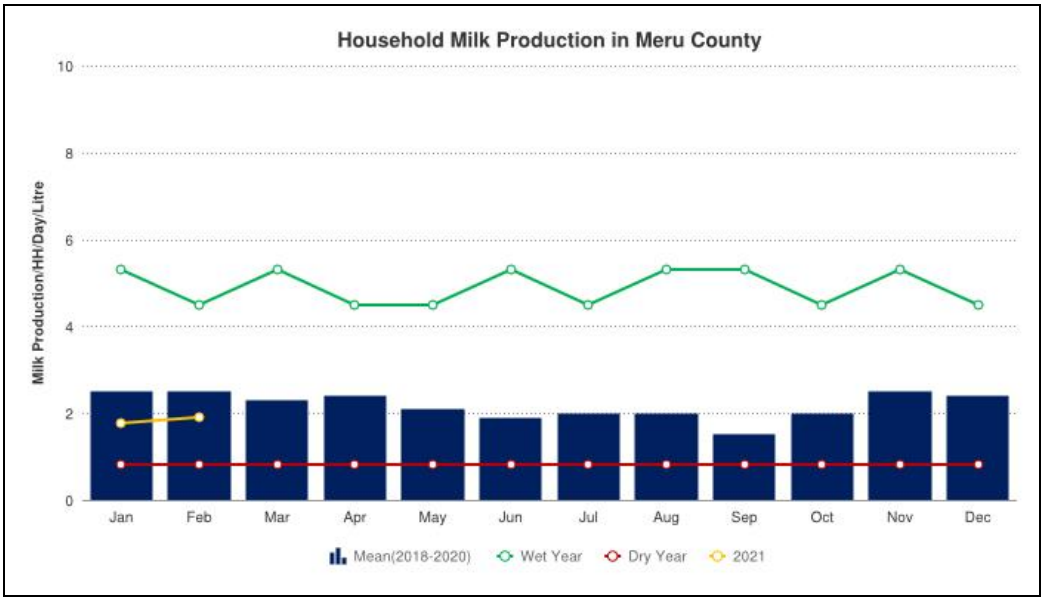

Figure 8: Household milk production in Meru North

- From the figure {8} shown above, the average daily milk production per household per day remained stable at 1.9 litres compared to the previous month at 1.8 litres.
- Milk production was high in Mikinduri Ward where cattle practice zero grazing and are of good breed.
- Current milk production of 1.9 litres is below normal the long term average milk production of 2.5 litres.
- Average milk price per litre at household level ranged from Ksh. 60.00- 80.00 which was normal at this time of the year.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of food Crops

- Farmers were doing final harvesting of maize
- Preparation of farms for the long rains is on-going.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

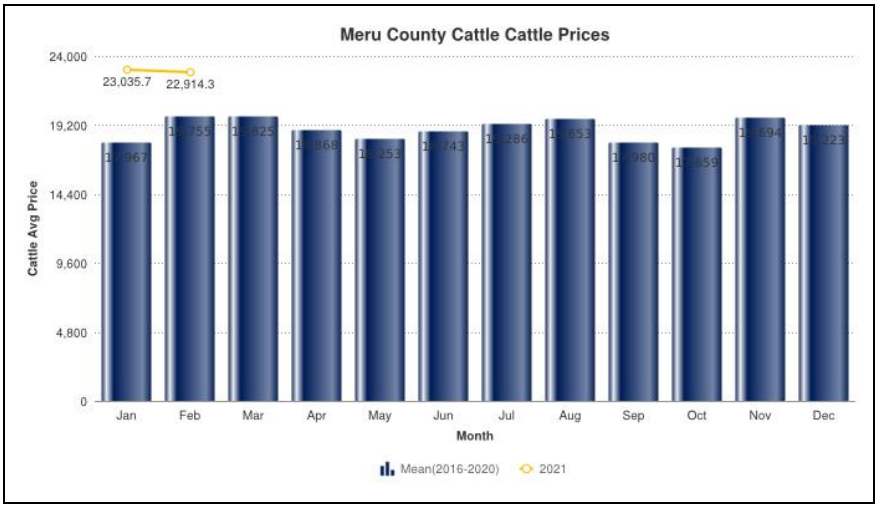

Figure 9: Average Market prices for cattle in Meru County

- From the figure (9) shown above, the average market price of three-year-old cattle for the month under review remained stable at Kshs. 22,914 when compared to the preceding month of January price of Kshs. 23,035.The stability is attributed to low supply and high demand at the markets.
- When compared to similar periods, current cattle price of Kshs. 22,914 is above the long term price of Kshs. 19,755.

4.1.2 Goat Prices

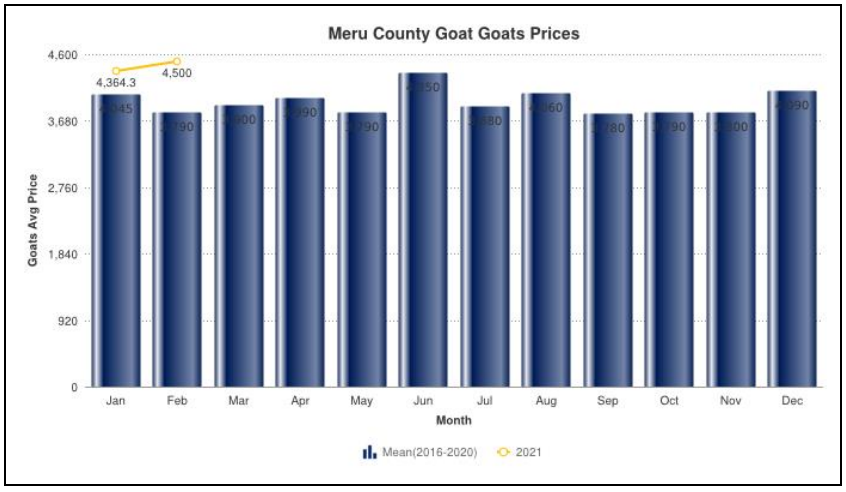

Figure 10: Average market prices for goats in Meru County

- The average market price of a two-year goat for the month under review increased to Kshs. 4,500 when compared to the preceding month of January price of Kshs. 4,364 as illustrated in the above figure (10).
- The increase is attributed to good body condition and high demand at the market with low supply.
- When compared to the long term average price of Ksh. 4,500 is above normal by 18.7 percent.

4.2 CROP PRICES

4.2.1 Maize

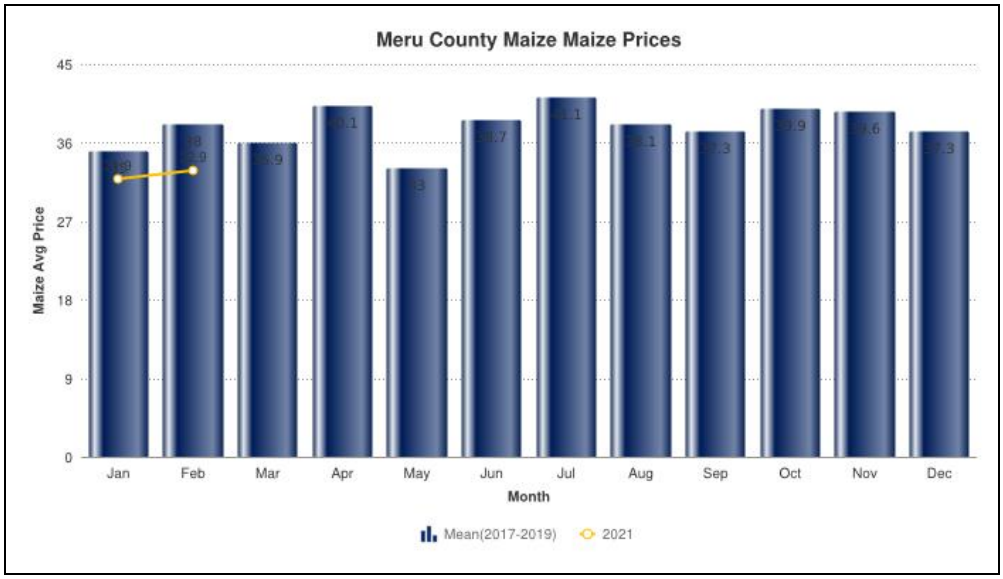

Figure 11: Average market prices for maize in Meru County

- From the figure 11 shown above, the average market price of a kilo of maize remained stable at Kshs.33/kg across the livelihood zones when compared to the previous month's maize price of Kshs.32/kg.
- The stability is attributable to short rains harvests at household level thus replenishing the household stocks.
- The average market price is within the long term average price of Ksh. 38 at this time of the year.

4.2.2 Beans Prices

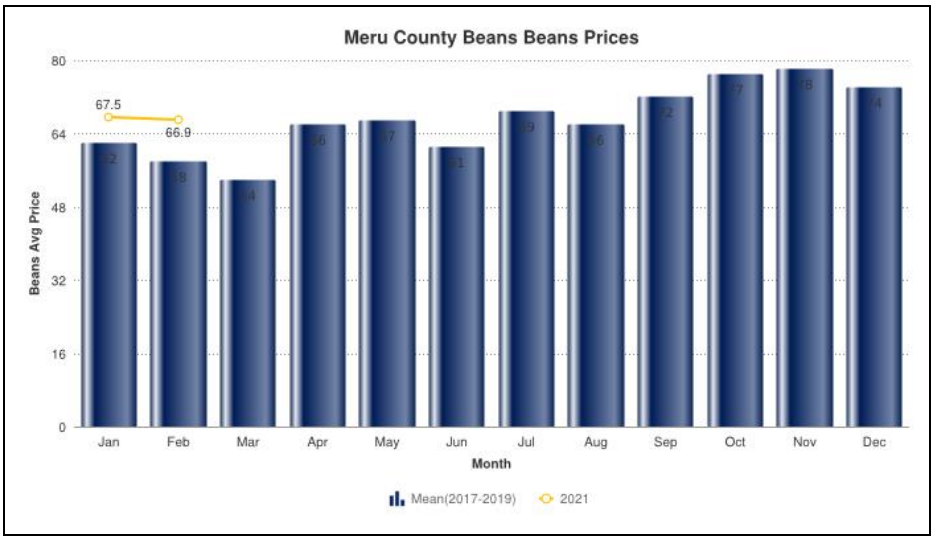

Figure 12: Average market prices for beans in Meru County

- From the figure {12} shown above, the average market price of a kilo of beans remained stable at Kshs 67 compared to previous month price of Kshs 67.5.
- The stability is attributed to short rains harvest of pulses hence replenishing the household stocks and high supply for the commodity in the market.
- The current average beans price is within the long term average price of Kshs. 58/kg.

4.2 **INCOME**

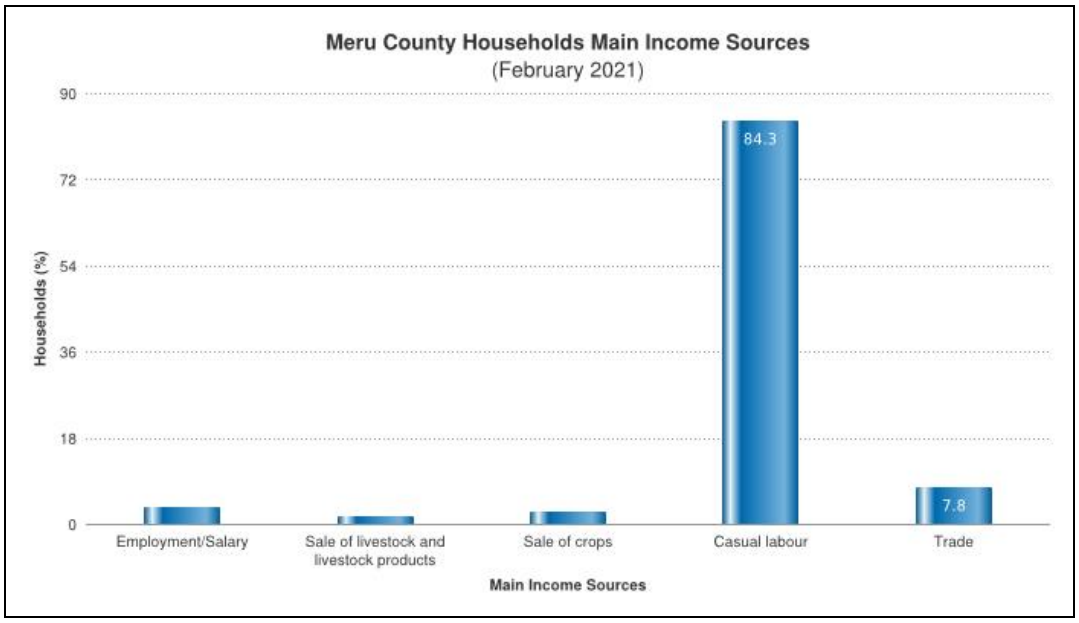

Figure 13: Sources of household income in Meru North

- Households main source of income were; casual labour, trade, sale of livestock and livestock products, employment/salary and sale of crops. Casual labour was readily available due to harvesting season.
- Households also depended on sale of *'Miraa''* which is considered as a major cash crop.

4.4 TERMS OF TRADE

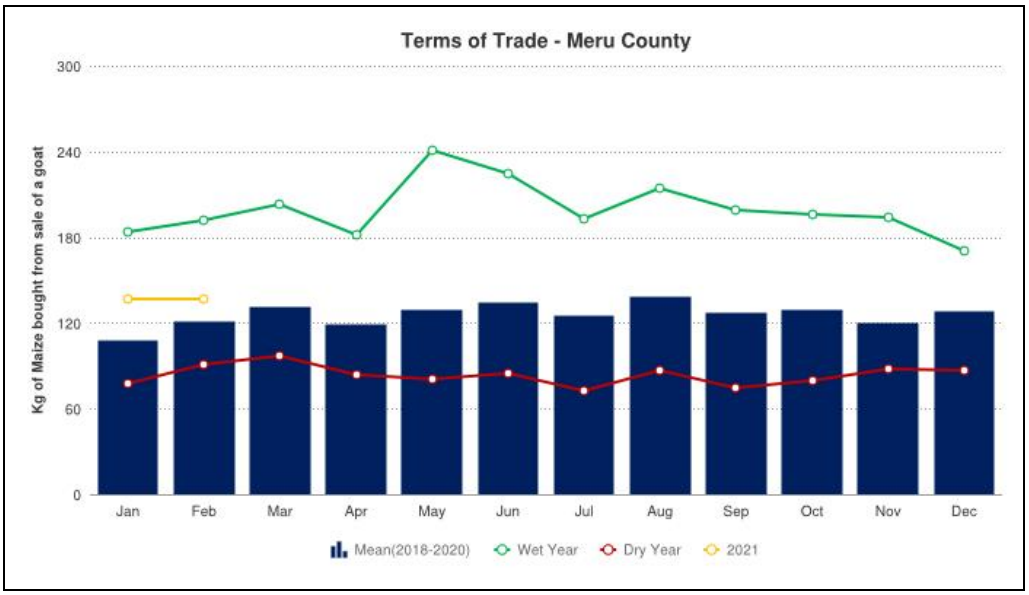

Figure 14: Terms of trade in Meru North

- The Terms of trade remained stable at 137 kilograms of maize realised from a sale of goat compared to previous month at 137 kgs from as illustrated in the above figure 14.
- The stability is attributable to stability in goat prices and maize prices.
- The current terms of trade is 13 percent above the long term average terms of trade of 108 kilograms.

5. FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

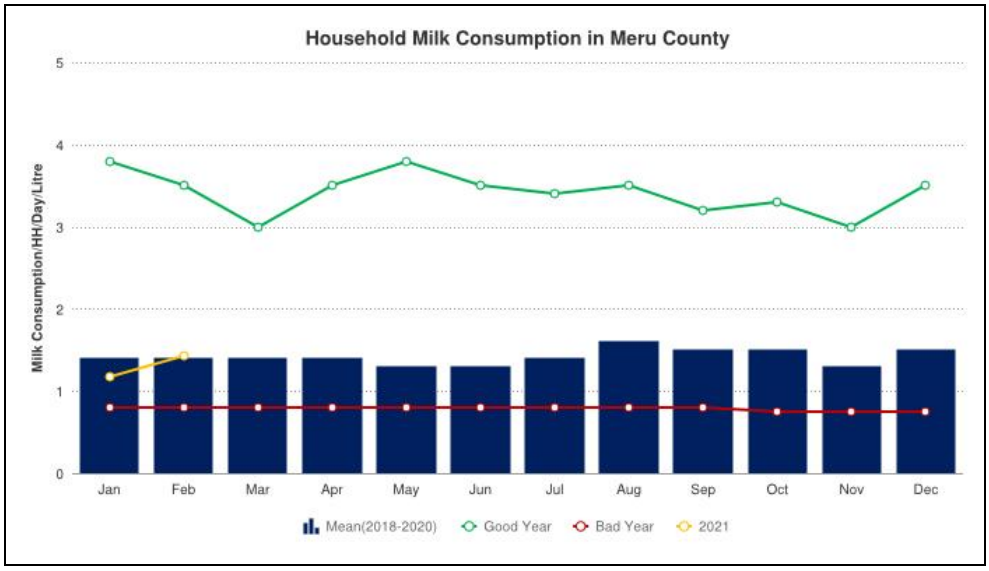

Figure 15: Average household milk consumption (l/hh/day)

- Milk consumption per household per day remained stable at 1.4 litres compared to previous month at 1.2 litres.
- The stability is attributed to stability in in milk production at households.
- The current milk consumption was normal compared to long term average of 1.4 liters.

5.2 FOOD CONSUMPTION SCORE

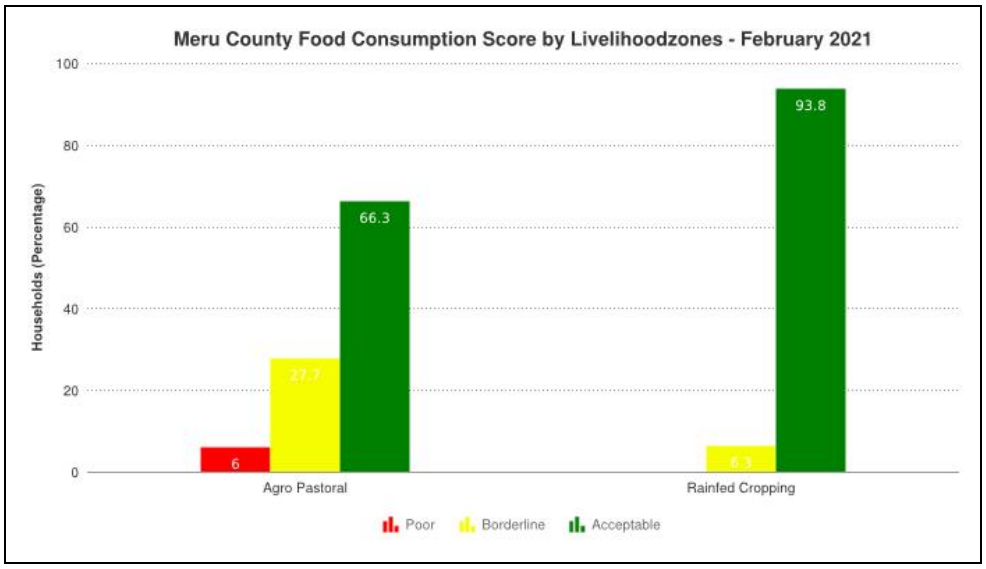

Figure 16: Household food consumption score

- Out of 120 households sampled from the sub counties, majority of the households averagely 74 percent were in the acceptable food consumption score category indicating that they were consuming an acceptable diet in terms of meal frequency, dietary diversity, nutritional value and amount. The rest of the households, 22 percent, were under borderline consumption score category, while four percent households under poor food consumption score.
- The households on average consumed; grains and pulses for six to seven days, vegetables for an average of four days and fruits for five days now that it was mango season. Consumption of milk and meat was minimal.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status of Children

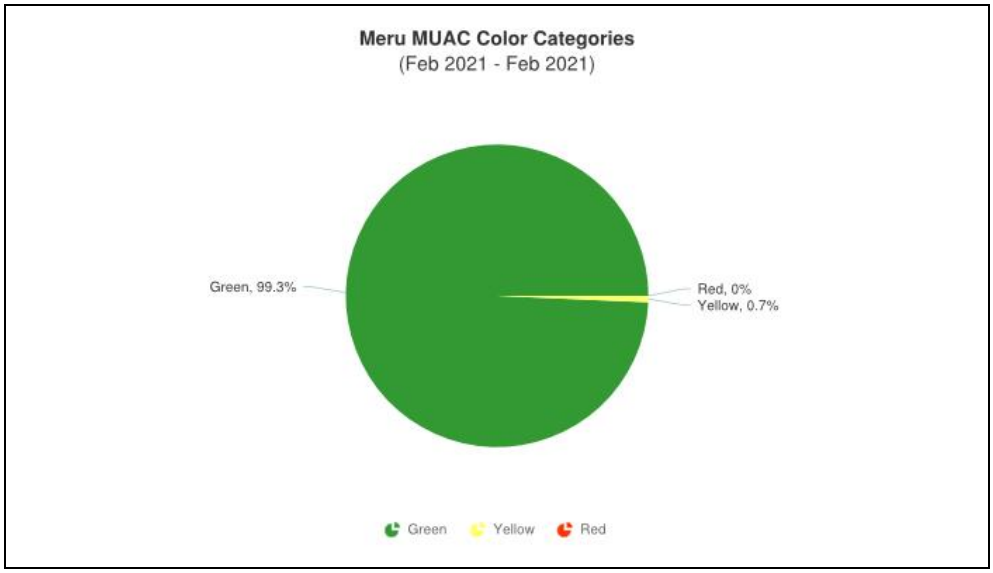

Figure 17: Children under five at risk of malnutrition in Meru County

- Out of the sampled children at risk of malnutrition 99.3% were at green and the rest 0.7%. This was an improvement from previous month. The improvement was attributed replenished household stock from the short rain harvests.

5.4 Coping Strategy Index

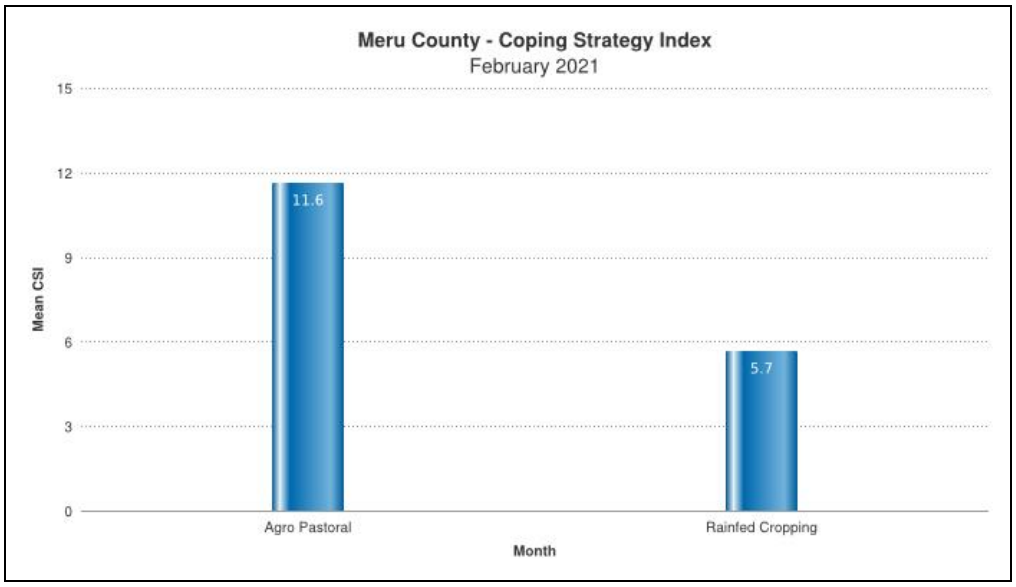

Figure 18: Household coping in Meru North

- Reduced consumption based coping strategy index (rCSI) for the month under review significantly decreased to 9.96 compared to previous month of January at 15. The index was within the long term average.
- Agro pastoral livelihood zone recorded a higher coping strategy index of 11.5 while Rained livelihood zone recorded a coping strategy index 5.7.
- The decrease is attributed to replenished household food stocks from the short rains harvests and also the increased purchasing power for livestock keepers.
- Notable reduced consumption based coping strategies employed by the households were; reduced portion size of meals and reliance on less preferred food in all the livelihood zones.
- The coping strategy index was normal at this time of the year.

6.1 Insecurity/ Conflict/ Human Displacement/ emerging issues

- There is herders' security tension in Ndumuru area of Igembe North with increasing livestock from neighbouring county isiolo in search of water and pasture.
- Invasion of locust in Igembe Central areas of Nkiyanga and Kagende; Tigania East areas of Kandembene and at Meru National park. The locusts have caused minimal destruction of crops and fodder. The ministry of Agriculture are doing Routine Surveillance to establish the destruction and spraying areas affected.

6.2 FOOD SECURITY PROGNOSIS

- The on-going harvest is expected to replenish the household stocks and temporarily bring reprieve to households
- Pasture and browse condition is expected to remain fair to poor in both livelihood zones as the dry spell continues.
- Livestock production is expected to reduce in the next three months as pasture/ browse and water availability will likely be a challenge for the households.
- Food commodity prices are expected to decrease due to decrease in demand occasioned by expected short rains harvest. However, with poor harvests realized after two months the prices are expected to increase.
- The nutritional status of the children under five will likely remain stable in the next 3 months due to replenishment of household stocks from short rains harvest and favourable terms of trade.
- The favourable terms of trade will likely sustain the purchasing power for the households for the next 1-2 months.

6.3 On-going interventions

SECTOR	Intervention	Implementer	Beneficiaries
LIVESTOCK	• Routine livestock diseases surveillance • Ring vaccination for FMD, Rabies and Anthrax. •	• County Department of Livestock Production and Veterinary Services	Livestock farmers from both sub counties
HEALTH	• Routine Disease Surveillance • Routine disease surveillance on outbreak of Corona virus (COVID- 19). • Routine screening management of malnutrition at health facility level • Routine Vitamin A and Zinc Supplementation and deworming at health facility level	• County Department of Health Services	Mothers and children who visited health facilities in both sub counties Households and health facilities in targeted community areas
AGRICULTURE	• Surveillance of the locusts and fall army worms	• County department of Agriculture department	Farmers
WATER AND SANITATION	• Repair of the broken boreholes	• County government, • Other Stakeholders	Households ,farmers

7. SECTOR RECOMMENDATIONS

Sector	Recommended Activities	Proposed Implementers	Expected Outcome/Impact
AGRICULTURE	• Sensitization on improved farming methods • Capacity building on pest and diseases (Fall army worm and Locust) • Development of irrigation schemes • Capacity building on food storage	County government Other Stakeholders	Reduced post-harvest losses due to poor storage
LIVESTOCK	• Disease surveillance and promotion of good and husbandry practices and silage making • Strategic vaccination of animals	County government Other Stakeholders	Increased productivity Diversification of income Reduced outbreak of diseases
WATER AND SANITATION	• Drilling and equipping of more boreholes • Desiliting of earth dams. • Construction of new big dams and pans. • Repair of the broken boreholes	County government, Other Stakeholders	Improved potable water accessibility and consumption
HEALTH AND NUTRITION	• Provision of Personal Protective Equipment (PPE) at the hospital and at community level to curb spread of corona virus • Sensitization on COVID-19 • Provision of commodities for management of various types of malnutrition at health facilities. • Sensitization on use and provision of water treatment chemicals to households.	County department of health NDMA Development partners	Management of malnutrition amongst under five children Reduced cases of water borne diseases