**WORKSHOP REPORT**


**Downscaling of Climate information and Sector Advisories at Cluster Levels**


**IGAD-EUTF Support for Effective Cooperation And Coordination Of The Cross-Border Initiative (SECCCI)**

**and**

**IGAD Climate Prediction and Application Centre (ICPAC)**


**September 2020**

# Executive Summary

IGAD in collaboration with its specialized institutions; EU, UNDP, UNEP and Implementing Partners have been jointly working on the "Support for Effective Cooperation and Coordination of the Cross-border Initiatives" **(SECCCI)** in three clusters namely; South Omo-Turkana (Cluster I), Marsabit-Moyale (Cluster II) and Mandera Cluster (cluster III) bordering Ethiopia, Kenya and Somalia.

ICPAC held a virtual workshop on 30 September 2020 to downscale the October-December (OND) 2020 climate outlook and develop sectorial advisories for SECCCI clusters. The Key messages from the workshop are highlighted below.

## 1. BASELINE CLIMATOLOGY

i. Rainfall in the cross border areas is characterized by a bimodal (two peaks) pattern. The two rainy seasons are March-April-May (MAM) and OND. This marked seasonality pattern dictates socio-economic activities in the region.
ii. Climatologically the area generally receives meagre rainfall. The OND season rainfall totals in most places is less than 250 mm.
iii. Climatologically January and February are generally hottest months while June, July and August are relatively cooler.
iv. There has been a significant warming trend throughout the area over the last 60 years

## 2. PERFORMANCE OF MARCH-APRIL-MAY (MAM) 2020 SEASON OVER IGAD SECCCI CLUSTERS

i. MAM 2020 was much wetter than usual conditions in most parts of SECCCI Clusters.
ii. Onset of MAM 2020 rainfall started earlier than usual everywhere over SECCCI Clusters
iii. Warmer than normal temperature was observed over central and eastern parts of SECCCI Clusters in MAM season.

## 3. OUTLOOK FOR SHORT RAINS SEASON (OCT–NOV–DEC (OND)) 2020

i.  Drier than average conditions are expected in the eastern half of the sub-region over IGAD Cluster II & III, while mostly average conditions are indicated in the western sub-region

ii.  Much of the sub-region from eastern Marsabit, Mandera, South Ethiopia to Somalia will likely have late start of the rains. However early start of OND is expected over South Omo (Ethiopia) to the Greater Kapoeta and Budi (South Sudan) and further extending from Kaabong to Kween in Uganda (Figure 4).

iii.  Temperatures are expected to be warmer than average over most places especially over IGAD Cluster III.

## 4. SECTORAL IMPACTS AND ADVISORIES FOR OND 2020 SEASON FOR SECCCI IGAD CLUSTERS

| Sector | Potential impacts | Possible mitigation measures, advisories and intervention |
|---|---|---|
| **Livestock (pastoralists and agro-pastoralists)** | 1. Depressed pasture situation (inadequate pasture) <br> 2. Water scarcity <br> 3. Degraded rangelands <br> 4. Increase disease prevalence and disease out break | i. Immediately disseminate this (early warning) information to all decision makers; <br> ii. Feed harvesting and storage (conservation/hay storage) <br> iii. Undertake mass vaccination of all hoofed animals against FMD and black quarter <br> iv. Sensitise farmers between border areas to spray and vaccinate livestock at individual level against common livestock diseases like tick borne <br> v. Timely commercial destocking to fetch good prices- Marketing eg cross-border animal markets ( disseminate the market price information) <br> vi. Community peace dialogues to avert potential conflicts over resources <br> vii. Construct dams as a long term solution of perennial issues of water scarcity <br> viii. Provide water along stock routes –water trucking and tankering <br> ix. Make use community structures for proper rangelands resource sharing e.g disease surveillance, CAHWs? <br> x. Diversified livelihoods in times of scarcity- <br> xi. Community peace structures…Committees (CMC, protocols <br> xii. Update, disseminate and conduct capacity development awareness creation campaign |

| | | |
|---|---|---|
| **Crop Agriculture** | 1. Dry spells/Drought<br>2. Irrigation water scarcity<br>3. Desert locust invasion | i. Immediately disseminate this (early warning) information to all decision makers;<br>ii. Early land preparation to take advantage of the short season;<br>iii. Promote short season (early maturing) crops and varieties;<br>iv. Expand irrigated areas especially in marshlands, rehabilitate irrigation infrastructure and subsidize irrigation equipment,<br>v. Practice in-situ water harvesting<br>vi. Practice moisture conservation, for instance mulching<br>vii. Develop contingency plans and Consider taking crop micro-insurance to cushion them in the event of losses,;<br>viii. Where possible, expand and promote value chain inputs subsidy and crop insurance cover to cushion farmers against impacts of climate variability;<br>ix. Mitigate impacts of COVID-19 measures on agriculture across the country;<br>x. Strengthening market information system to benefit the farmer or pastoralists.<br>xi. Update, disseminate and conduct capacity development awareness creation campaign |
| **Water** | 1. Water scarcity<br>2. Drying up of wells and boreholes | i. Immediately disseminate this (early warning) information to all decision makers;<br>ii. Water harvesting, conservation and enhance water-shed management to take measures in runoff flooding.<br>iii. To maintain and repair of water points, storage and conveyance systems<br>iv. Water trucking and tankering<br>v. Update, disseminate and conduct capacity development awareness creation campaign |
| **Disaster Risk Management (DR** | 1. Food insecurity due to crop failures<br>2. Death of livestock due to lack of forage and water | i. Immediately disseminate this (early warning) information to all decision makers;<br>ii. Update the national multi-sectorial response plan covering all major hazards<br>iii. Monitoring hatching areas and movement of desert locusts<br>iv. Update and disseminate and conduct capacity development awareness creation campaign<br>v. Institute drought contingency measures<br>vi. Update the humanitarian response plan already in place |
| **Conflict, Migration and displacement** | 1. Inter- and intra-community conflicts over scarce resource will be escalated | i. Immediately disseminate this (early warning) information to all decision makers;<br>ii. Update, disseminate and conduct capacity development awareness creation campaign<br>iii. Conduct community peace dialogues<br>iv. Use the existing structure for peace and conflict prevention<br>v. Beef up security |

Contents

Tables and Figures

## Background/Introduction

Climate variability and change is one of the main controlling factors of socioeconomic activities and livelihoods in most parts of the Greater Horn of Africa (GHA). More than 2/3 of the IGAD region is considered as ASAL and suffers periodical climate related disasters. Resource based conflicts related to pastoral livelihood are common due to scarce availability of water and fodder for livestock which is directly associated with variability and change in seasonal climate. Pastoralism and agro-pastoralism are the dominant livelihood systems found in all regions of the ASALs, which cover around 60-70 % of the IGAD-Region. These lands and the people living therein are not necessarily defined by national or international political-administrative borders. Pastoralism, as a livelihood system, relies on livestock as a source of economic and social wellbeing and on mobility to access water, and diverse grazing areas depending on the seasons and markets.

For centuries, long before political boundaries were established, pastoralists were able to mitigate drought and other uncertainties including access to natural resources with mobility and trade as core coping mechanisms. While dryland communities nowadays continue to collaborate across borders to exploit resources, many share similar social institutions and engage in a range of other cross-border activities.

The IGAD Border areas are categorized into **"clusters"** to provide services and foster cooperation between communities. These regions share common cross-boundary challenges ranging from drought and food insecurity, internal and cross-border violence, cattle rustling, prevalence of weapons and unwarranted loss of human livelihoods leading to deplorable human living conditions and contested political boundary demarcations. The inhabitants of the zones within the cluster are majorly pastoralists. Theses pastoralists frequently move their livestock across the common border in search of pasture and water; and livestock from either sides of the borders. The livestock movements in search of pasture and water results in the spread of trans-boundary animal diseases leading to reduced production, productivity, loss through mortality and economic loss to governments through prevention and control measures. The movement too brings the diverse ethnic groups with various historical ethnic conflicts into close proximity and thereby trigger conflicts.

In contributing towards addressing and supporting priority interventions in the Cross-border areas, IGAD, in collaboration with its specialized institutions; EU, UNDP, and GIZ have been jointly working on the "Support for Effective Cooperation and Coordination of the Cross-border Initiatives" (SECCCI) in three clusters namely; South Omo-Turkana (cluster I), Marsabit-Moyale (Cluster II) and Mandera Cluster (cluster III) (bordering Ethiopia, Kenya and Somalia).

The implementation of the Support for Effective Cooperation and Coordination of the Cross-border Initiatives (SECCCI) project has been going on for about two years by different implementing partners and IGAD specialized institutions. Each implementing partner has specific mandated activities to be carried through allocated funds by EU.

Lack of access to accurate and timely weather and climate information for early warning and disaster risk reduction hinders the sustainability of livelihoods and economic stability. Even if the information were available, proper interpretation, packaging and dissemination including lack of knowledge of the various response stakeholders and their roles, would be locally

difficult and the information would rarely lead to effective and timely response measures. Early climate warning and early response/preparation could have saved more lives and properties in a region where resource based conflicts are rife and animal feed and water are at the centre of livelihoods. The provision and access to climate information that informs decision-making process at the pastoral level is, therefore, a necessity.

It is in the backdrop of the aforementioned challenges that the IGAD offices, led by ICPAC, plans to facilitate the access of the value-added climate prediction services to the pastoral communities in the SECCCI Clusters through OND climate outlook downscaling and issuance of sector advisories for early and effective responses.
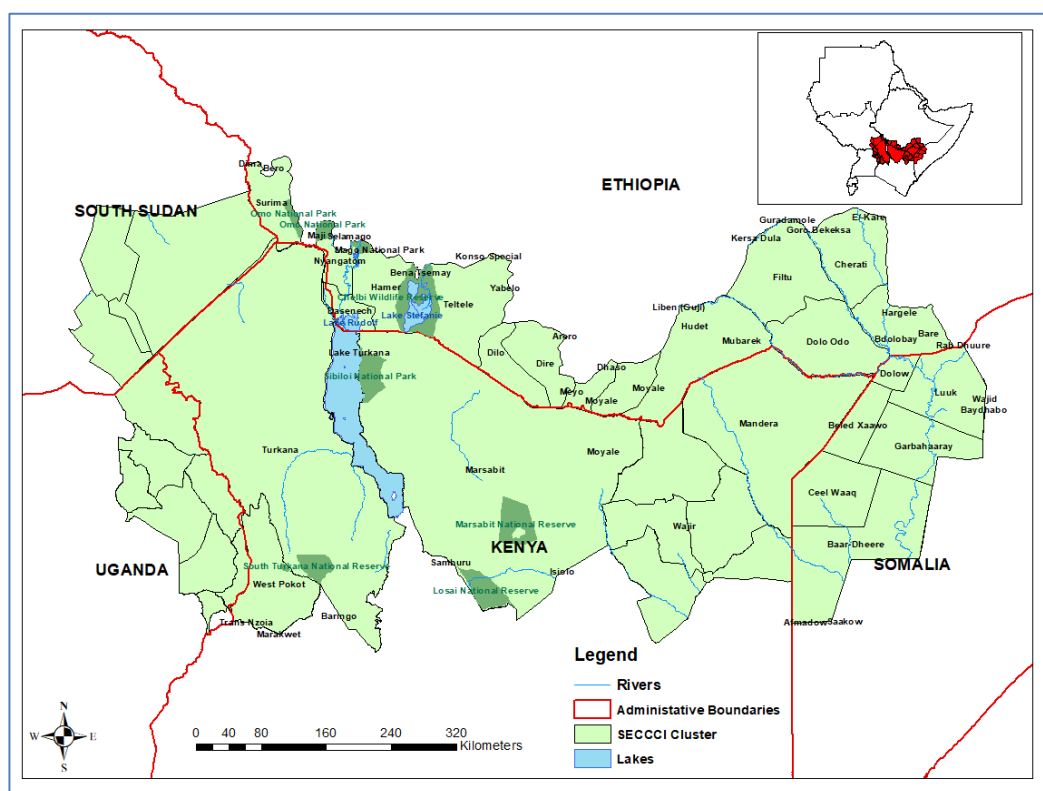


**Figure 1: SECCCI clusters (South Omo-Turkana (cluster I), Marsabit-Moyale (Cluster II) and Mandera Cluster (cluster III)**

## The Workshop

ICPAC held a virtual workshop on 30 September 2020 to downscale the October-December (OND) 2020 climate outlook and develop sectorial advisories for SECCCI clusters. The specific objectives of the workshop were to present downscaled climate outlook for OND season and generate advisories for the crop agriculture, livestock, water, Disaster and Risk Management and conflict, migration and displacement sectors based on the OND 2020 downscaled forecast together with key stakeholders and experts working in the three IGAD clusters of the SECCCI project**.**

## Opening Remarks

**a)  SECCCI Project: SECCCI Project Coordinator, IGAD.**

The SECCCI Project Coordinator Dr. Gezahegn Aboset, welcomed all participants and gave a brief background about the project hailing the important roles of partners UNDP&UNEP) and implementing partners. He observed that the IGAD region faces radical climate disasters and underscored the importance of the workshop to facilitate dissemination and proper interpretation of climate information. This helps in climate information management for decision makers for early warning and early response.

b) **SECCCI Project:  Project Manager, UNDP-RSCA**

The SECCCI Project Manager Mr. Simone  based at UNDP-RSCA observed that the agenda is very reach and the outcomes will really bridge the gaps in climate information reaching out to the local communities for timely and effective use. He commended IGAD and its specialised center ICPAC for making the virtual climate information downscaling workshop a reality.

c)  **ICPAC-SECCCI: Director,  ICPAC-IGAD**

The director of ICPAC Dr Guleid Artan reminded the participants the climate calamities facing the region for example droughts in 2010/11 and 2015/16 and floods in 2019/2020 cased significant human life loss and economic damage. He therefore reemphasized the need to accelerate climate information. In line with this, ICPAC organizes regular seasonal outlooks to disseminate climate outlook in the region. He observed the Growing interest of IGAD and development partners in the border lands of the IGAD region because of issues related to for integration, social development, migration, conflict amongst other challenges.  IGAD has so far identified 8 clusters and three of the clusters are covered under the SECCCI project.  The vulnerability of   the three clusters to climate variability and climate change is very high and it is critical to use climate information in our decision making. He welcomed institutions to make use of ICPAC climate information services and products in designing interventions and projects.

He concluded by wishing participants a fruitful workshop and looking forward to the workshop report. He then declared the workshop officially open!

## A brief overview of the SECCCI project (status and achievements)

Again the SECCCI Project Coordinator gave a detailed overview of the SECCCI project presented for the climate downscaling workshop for SECCCI Clusters. He informed participants about the SECCCI duration and budget and, the implementing partners UNDP Regional Service Centre for Africa (RSCA) IGAD - Intergovernmental Authority for Development and UNEP - United Nations Environment Programme. The Project is designed to provide technical support to national Governments of Ethiopia, Kenya and Somalia at the national level

## SECCCI Project objectives

The Overall Objective is to address the drivers of conflict and instability, irregular migration and displacement in the cross-border areas of the Horn of Africa through improved cross-border cooperation and coordination

### Specific Objectives

1. To strengthen regional policy frameworks, structures and protocols for cross-border cooperation between national and local Governments, the private sector, civil society and international technical and financial partners in development

2. Capacities of communities, local governments and civil society to fully engage in processes for development planning and results are built

3. To ensure effective cooperation and coordination, monitoring and evaluation of cross-border initiatives including involvement of relevant national and regional actors in these processes

## Expected results

The expected results of the project are:

1. Regional policy frameworks, structures and protocols for cross-border cooperation between national and local governments, the private sector, civil society and international technical and financial partners in development are strengthened.
2. Capacities of communities, local governments and civil society to full engage in processes for development planning and results are built
3. Effective cooperation and coordination, monitoring and evaluation of cross-border initiatives in place, including involvement of relevant national and regional actors in these processes

## Focus Area

The project is focusing on three Cross Border Clusters namely:

a. **Turkana – Omo** at the Kenyan and Ethiopian Border (Cluster I);

b. **Marsabit - Moyale** at the Kenyan, Ethiopian border (Cluster II);

c. **Mandera – Gedo – Doolow** at the Kenyan, Ethiopian and Somali border (Cluster III). The office was reallocated to Dolo ado

## Project Achievements

i. Enhance Policy development and mechanisms for cross-border cooperation
   o 10 forums in the form of Community Peace Dialogues
   o Over 350 participants, organized in cross-border areas in order to raise awareness among the local governments and communities on the existing cross-border agreements, policies and protocols for peace building and conflict prevention.
ii. Effective Cooperation and Coordination of the Cross-Border Initiatives
iii. Coordination mechanisms in support of cross-border cooperation
   o Conducted Inter-Governmental Steering and Technical Committees
iv. Case studies and training courses on pastoralism and trans-boundary dry land development:

- o Study and training course on **Animal Production and Trans-boundary Animal Diseases** (TADs): led by ICPALD,
- o Study and training course on **Peace Building, Conflict Prevention and Conflict Sensitivity**: led by CEWARN,
- o Study on **Rangeland Management and Livelihood Diversification**: led by ICPAC,

v. Three annual thematic reports produced:

- o Climate Needs Assessment

- o Rangeland characterization and mapping

- o Report on "Securing cross-border livestock mobility along Ethiopia and Kenya Border Areas: Case of mapping of cross-border transhumance routes and grazing resources"

vi. IGAD Knowledge Management Established

- o Online platform for resilience actors,
- o facilitating the use of KM tools and documentation and sharing of lessons learned and good practices:
- o Web hosting currently managed by IGAD Secretariat;
- o Website: https://resilience.igad.int/

## Baseline Climatology of cross boarder cluster areas of the SECCCI project

ICPAC Climate Scientist Mr Abebe Tadege spelt out the importance of climate information, some basic terminologies, climate downscaling and certain scenarios. Some highlights of his presentation are contained below.

### Importance of climate information
There is growing demand for user tailed climate information and need to improved climate services both in quantity and quality as such:

- The need to optimally and efficiently use of natural resources (water, energy, land)
- The need to manage climate related disasters including floods and droughts
- The need to address human caused climate change

### Basic terminologies

### Climate and Weather
Weather is the instantaneous state of the atmosphere and it is short term while Climate is the average of weather and it is long term.

### Climate variability and Climate Change
Climate variability is a fluctuation from the mean while Climate change is a shift in the mean state of climate. It is a persistent long term trend

## What is climate downscaling

### *Climate Models*
Global climate models (GCMs) are tools for providing climate projections. A climate model is a mathematical representation of the climate system.
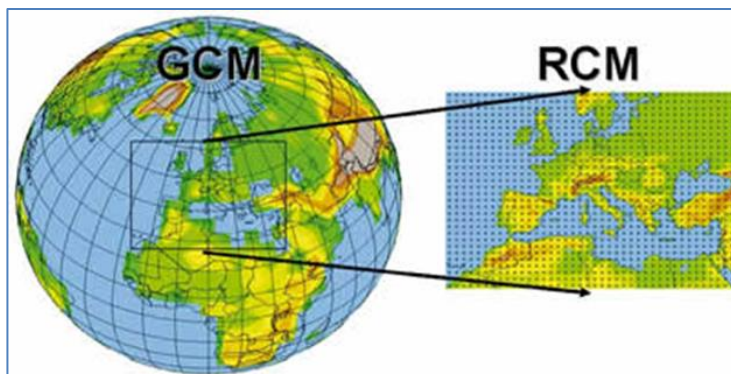


**Figure 2: Global and regional climate models**

### *Downscaling*
'Downscaling' is the process by which coarse-resolution GCM outputs are translated into finer resolution climate information, so that they better account for regional climatic influences, such as local topography.
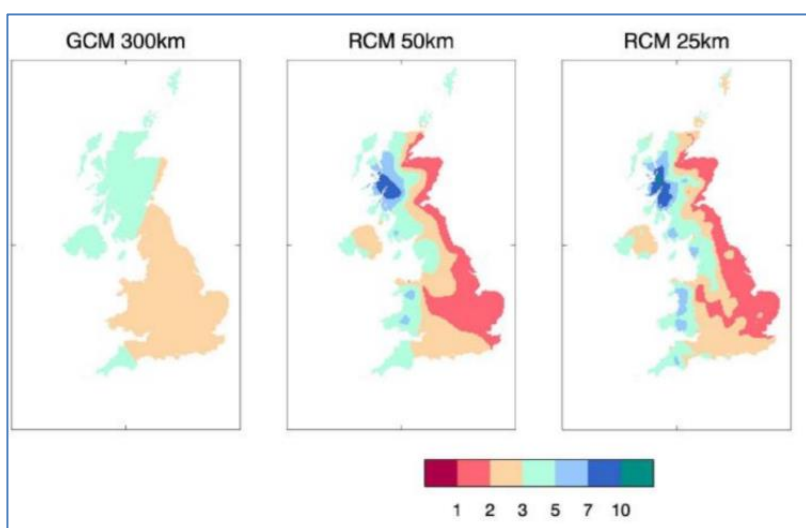


**Figure 3: Climate Downscaling**

There are many different ways in which GCM outputs can be translated to finer resolutions or even point locations. As a general guide, downscaling methods can typically be categorized into three groups: change factor methods, statistical downscaling and dynamical downscaling

## Baseline Climatology

   v. Rainfall in the cross border areas is characterized by a bimodal (two peaks) pattern. The two rainy seasons are March-April-May (MAM) and OND. This marked seasonality pattern in rainfall is shown in Figure 1. MAM is generally wetter than OND.

   vi.     Climatologically the area generally receives meager rainfall. OND rainfall totals in most places is less than 250 mm.

   vii. January and February are generally hottest months while June, July and August are relatively cooler.

   viii. There has been a significant warming trend throughout the area over the last 60 years
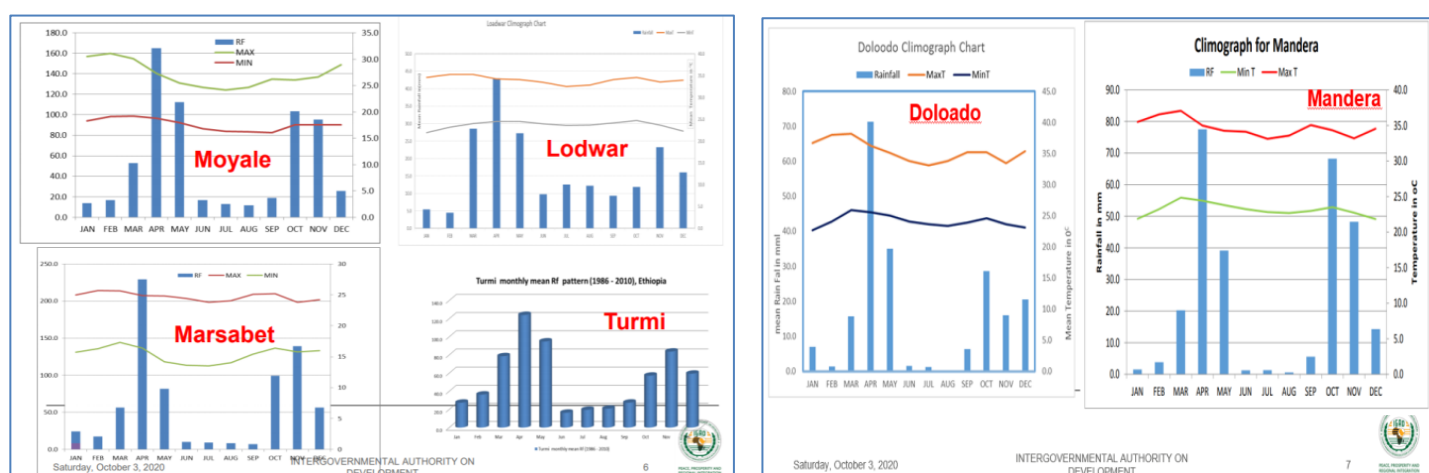


   ix.

**Figure 4: Climographs for selected stations in the SECCCI Clusters**

**Seasonality of Climate in the SECcCI Clusters**

13

| Mean monthly spatial distribution of Rainfall | | | | | |
|---|---|---|---|---|---|
| Jan | Feb | Mar | Apr | May | Jun |
| Jul | Aug | Sep | Oct | Nov | Dec |

Figure 5; Mean monthly rainfall in the clusters

## Seasonal maximum temperature distribution
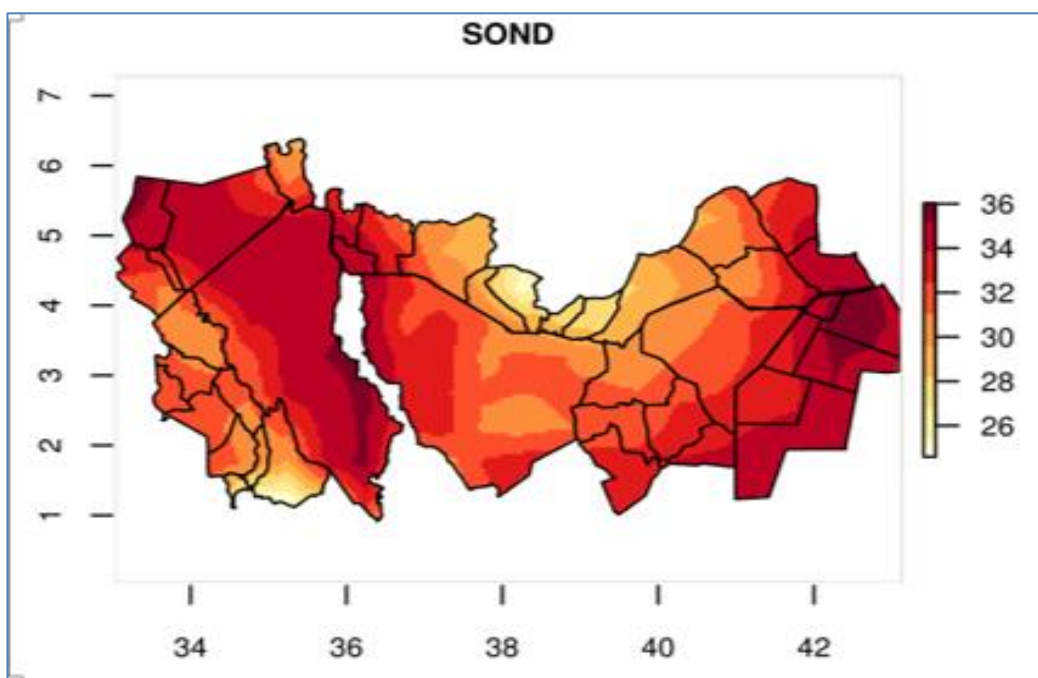
Figure 6; Seasonal maximum temperature

14

## Temperature Variability and trend
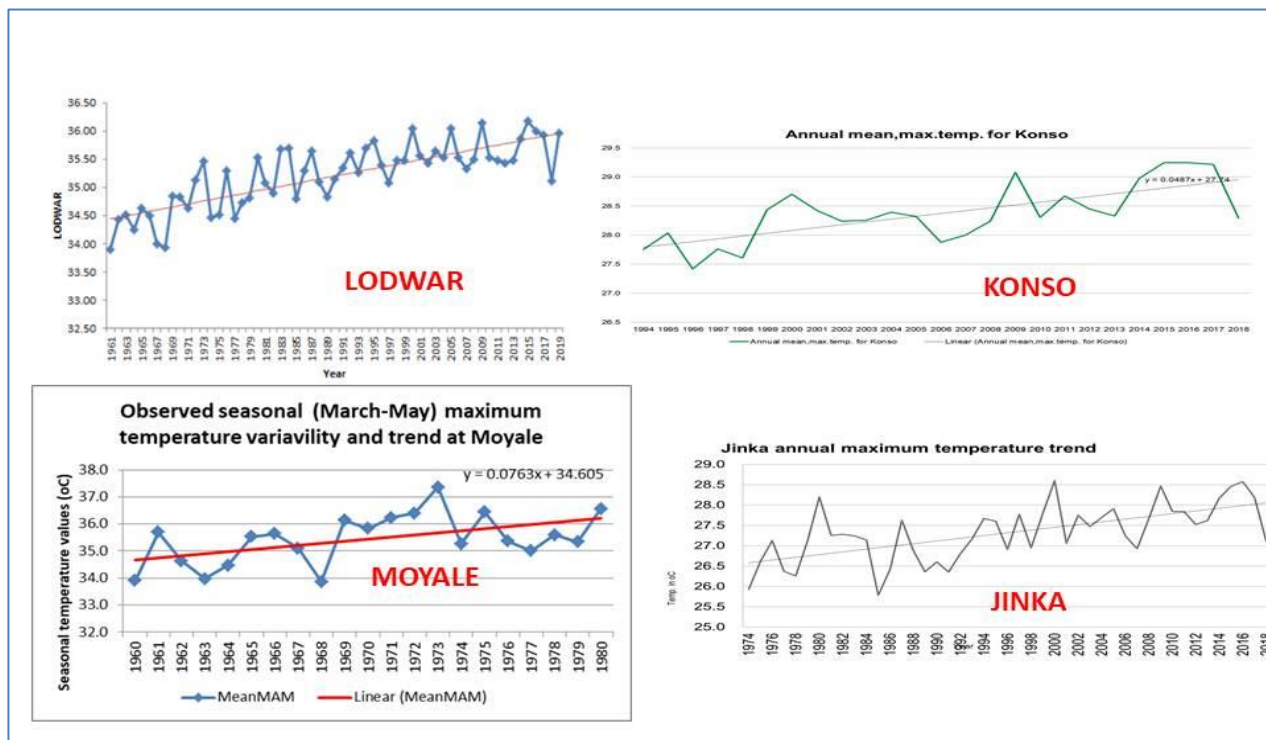


Figure 7: Weather Stations observed temperature variability and trends

## OND Rainfall Variability and trend
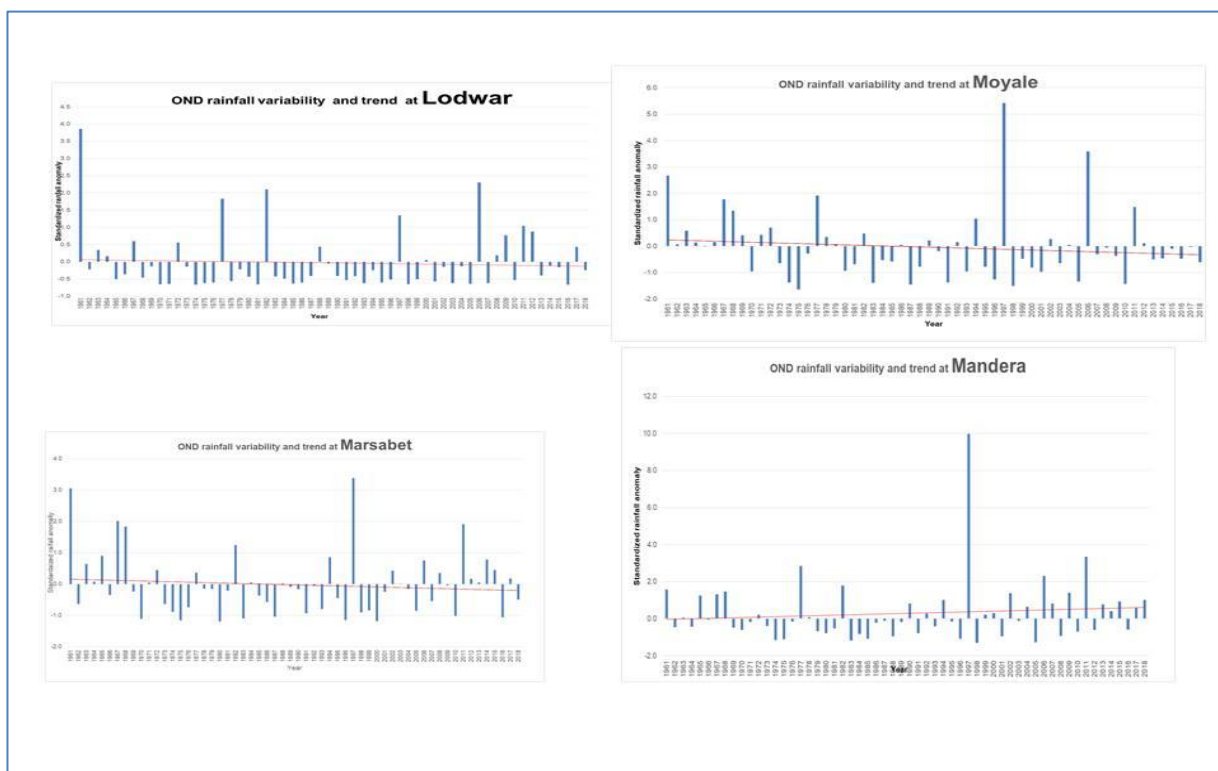


Figure 8: Observed OND rainfall variability and trends for selected stations in the SECCCI clusters

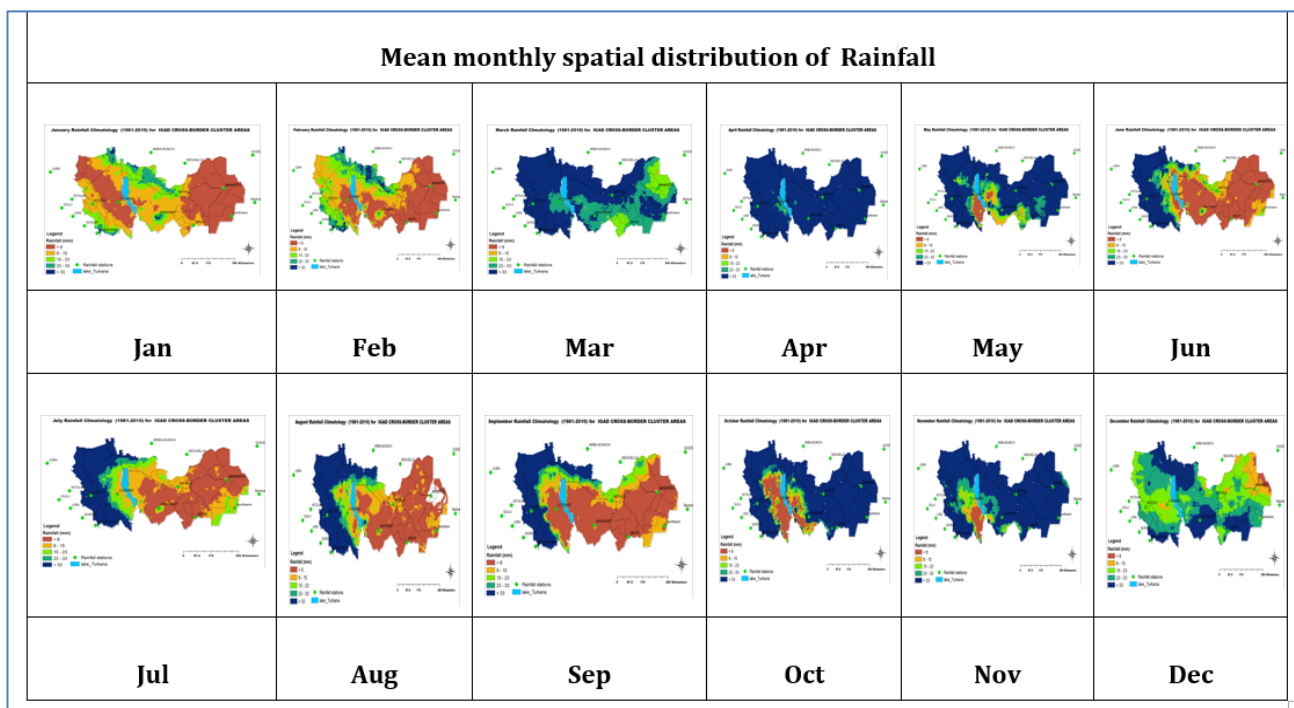## Summary and recommendations

1. Rainfall is highly seasonal. The two rainy seasons are MAM and OND. MAM is generally more wetter than OND
2. January and February are generally hottest months while June, July and August are relatively cooler
3. There has been a significant warming trend throughout the area over the last 60 years
4. Trend in rainfall is not uniform over the region
5. Strengthening monitoring and observation and developing climate data base for the region
6. A further study of the baseline climate and its variability is important
7. Capacity building of climate information producers and users is critical


## Review of performance of MAM and JJA 2020

Mr Paulino Omay, ICPAC Climatological Specialist gave presentations on reviews of performance of MAM season. The observations were that it was much wetter than usual conditions observed in most parts of SECCCI Clusters as shown in figure below:
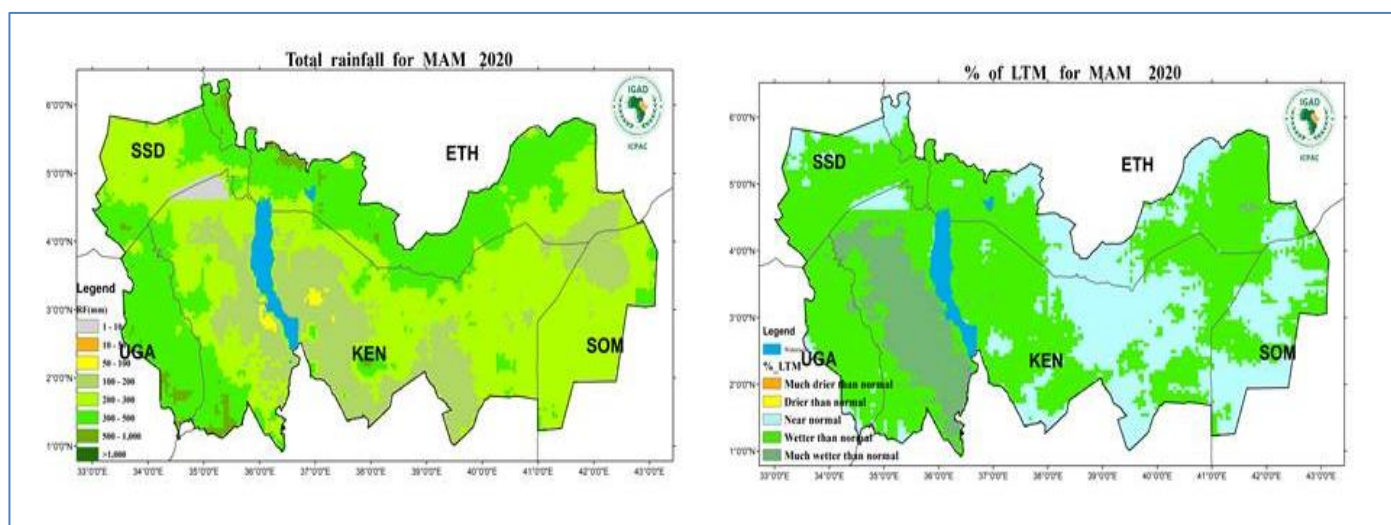


**Figure 9: observed MAM 2020 rainfall anomalies from the mean condition**

Another finding was that MAM was much warmer than usual over eastern parts of SECCCI Clusters as shown in the figure below.
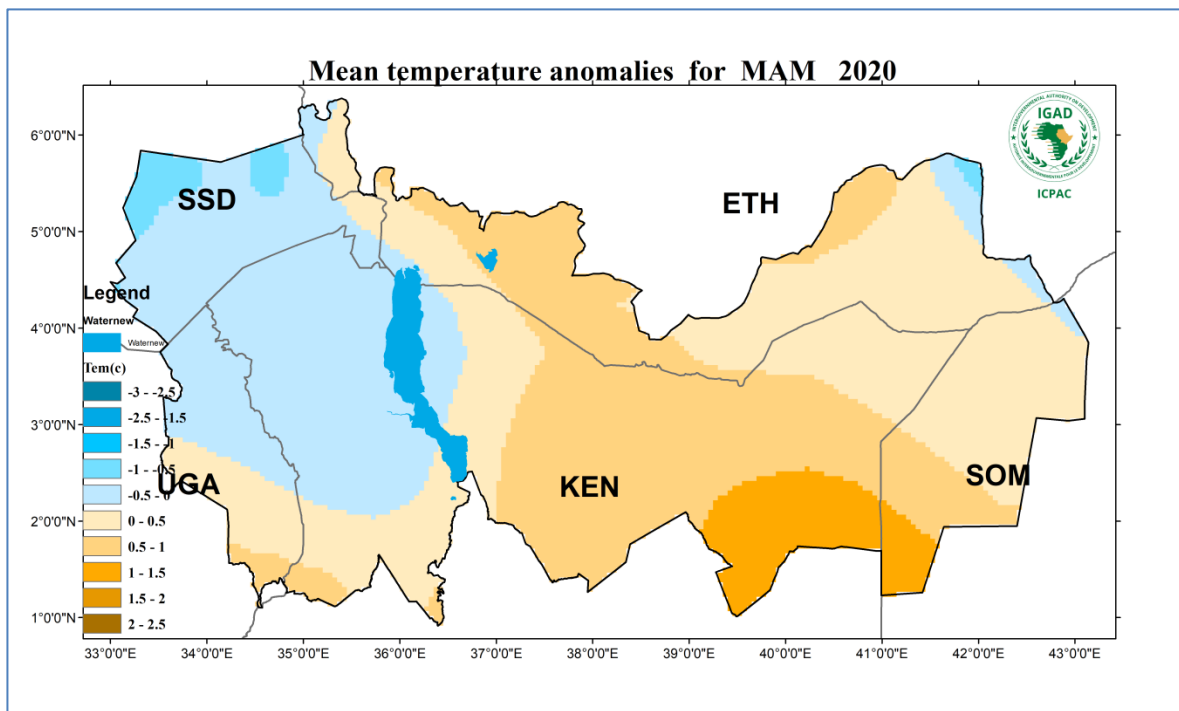
**Figure 10: MAM Temperature anomalies**

While in JJA Much of Kenya and Somalia SECCCI Clusters were dry in JJA 2020 as indicated below.
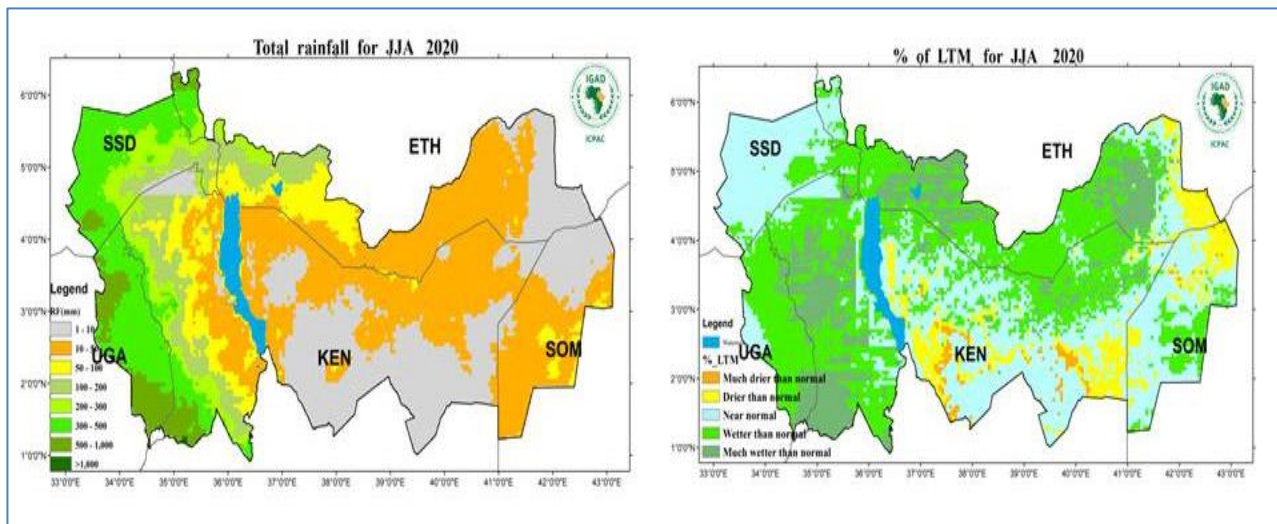


**Figure 11: JJA Rainfall**

There was warmer than usual temperatures over central and eastern parts of SECCCI Clusters in MAM and JJA seasons
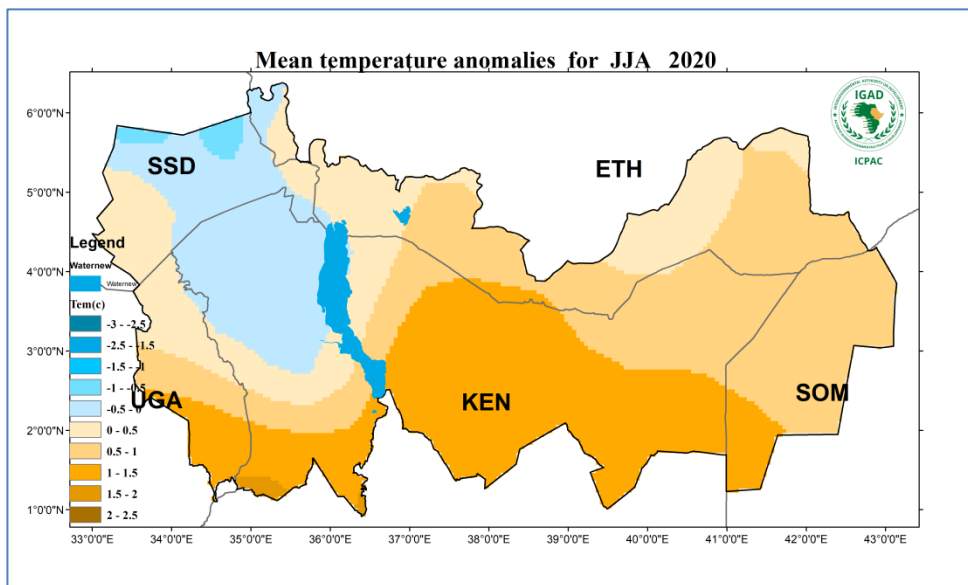
**Figure 12; JJA Temperature anomalies**

## Conclusions

i. Much wetter than usual conditions observed in most parts of SECCCI Clusters .

ii. Very early  rainfall onset everywhere over SECCCI Clusters

iii. Increase in wet days and  less dry spells

iv. Warmer than usual  over central and eastern parts of SECCCI Clusters in MAM and JJA seasons

## Review of observed sectoral impacts of MAM and JJA 2020 in the SECCCI cluster

### Cluster 2 - Moyale/Marsabit

Dr Jiddah Choke the Cluster 2 coordinator presented MAM and JAA seasons impacts and mitigation measures as outlined below.

### a. MAM (March, April, May) Seasonal Impact in Marsabit County - Kenya

Onset of the long rains was early as it occurred in the first dekad of the March as opposed to the normal onset, which is usually the second dekad of March characterized by torrential rainfall amounts in Moyale and Saku sub-counties and some parts of Laisamis and North Horr sub-counties. However, rains of varied intensities were received in different parts of the County with Moyale and Saku sub-counties receiving torrential rainfall amounts. Flash floods affected parts of Moyale sub-county (Sololo, Amballo, Badanrero, Bori, Dabel, Kinisa, Yaballo), Laisamis sub-county (Farakoen and Illaut), Saku sub-county (Jaldesa) and North Horr sub-county (Shurr, Demo and Turbi) affecting approximately 6,786 people (1,131 households) in need of food and non-food items. Flash floods in the aforementioned areas necessitated rapid assessment to examine the extent of damage to livelihoods and infrastructure. Paltry 3%, 5%, 1% and 4% of the interviewed households affected by floods

in Laisamis, Moyale, North Horr and Saku sub-counties respectively had food stocks. 65% of the floods affected communities were able to access essential food in the market in the most affected areas of Moyale sub-county. Similarly, 85%, 50% and 40% of the interviewed floods affected populace in Saku, Laisamis and North Horr sub-counties respectively were able to access essential food in the market.

The areas that were not accessible by road within the county due to floods included: Badanrero and Laqi in Moyale sub-county. Major priority needs identified were food, cash, shelter rehabilitation, rehabilitation of destroyed water systems, small stock restocking, non-food items, hygiene promotion and rehabilitation of access roads.

Similarly, Food Security Situation has been affected by the COVID-19 pandemic, closure of livestock markets, livestock diseases and human disease outbreaks especially in Illeret ward of North Horr sub-county. Camel calves' deaths and cattle skin condition in Hurri hills – Forolle areas of Maikona ward, mass deaths of weaner camel calves at Yaa Gara in North Horr sub-county, reports indicated cough, cases of camel calves presented with suspected viral pneumonia in Turbi/Bubisa and North-Horr Wards. Cholera outbreak was reported in Telesgaye, Illeret ward in North Horr sub county where 2 deaths were reported and upsurge in malaria was reported in Loyangalani and Illeret wards.

FAO RVF forecasting in May 2020 confirms that the risk of Rift Valley Fever occurrence remains high both in animals and humans in the next coming months, either due to favorable environmental conditions and/or through animal movement, and called for urgent readiness for any potential RVF outbreak, in particular through One Health coordination. COVID-19 pandemic, Human and Livestock disease incidences also occasioned the need to conduct a multi-hazard assessment to inform the level of priority needs and possible recommendations for early action.

### b. JJA – Marsabit Cluster II

**June**
Drought Situation & EW Phase Classification Biophysical Indicators:
**Rainfall**: In the month under review, the County generally remained dry save for isolated areas that received off-season rains in 1-3 rainy days.

**Vegetation condition**: 3-months Vegetation Condition Index for the month under review was 64.30 across the County thus didn't change and fell within the above normal vegetation greenness band.

**Socio Economic Indicators (Impact Indicators) Production indicators:**

Livestock body condition was good for all the livestock species across the livelihood zones. In the agro-pastoral areas of Saku, farmers harvested both maize and beans while in Saku, 50 percent of the farmers harvested maize. Milk production was 1.2litres/household/day, which was below normal across the livelihood zones. Livestock grazed within their normal traditional grazing areas.

Incidences of livestock diseases were reported in North Horr, Moyale and Laisamis sub-counties. There were no reported livestock deaths as a result of the dry spell.

**Access indicators**: Household water distances was normal while livestock trekking distances was shorter than the long term average. Water pans and boreholes were the main sources of water. Milk consumption was 1.0Litres/household/day which was way below normal.

Terms of trade was above normal attributed to stable goat and maize prices.

**Utilization indicators**: Nutritional status of children below the age of five years deteriorated but was within the long term average. Household food consumption score slightly declined but fell within acceptable band while coping strategies applied were stressed in all the livelihood zone.

### July
Drought Situation & Biophysical Indicators:
**Rainfall**: In the month under review, the County generally remained dry. Vegetation condition: 3-months Vegetation Condition Index for the month under review was 64.24 across the County hence no change but fell within the above normal vegetation greenness band.

**Socio Economic Indicators (Impact Indicators) Production indicators**: Livestock body condition was good for all the livestock species across the livelihood zones. In the agro-pastoral areas, farmers harvested maize, beans and green grams. Milk production was 1.3litres/household/day, which was below normal across the livelihood zones. There was no unusual livestock migration in all the livelihood zones. Incidences of livestock diseases were reported in North Horr, Moyale and Laisamis sub-counties. There were no reported livestock deaths as a result of the dry spell.

**Access indicators**: Household water distances was slightly above normal while livestock trekking distances was shorter than the long term average. Boreholes and water pans were the main sources of water. Milk consumption was 1.0Litres/household/day which was way below normal. Terms of trade was above normal attributed to stable goat and maize prices.

**Utilization indicators:** Nutritional status of children below the age of five years deteriorated but was within the long term average. Household food consumption score declined but fell within acceptable band while coping strategies employed by households were stressed in all the livelihood zones. There were no notable variations in livelihood coping strategies employed

### August
Drought Situation & Biophysical Indicators:
**Rainfall:** In the month under review, the County generally did not receive rains. Vegetation condition: 3-months Vegetation Condition Index for the month under review was 68.87 across the County hence no change when compared to the previous months VCI (Veg. Condition Index) of 62.24.

**Socio-Economic Indicators (Impact Indicators) Production indicators**: Livestock body condition was good for all the livestock species across the livelihood zones. Milk production was 1.4litres/household/day, which was below normal across the livelihood zones. There was no unusual livestock migration in all the livelihood zones. Incidences of livestock diseases

were reported in Saku, North Horr and Laisamis sub-counties. There were no reported livestock deaths as a result of the ongoing dry spell. Access indicators:

Household water distances was above normal by 16percent whereas livestock trekking distances was shorter than the long term average. Boreholes, shallow wells and water pans were the main sources of water. Milk consumption was 0.75litres/household/day which was way below normal.

Terms of trade was above normal attributed to stable goat and maize prices.

**Utilization indicators**: Reduction in admission trends for moderate acute malnutrition across the County recorded. Household food consumption score remained within acceptable band while coping strategies applied by households were stressed in all the livelihood zones. There were no notable variations in livelihood coping strategies employed.

## Cluster 3 – Mandera Cluster

Prof. Kassim Farah the IGAD Cluster 3 coordinator presented MAM and JAA seasons impacts and mitigation measures as outlined below. The below map shows the climatic conditions during the MAM season.
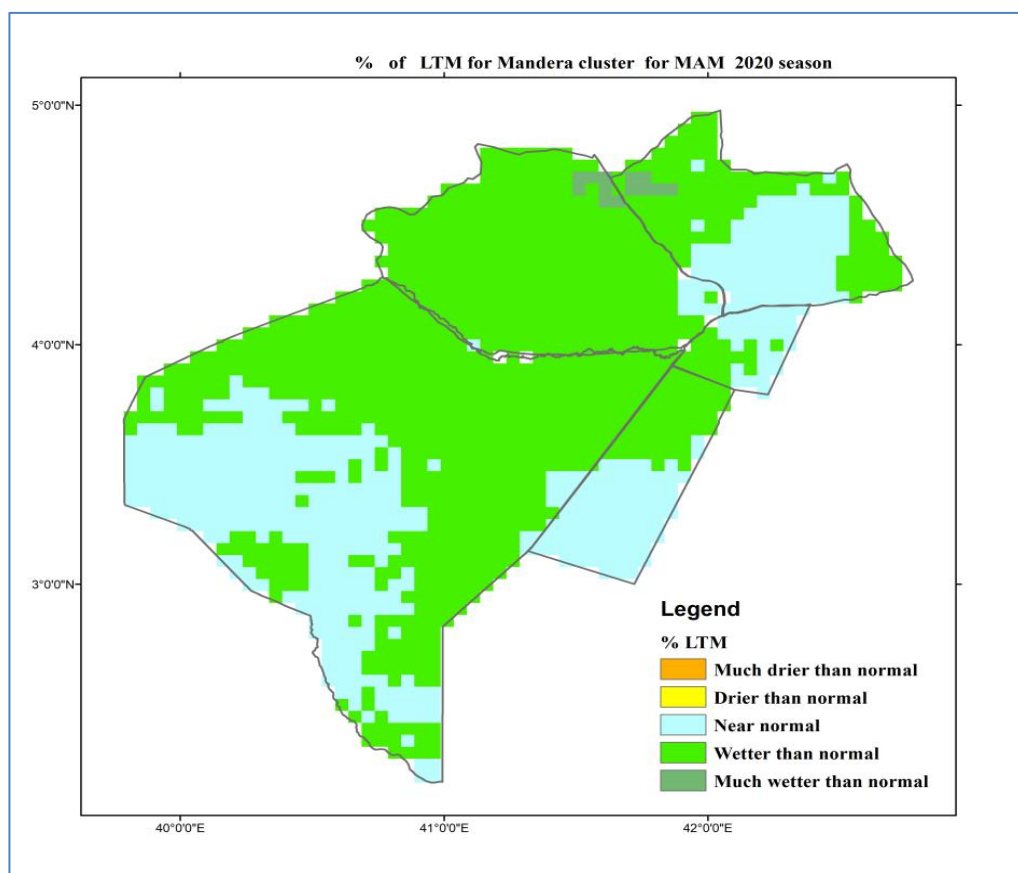


**Figure 13: MAM climate outlook – Mandera Cluster**

### MAM 2020: Interpretation

Most of the region is under zones 1,2,3 which had increased likelihood of enhanced rainfall during MAM (40-80%) with rainfall being fairl distributed within the season with short dry spells (mostly 2-4 days) except in zone 4 in Ethiopia which will have long dry spells (up to 20 days). Also, onset was fairly early in a the South-North direction leading to lush vegetation suitable for locust breeding. Zone 4 in Ethiopia, SW Somalia is of greatest concern ( BN forecast, long dry spells, high temperatures)

### Impacts on feed and water availability

Better regeneration of pastures and recharge of water reservoirs was witnessed in most parts of Kenya, Uganda, South Sudan, Somalia, southern Ethiopia. This led to enhanced:

- ✓ Fodder production and storage
- ✓ Water harvesting
- ✓ Reseeding of pastures ravaged by locusts and flooded areas

However, poor pasture conditions was experience in zone 4 (Ethiopia Afar, Dire dawa, east Shoa, Djibouti , north-west Somalia) requiring the distribution of concentrates due to deterioration of pastures as well as supplemental feed supplies and destocking initiatives for strategic off-takes.

### Implications on livestock health

In the wet zones within the cluster, Tick-Borne Diseases, LSD, PPR, CPP, Tsetse were recorded a further spread of tsetse flies especially in areas bordering wild animals and clostridial diseases upsurge. Also there was high alert of RVF and in in zone 4, due to amplifies livestock movements there were incidences of disease sharing at water points requiring animal treatments and vaccinations.

### Implications on markets

During the MAM season, Somalia targeted to sell more animals on the export markets during the Hajj (MAY) due to good body conditions of livestock. Also there was increase in milk production that compromised prices.

### Mandera Cluster JJA Outlook

A wetter than usual season is forecasted for western and central Sudan, southwestern Ethiopia, southeastern South Sudan, western Kenya, eastern and central Uganda. The rest of the region is expected to receive the usual rainfall, except for a limited area of coastal of Somalia, where less than usual rain is expected. The figure below shows the JJA season climatic conditions in the Mandera Cluster.
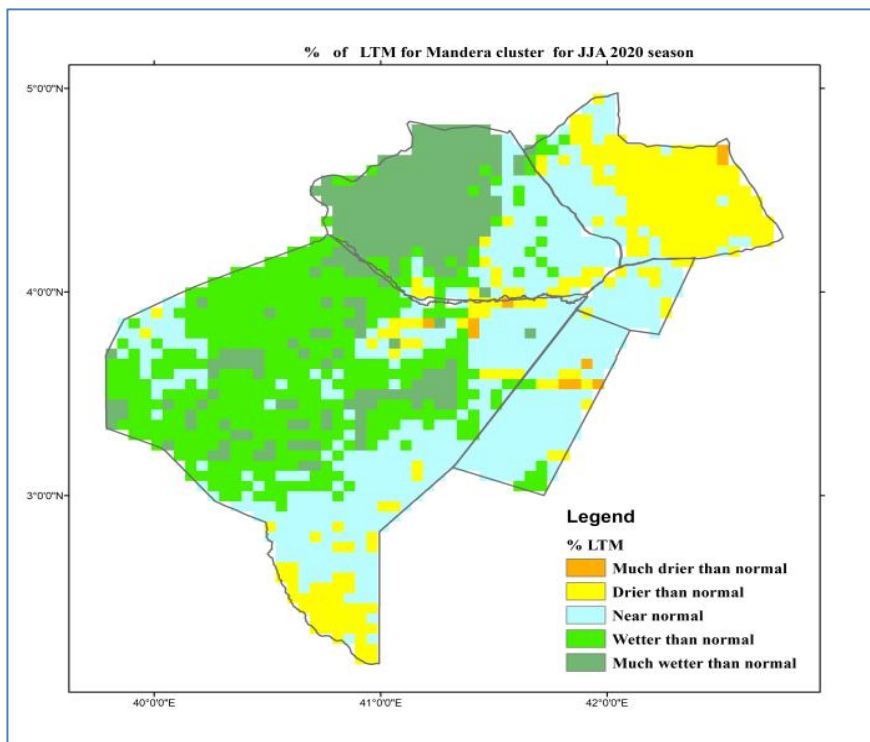
**Figure 14: JJA climate outlook – Mandera Cluster**

Below are some of the impacts experienced and mitigations undertaken

*Livestock*
**Impacts**
  i.    Good rains were experienced in the north and southwestern parts of the cluster that led to pasture regeneration.
  ii.   The potential migration of animals from flooded areas increased the risk of animal diseases.

**Mitigation interventions**
  i.    Increased fodder production,
  ii.   Provided veterinary services and mobile clinic in preparation for animal vaccination to reduce the risk of the spread of animal diseases
  iii.  Monitored the forecasts and disseminated early warning in a timely manner
  iv.   Monitored desert locust impact on pasture land and its migration to new areas

*Agriculture*
**Impacts**

  i.    The season was wetter than usual in the western part of the cluster presenting good conditions for production
  ii.   It also increased flood risk.
  iii.  Desert Locust, Post-Harvest losses, and COVID19 all threatened food production, transport and security.

**Mitigation interventions**

  i.    Distributed agro-inputs to farmers especially in the western part of the cluster

ii.   Avoided planting in flood-prone areas and put in place soil-erosion control structures
iii.  Instituted improved harvesting and post-harvest handling of the production of March-May season
iv.   Monitored and controlled of Desert locust breeding and migration
v.    Engaged in alternative income-generating enterprises


## Downscaled climate outlook the OND 2020 season

ICPAC Climate Scientist Dr Zewdu Segele presented downscaled OND season climate outlook, the parameters used and the findings that informed the advisories derived.

### OND Climate outlook

#### *Input for objective OND 2020 Forecasts*

Forecast outputs from 9 Global Climate Centers were processed using two approaches to fit the climate of GHA. Predictions indicate high probabilities for average conditions over the western and drier than average over the eastern parts of the sub-region
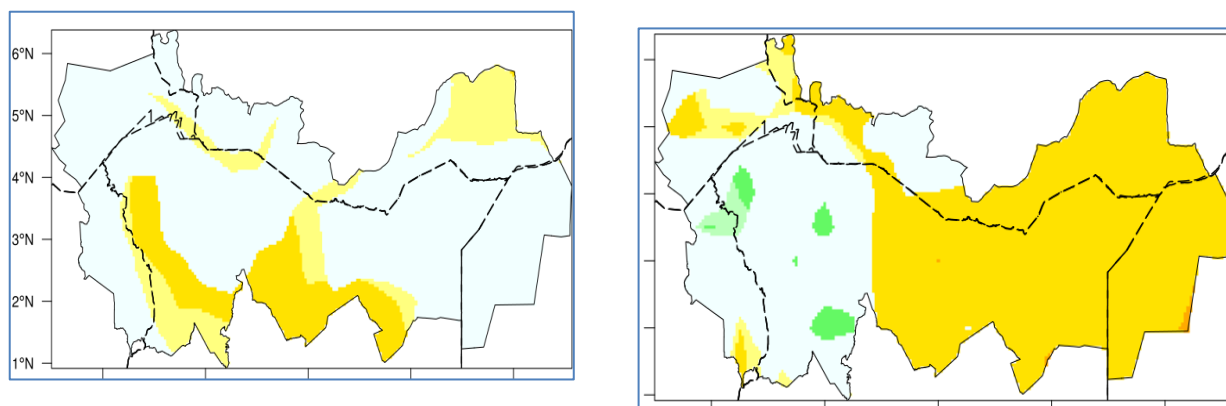


Figure 15: Climate inputs-CPT and Regression

### October-December (OND) 2020 Rainfall Outlook

i.   Drier than average rainfall conditions are expected over the eastern half of the sub-regions (IGAD Clusters I & II) extending from Marsabit and Moyale to Somalia. Parts of Ethiopia from South Omo and Hamer will also have drier conditions.
ii.  Near Average conditions are expected over most parts of IGAD Clusters I, including the greater Kapoeta in South Sudan, Uganda, much of Turkana and parts of Ethiopia (Yabelo to Moyale).
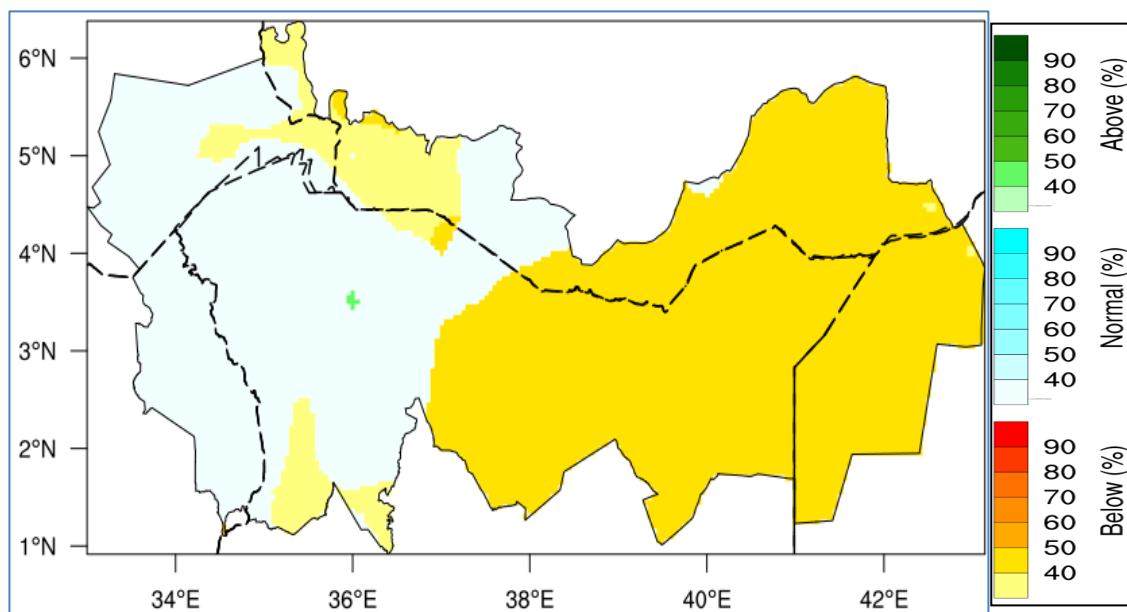
**Figure 15: OND Climate Outlook**

## Onset of OND-2020 rainy season

Early start of the rains expected over much of the Karamoja Cluster associated with the continuing rains in Uganda and South Sudan in September. The rains likely will be delayed by at least a week over the IGAD Clusters II & III
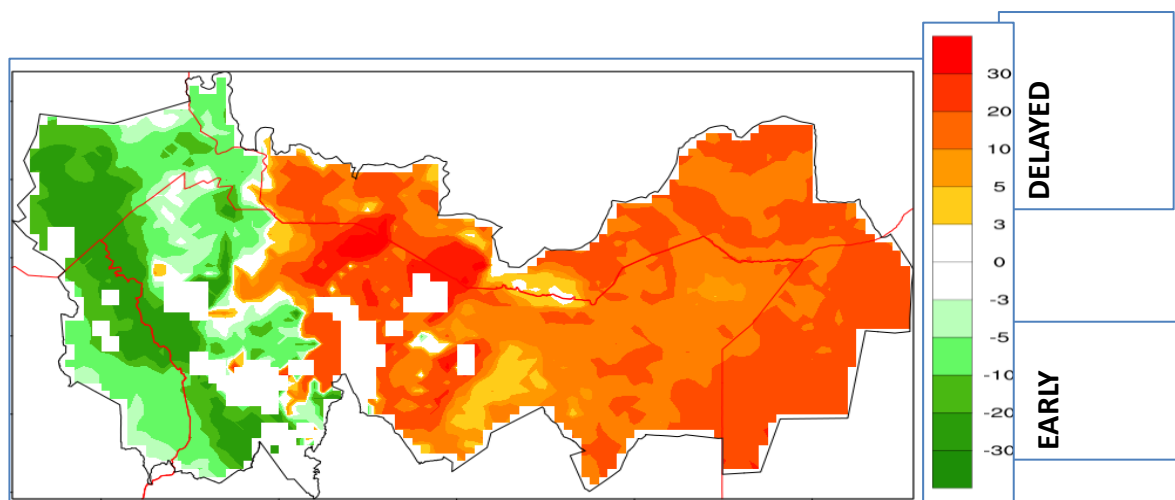


**Figure 16: OND Rain-onset**

## Start of dry spells (< 1 mm/day) after onset

Turkana and Marsabit likely will have extended dryness (> 20 days) soon after the first onset rains. Dry spells are short over IGAD Cluster II & III
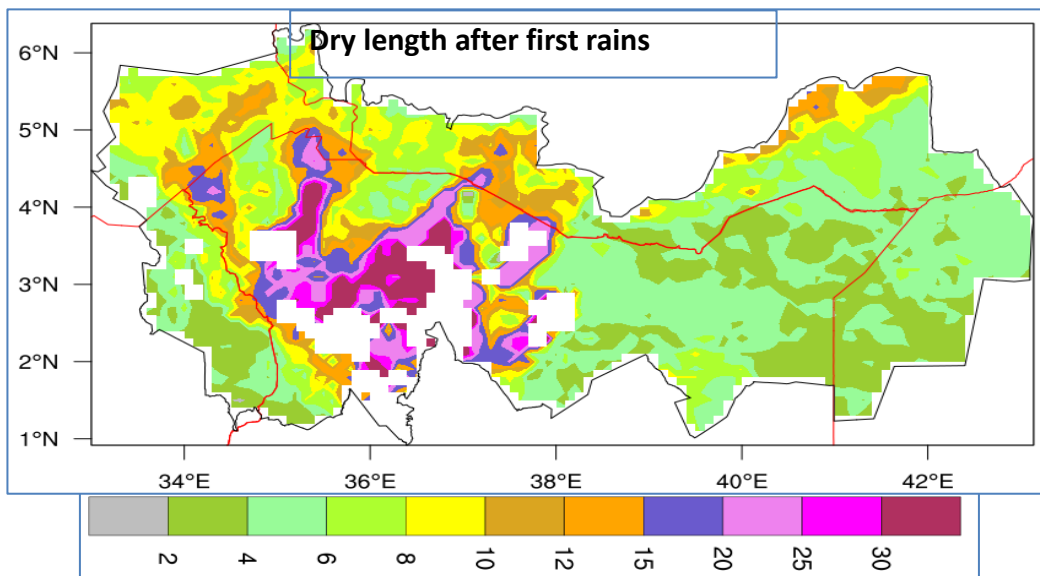
**Figure 17: OND Dry spells**

Except in Uganda, the extended dryness is longer than average compared to average. The longest dry spells are over northwestern Kenya
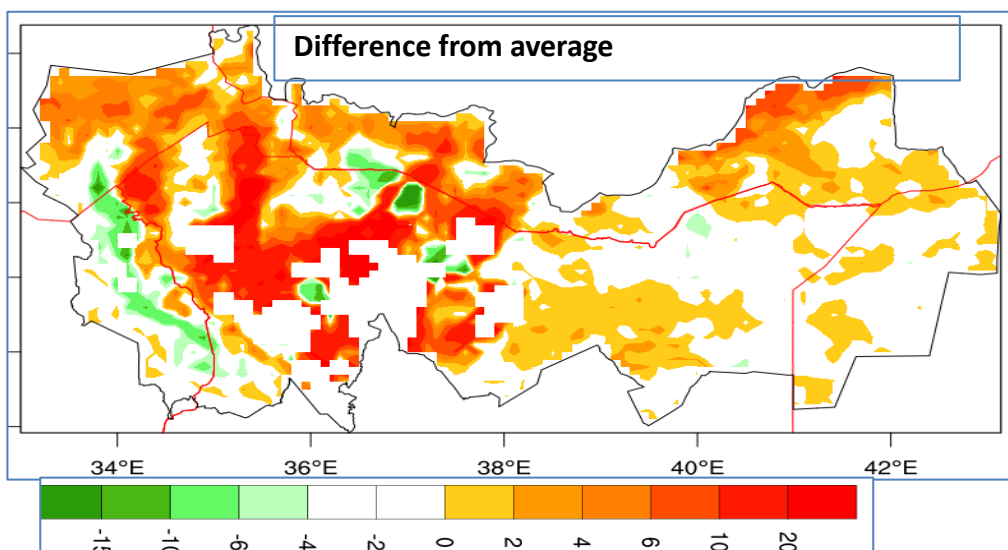


**Figure 18: OND Dry spells average differences**

## October-December 2020 temperature OUTLOOK

i.   Warmer than average temperatures indicated over most places. Probabilities for warmer than average temperatures are most enhanced over IGAD Clusters III

ii.  Near average temperatures are indicated over Uganda, West Pokot, southern Turkana regions
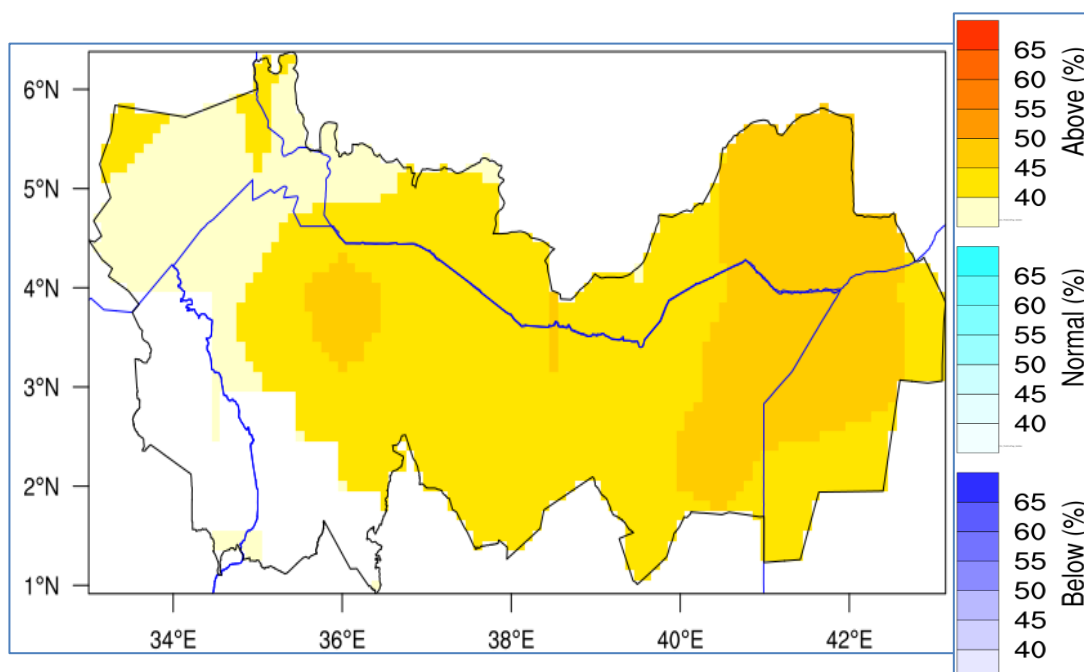
**Figure 19: OND Temperature outlook.**

## SUMMARY

1. The Clusters I, II, & III generally receive meager rainfall – climatologically, OND rainfall totals reach 250 mm only at few places
2. Drier than average conditions are expected in the eastern half of the sub-region over IGAD Cluster II & III, while mostly average conditions are indicated in the western sub-region
3. Early start of OND from South Omo (Ethiopia) to the Greater Kapoeta and Budi (South Sudan) and further extending from Kaabong to Kween in Uganda. However, much of the sub-region from eastern Marsbit to Somalia will likely have late start of the rains
4. Temperatures are expected to be warmer than average over most places especially over IGAD Cluster III
5. The probability of receiving 100 mm is significant (> 50%) mainly in few counties/woredas of Ethiopia, Somalia, and South Sudan

# Sectoral Impacts and Advisories for OND 2020 Season for SECCCI IGAD Clusters

| Sector | Potential impacts | Possible mitigation measures, advisories and intervention |
|---|---|---|
| **Livestock (pastoralists and agro-pastoralists)** | 5. Depressed pasture situation (inadequate pasture)<br>6. Water scarcity<br>7. Degraded rangelands<br>8. Increase disease prevalence and disease out break | xiii. Immediately disseminate this (early warning) information to all decision makers;<br>xiv. Feed harvesting and storage (conservation/hay storage)<br>xv. Undertake mass vaccination of all hoofed animals against FMD and black quarter<br>xvi. Sensitise farmers between border areas to spray and vaccinate livestock at individual level against common livestock diseases like tick borne<br>xvii. Timely commercial destocking to fetch good prices-Marketing eg cross-border animal markets ( disseminate the market price information)<br>xviii. Community peace dialogues to avert potential conflicts over resources<br>xix. Construct dams as a long term solution of perennial issues of water scarcity<br>xx. Provide water along stock routes –water trucking and tankering<br>xxi. Make use community structures for proper rangelands resource sharing e.g disease surveillance, CAHWs?<br>xxii. Diversified livelihoods in times of scarcity-<br>xxiii. Community peace structures…Committees (CMC, protocols<br>xxiv. Update, disseminate and conduct capacity development awareness creation campaign |
| **Crop Agriculture** | 4. Dry spells/Drought<br>5. Irrigation water scarcity<br>6. Desert locust invasion | xii. Immediately disseminate this (early warning) information to all decision makers;<br>xiii. Early land preparation to take advantage of the short season;<br>xiv. Promote short season (early maturing) crops and varieties;<br>xv. Expand irrigated areas especially in marshlands, rehabilitate irrigation infrastructure and subsidize irrigation equipment,<br>xvi. Practice in-situ water harvesting<br>xvii. Practice moisture conservation, for instance mulching<br>xviii. Develop contingency plans and Consider taking |

| | | crop micro-insurance to cushion them in the event of losses,; |
|---|---|---|
| | | xix. Where possible, expand and promote value chain inputs subsidy and crop insurance cover to cushion farmers against impacts of climate variability; |
| | | xx. Mitigate impacts of COVID-19 measures on agriculture across the country; |
| | | xxi. Strengthening market information system to benefit the farmer or pastoralists. |
| | | xxii. Update, disseminate and conduct capacity development awareness creation campaign |
| **Water** | 3. Water scarcity<br>4. Drying up of wells and boreholes | vi. Immediately disseminate this (early warning) information to all decision makers;<br>vii. Water harvesting, conservation and enhance water-shed management to take measures in runoff flooding.<br>viii. To maintain and repair of water points, storage and conveyance systems<br>ix. Water trucking and tankering<br>x. Update, disseminate and conduct capacity development awareness creation campaign |
| **Disaster Risk Management (DR** | 3. Food insecurity due to crop failures<br>4. Death of livestock due to lack of forage and water | vii. Immediately disseminate this (early warning) information to all decision makers;<br>viii. Update the national multi-sectorial response plan covering all major hazards<br>ix. Monitoring hatching areas and movement of desert locusts<br>x. Update and disseminate and conduct capacity development awareness creation campaign<br>xi. Institute drought contingency measures<br>xii. Update the humanitarian response plan already in place |
| **Conflict, Migration and displacement** | Inter- and intra-community conflicts over scarce resource will be escalated | vi. Immediately disseminate this (early warning) information to all decision makers;<br>vii. Update, disseminate and conduct capacity development awareness creation campaign<br>viii. Conduct community peace dialogues<br>ix. Use the existing structure for peace and conflict prevention<br>x. Beef up security |

# Workshop Recommendations and way forward

## Key Messages

1. OND seasonal outlook is critical and important for Clusters I, II, and III) mainly for Mandera and Marsabit county and also Moyale woreda.
2. Mandera and Marsabit counties and Moyale woreda from cluster II and III will be much drier and warmer than average.
3. Mandera and Marsabit counties and Moyale woreda from clusters III and II will also experience delayed onset of rains.

## Recommendations

1. To focus on dissemination of climate information including: forecasts, seasonal outlooks and advisories not only to reach the technical persons but to reach local communities (farmers/herders) who are direct beneficiaries.
2. To combine both scientific and indigenous technical knowledge while designing interventions for mitigation based on the downscaled seasonal outlooks.
3. To undertake capacity building in the interpretations and use of climate information for decision making in clusters and sub-clusters levels.
   a. Linking experts within clusters to the ICPAC generate climate information and products.
   b. Conduct Climate downscaling to lower levels i.e sub-counties, woredas, zones etc
4. To access relevant information from ICPAC (Climate data, forecasts and advisories); IGAD-KMP (thematic studies and data) and, UNEP (Environment assessment and monitoring data) portals.
5. To engage sectorial (Agriculture, livestock, peace, DRM and food security ) institutions and development partners to access the relevant information on climate date and forecasts)
6. To involve the development partners in the process of contingency planning and update information sharing campaign.

## Actions and Way Forward

1. SECCCI Cluster Coordinators to coordinate with sector experts within their clusters to finalize the advisories template and share back with ICPAC for compilation and producing the complete workshop report.
2. ICPAC together with SECCCI Cluster Coordinators and partners to explore avenues and pathways of disseminating climate information to local communities including farmers & herders
   a. Explore dissemination through radios
3. SECCCI Cluster Coordinators together with ICPAC and partners to organize joint forums – BORESHA consortium will/can take lead to initiate the process.

4. ICPAC-SECCCI together with cluster coordinators to organize second follow-up workshops at individual cluster levels to design interventions and operationalize dissemination of climate information pathways.

## Closing

Dr Agol on behalf of the project coordinator gave his closing remarks appreciating all for their active participation and rich information provided. Dr Zewdu on behalf of ICPAC director echoed the same sentiments and assured participants of support from IGAD/ICPAC and, officially closed the meeting at 1329hrs.

# ANNEXES

## Program/Agenda

**Downscaling of Climate information and Sector Advisories at Cluster Levels**

| TIME | ACTIVITY | Facilitator/ Responsible |
|---|---|---|
| **Virtual workshop on downscaling of  OND  2020 climate outlook and sector advisories for SECCCI clusters**<br><br>**30 September 2020** | | |
| **SESSION I:    SETTING THE STAGE AND  OPENING SESSION** | | |
| 09.00: – 09:15 | Participant registration | Fred Atieno and Abebe Tadege |
| 09:15 – 10:00 | Welcome of participants  and workshop perspectives/introduction of participants : **Abebe Tadege** | *Moderator:* Prof Kassim Farah,  Cluster Coordinator for Mandera (IGAD-ICPAC/SECCCI) |
| | Opening Remarks<br><br>   a) SECCCI: **Dr. Gezahegn Aboset,   SECCCI Project Coordinator**<br>   b) UNDP- **Mr. Yuta Kono/Simone  (UNDP)**<br>   c) ICPAC:   **Dr Guleid Artan, Director of ICPAC** | |
| | A brief overview of the SECCCI project (status and achievements) - **Dr. Gezahegn Aboset (IGAD)** | *Rapporteur:* Mr Fred Atieno, |
| 10.00-10:45 | Baseline  climatology of  cross boarder cluster areas of the SECCCI  project  **(Mr Abebe Tadege, Climate Change Officer, ICPAC)** | *Moderator:* Dr Ahmed Amdihun |
| | Review of  performance of  MAM&JJA 2020 **(Mr  Paulino Omay, ICPAC)** | |
| | Review of observed sectoral impacts of MAM & JJA 2020 over the SECCCI cluster areas- (**To be led by sectoral experts)**<br><br>*Responsible persons*<br><br>Cluster 1- Dr. Agol Kwai -  Turkana<br><br>Cluster 2 - Mr. Jiddah Choke – Moyale/Marsabit<br><br>Cluster 3-  Prof. Kassim - Mandera | *Rapporteur:*<br><br>Mr Misiani Herbert |

| | | |
|---|---|---|
| 1045-11:00 | Plenary Discussion-All participants | |
| 11:00 -11.15: | Health break | |

<table>
<tr><td colspan="3" style="background:orange"><b>SESSION II: OCTOBER-DECEMBER (OND) 2020 CLIMATE OUTLOOK AND ITS POTENTIAL IMPACTS AND DEVELOPMENT OF MANAGEMENT STRATEGIES</b></td></tr>
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| | | |
|---|---|---|
| 11:15 – 12.00 | Downscaled climate outlook for SECCCI clusters for the October to December 2020 season -**Dr Zewdu Segele, ICPAC**, 15 minutes | ***Moderator:*** Dr Linda Ogallo, |
| 12:00-12:45 | ***Sectoral advisories:*** Assessing likely impacts/implication of OND 2020 forecast for sectors in the SECCCI clusters and developing advisories and mitigation measures to be taken for Early Warning and Early Action.<br><br>• Sector 1: Agriculture and Food Security Sector (Crops)<br>• Sector 2: Livestock & Veterinary<br>• Sector 3: Water & Health<br>• Sector 4: Disaster Risk Management (DRM)<br>• Sector 3: Conflict & NRM | ***Rapporteur and Guidance:*** Mr Oliver Kipkogei/ Jaspher |
| 12:45-13:00 | Plenary discussions | **ALL** |
| 13:00-13:10 | Recommendations and way forward | Mr Fred Atieno, |
| 13:10-13:15 | Closing Remarks | IGAD/ICPAC |

## List of Participants

| Name | Organization | Position | Country | Email Address |
|------|--------------|----------|---------|---------------|
| Abdul Haro | Danish Refugee Council | Head Of Programme | Kenya | Abdul.Haro@Drc.Ngo |
| Abdullahi Farah | Ministry Of Livestock Forestery And Range Jubaland State Of Somalia | Director General | Somalia | Dg-Molfr@Jubalandstate.So |
| Abebe Tadege | IGAD/ICPAC | Climate Change Officer | Kenya | Abebe.Tadege@Igad.Int |
| Aden Ahmed | Ministry Of Agricultural Development Somaliland | Meteorology | Somaliland | Adan.V.Good@Gmail.Com |
| Agol Kwai | IGAD/ICPAC | IGAD-Cluster 1 Coordinator | South Sudan | Agol.Kwai@Igad.Int |
| Ahmed Amdihun | IGAD/ICPAC | Disaster Risk Assessment | Kenya | Aamdihun@Icpac.Net |
| Ali Kuresh | | | Ethiopia | ali.kuresh00@gmail.com |
| Alinur Abdi | Government | Woreda Agriculture Head | Ethiopia | Alinur8419@Gmail.Com |
| Anthony Mwanthi | IGAD/ICPAC | Climate Modelling Assistant | Kenya | Amwanthi@Icpac.Net |
| Awale degewione | Etra Tech Internayional Development | | Ethiopia | awale.deg@gmail.com |
| Benson Long'or | County Government Of Turkana | County Director Of Veterinary Services | Kenya | Etelejlongor@Gmail.Com |
| Bertrand Richaud | UNEP-DHI | Water Resources Expert | France | Ber@Dhigroup.Com |
| Claudio Sortum | Mandera County | County Director Of Veterinary Services | Kenya | Csortum@Gmail.Com |
| Daniel Anaya | Ateker Foundation South Sudan | Programs Manager | South Sudan | Anayadnl@Gmail.Com |
| DENNIS PAULE | Lokado | | Kenya | |
| Edwin Mangeni | UNDP | Capacity Development Peace And Conflict Officer | Kenya | Edwin.Mangeni@Undp.Org |
| Ernest Anzeze | Turkana County Government | Deputy Director of Livestock Production | Kenya | eanzeze@gmail.com or eanzeze@yahoo.com |

| Eunice Koech | IGAD/ICPAC | ICPAC - Climate Scientist | Kenya | Ekoech@Icpac.Net |
|---|---|---|---|---|
| Fadumo Ahmed Abdullahi | Ministry Of Humanitarian Affairs And Disaster Management | Head Of Climate Change Adaptaion | Somalia | Xanaan2030@Gmail.Com |
| Fatuma Salat | Danish Refugee Council | Project Officer | Kenya | Fatuma.Salat@Drc.Ngo |
| Francis Kiriri | Department Of Agriculture, Marsabit County | Sub County Agricultural Officer, Moyale | Kenya | Daomoyale@Yahoo.Com |
| Fred Atieno | IGAD/ICPAC | Resilience Officer | Kenya | Fred.Atieno@Icpac.Net |
| GEBREMARIAM ADANE GETU | National Meteorology Agency Of Ethiopia | Associated Meteorologist | Ethiopia | Gebremariamadane@Gmail.Com |
| Gemechu Deed | UNDP | UNDP- Deputy CC - Cluster 2 | Ethiopia | Gemechu.Deed@Undp.Org |
| Gezahegn Aboset | IGAD | IGAD-Project Coordinator | Ethiopia | Gezahegn.Aboset@Igad.Int |
| Guleid Artan | IGAD/ICPAC | ICPAC-Director | | Guleid.Artan@Igad.Int |
| HAGGAI NANGORI | Lokado | | Kenya | |
| Harun Musdaf | Mandera County | Peace / security / conflict | Kenya | Harun.musdaf@gmail.com |
| Hassan Abdilahi | Minstery Of Agricultural Development Somaliland | Member | Somalia | Hassanmahdi213@Gmail.Com |
| Hassan Charfi | CGM Department Of Agriculture | Deputy Director Agriculture | Kenya | Hassancharfi@Gmail.Com |
| Hussein Madey | Livestock | County Director Of Livestock Production- Mandera County | Kenya | Madeyhussein@Gmail.Com |
| Hussein Mohamud Ibrahim | National Drought Management Authority | Assistant Director Drought Information | Kenya | Hussein.Ibrahim@Ndma.Go.Ke |
| Hussen Seid Endris | IGAD /ICPAC | Climate Modeling Expert | Kenya | Hussen@Icpac.Net |
| Jasper Mwesigwa | IGAD/ICPAC | ICPAC - Climate Scientist | Uganda | Jmwesigwa@Icpac.Net |
| Jiddah Choke | ICPALD/IGAD | Cluster Coordinator, Cluster II | Kenya | Jiddah.Choke@Igad.Int |

| Kassim Farah | IGAD/ICPAC | IGAD-Cluster 3 Coordinator | Kenya | Kassim.Farah@Icpac.Net |
|---|---|---|---|---|
| Locheria Narubu Icarus | Ateker Foundation South Sudan | Executive Director | South Sudan | Atekerfoundationssd@Gmail.Com |
| Marijn Korndewal | UNEP | UNEP-Programme Manager | | Marijn.Korndewal@Un.Org |
| Mohamud Geddi | UNDP | UNDP - Deputy CC - Cluster3 | Ethiopia | Mohamud.Geddi@Undp.Org |
| Nicoletta Buono | DRC | Head Of PMU | Kenya | Nicoletta.Buono@Drc.Ngo |
| Oliver Kipkogei | IGAD/ICPAC | ICPAC - Climate Scientist | Kenya | Oliver@Icpac.Net |
| Paulino Omay | IGAD/ICPAC | ICPAC - Climate Scientist | South Sudan | Paulinoomay@Icpac.Net |
| SÃlvia Leiriã£O | UNEP-DHI | Project Manager | Denmark | Sls@Dhigroup.Com |
| Shire Musse | Ministry of Livestock, Forestry & Range | Senior NRM & Resilience Advisor | Somalia | Shiremusse@gmail.com |
| Simone Beccaria | UNDP RSCA | UNDP-Programme Manager | Italy | Simone.Beccaria@Undp.Org |
| Stella Opakas | Turkana County | Water Services | Kenya | |
| Titus Ochieng | Turkana County | Water Services, | Kenya | |
| Tony Mwaniki | GIZ-TCF | Technical Advisor | Kenya | Tony.Mwaniki@Giz.De |
| Vivian Malit | VSF-Germany | MEAL Officer | Kenya | |
| Yuta Kono | UNDP RSCA | Peacebuilding And Governance Specialist | Japan | Yuta.Kono@Undp.Org |
| Zewdu Segele | IGAD/ICPAC | Climate Scientist | Kenya | Zsegele@Icpac.Net |