

FDRE
Ministry of Water and Energy
EMI
Bio Meteorology and Insurance Index Desk



Climate Information
For
The Health Sector

June 1-10, 2024 Assessment and
11-20 Forecast

Jun _2024

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Foreword

This "Climate Information for the Health Sector" Bulletin has been designed to convey essential information regarding the monitoring of human comfort conditions based on the analysis of temperature and humidity data and also for the monitoring of Malaria outbreak areas based on the analysis of temperature and precipitation data. Since the monitoring of temperature and rainfall over a given area can be used to assess the likelihood of an outbreak of Malaria with a lag of two months, this information can be an important early warning tool if used judiciously.

The major objective of this bulletin is in line with the Ethiopia Meteorological Institute's strategy of diversifying climate application products to the basic developmental sectors (such as the Health, water, agricultural sector, etc...). This bulletin can be a very important source of information to Health professionals engaged in the monitoring of Public Health, to Tourism Agents and institutions who advise tourists regarding the comfort conditions of the places to be visited by the tourists, and to the researcher who is interested in the field of Bio-Climatology.

We have the opinion that careful and continuous use of this bulletin can benefit the improvement of early warning and preparedness in the health sector.

Meanwhile, your comments and constructive suggestions are highly appreciated to make the objective of this bulletin a success, This same bulletin can be accessed online at: http://www.ethiomet.gov.et/bulletins/health_bulletins

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Part One

1. Climate-Health Assessment of Jun2024 1st Dekad

1.1 Suitable weather conditions for Malaria Transmission during Jun 2024 1st Dekad

According to the collected and analyzed climate data for Jun 2024 1st Dekad, there was a **low favorable to moderate favorable** climate conditions for the breeding and transmission of malaria over Western and southwestern half of the country. Regions such as Eastern Gambela, South-west Ethiopia region, central Ethiopia region, and South Ethiopian region, western and South Oromia, Sidama and Benishangul Gumuz regions of the country were very conducive for malaria transmission as illustrated in Figure 1.

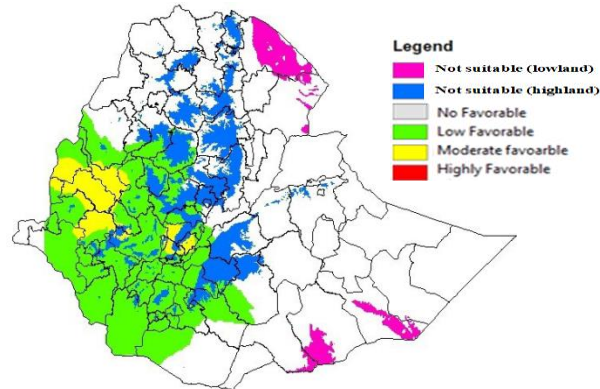


Fig 1:- Suitable weather conditions for malaria breaging site during Jun 2024 1st Dekad.

1.2 Climate comfort Conditions during Jun 2024 1st Dekad

1.2.1 Comfortability for Human

As a result of the Temperature-Humidity Index (THI) analysis of Jun 2024 1st Dekad heat stress was happened over a few places in the lowland parts of Gambela, North Somalia and Afar regions who experienced heat stress condition; whereas the rest of most parts of the country were experienced comfortable and moderately comfortable weather conditions as shown in figure 2.

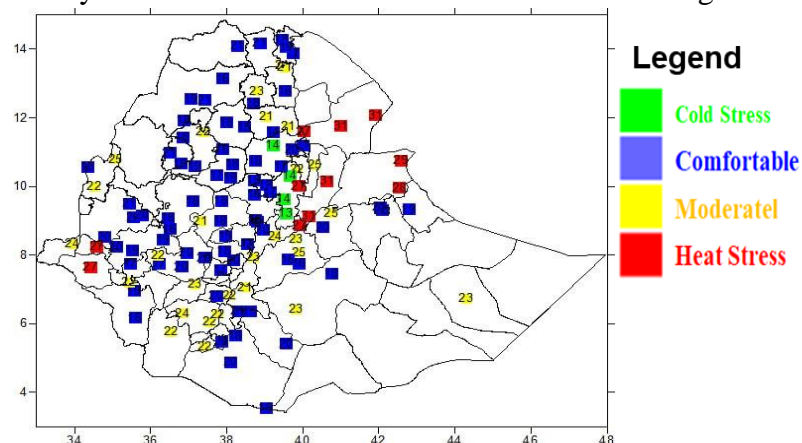


Fig 2:- Comfort index for humans duringJun 2024 1st Dekad.

1.2.2 Comfortability for Cattle

Moderately heat stress was experienced in Afar. And also Non-significant heat stress condition was observed in eastern and northern Somali, most parts of Afar, Gambela, Benishangul and some lowlands parts of south Ethiopia regions. Whereas much of the country were dominated by non-stress climate conditions as shown in figure 3.

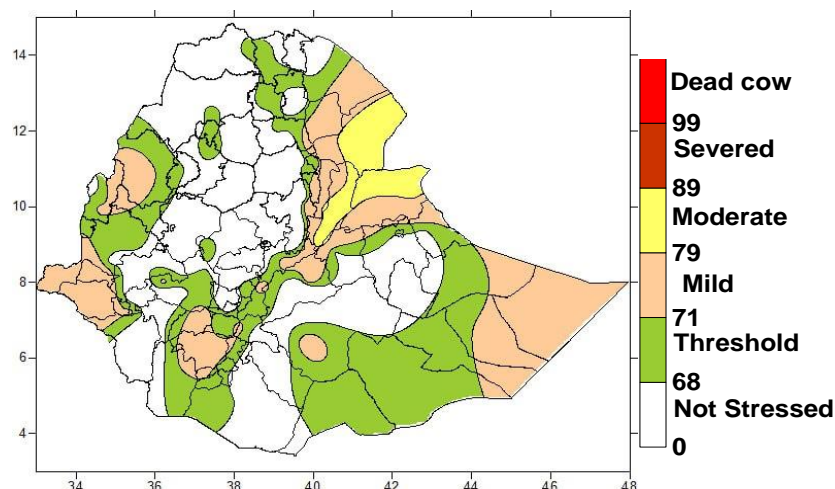


Fig 3:- Comfort index for Cattle duringJun 2024 1st Dekad.

Part Two

2 Expected suitable Weather condtions on health for Second dekad of June 2024

2.1 Expected Mosquito Breeding Suitable Areas

During the upcoming Second (11-20) dekad of June 2024; encouraging climate condition for mosquito breeding and development will expected over most of Ethiopia ranging from southwest Ethiopia to northern Ethiopia; namely Gambela, Benishangul, western and eastern Oromia, western Amhara, south Ethiopia, southwest Ethiopia and central Ethiopia regions. This expanded and amplified situation of previous month flattering climate effect will be aggravation incidence cases. illustrated in red in figure 4.

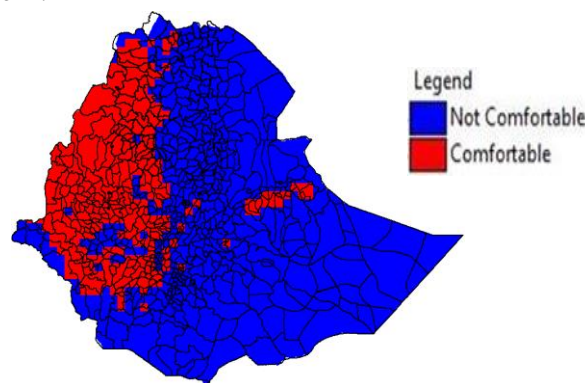


Fig 4: Suitable weather conditions for malaria incidence for June 2nd dekade 2024

2.2 Temperature Humidity Index (THI)

2.2.1 Comfortability for Cattle

During the succeeding Second (11-20) dekad of June 2024, Severe stress condition will expect in Northern afar for non-dairy cattle and non-significant impact (mild to moderate heat stress) condition will expected in most low lands of the country, which includes Somali, Afar, Gambela, Benishangul Gumuz, Southwest Ethiopia, south Ethiopia regions, lowlands of eastern and western Amhara and most parts of Tigray regions. While other highland parts of the country will be in a safe conditions for cattle's as shown in Figure 5.

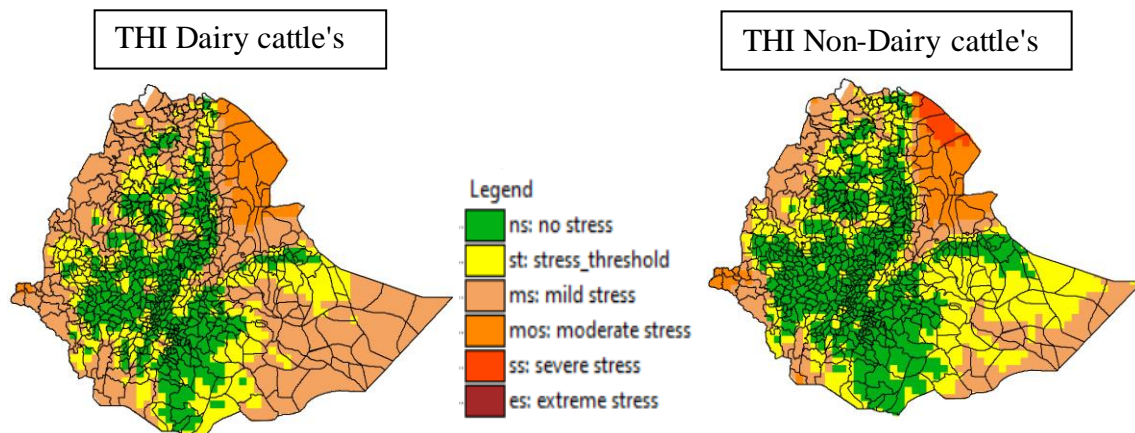


Fig 5: Comfort index for Cattle during 2nd Dekad of June 2024

2.2.2 Comfortability for Human

During the impending Second dekad of June 2024, in the most parts of Afar will be in 100% stressful conditions. While Gambela, northern and southern Somali, border of western Amhara and south Ethiopia regions will be in partially stressed areas for the coming 10 days. The remaining most midland and high land areas of the country are in a pleasant condition as looking in figure 6 below.

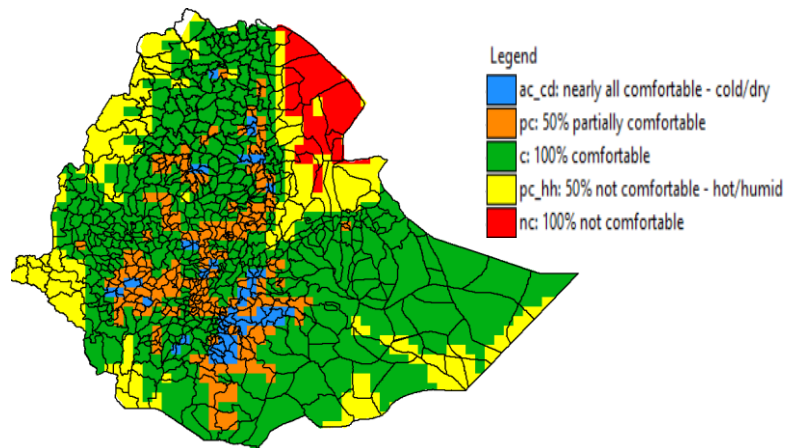


Fig 6: Comfort index for humans during 2nd Dekad of June 2024

3. Conclusion

Based on the June 2024 first dekad analyzed data, there were **low to Moderate** suitable climate conditions to the breeding and transmission of vector-borne diseases, additionally, over the next 10 days, the western half of the country will continue to experience expanded suitable conditions for the breeding and development mosquitoes.

In terms of climate comfortability conditions, most parts of the country have experienced pleasant conditions for both humans and livestock. However, certain regions like Afar, Somali, Gambela and western Amhara might be affected by heat stress in some hotspot lowland areas. Looking ahead to the next 10 days of June second dekad, the low-lying border areas of the country, especially Afar will be in stressful, and others like Gambela, south Ethiopia region, and western Amhara, southern borders of Somali region will experience moderately heat stress, which will affect both humans and cattle.

4. Recommendations

Use and implement the following recommendations in places that are favorable for the development of malaria and other vector-borne related diseases;

- Attention to any incidence, especially for malaria disease in such favorable areas
- Controlling measures and activity are advised
- Reducing the environmentally aggravating condition
- Awareness creation campaign to the community and sharing of the climate-health update
- As per the threshold of malaria, the impact will start after the end of this month, and be ready to respond before it leads to significant impacts
- Avoid any exposure of the community to mosquitoes by ensuring a clean environment and using mosquito nets.