

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



Climate Information
For
The Health Sector

July 2024 Monthly Assessment and August 1-10
Dekadal Forecast

August_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 July 2024

1.1 Suitable weather conditions for Malaria Transmission during July 2024

According to the collected and analyzed climate data for July 2024, there was a **low to moderate favorable** climate conditions for the breeding and transmission of malaria over most parts of the country. Regions such as Eastern Gambela, south and South-west Ethiopia, central Ethiopia, most parts of Oromia, western Amhara, Western Somali, Harar, Northern Afar, most parts of Tigray and Benishangul Gumuz regions of the country was very conducive for malaria transmission and breeding as illustrated in Figure 1.

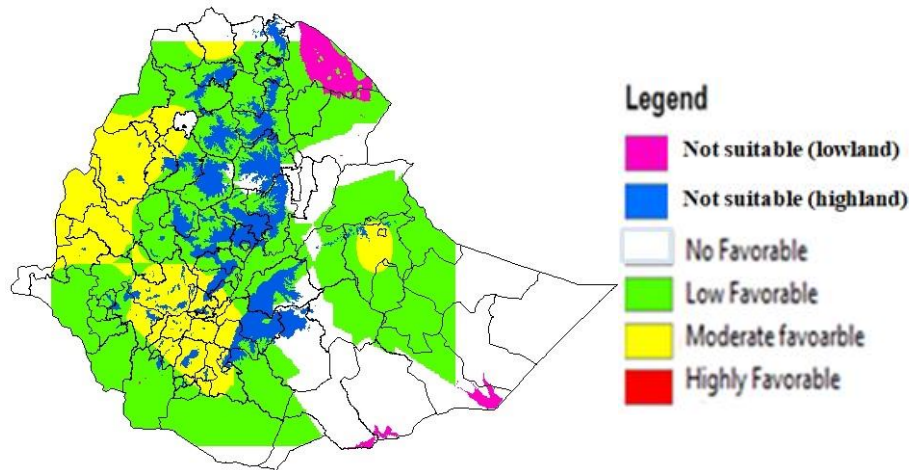


Fig 1:- Suitable weather conditions for malaria breeding areas during July 2024.

1.2 Climate comfort Conditions

1.2.1 Comfortability for Human

As a result of the Temperature-Humidity Index (THI) analysis of July 2024 over a few places of Gambela, southern Somali and Afar regions was experienced heat stress condition; whereas the rest of most parts of the country were experienced comfortable and moderately comfortable weather conditions looking at figure 2.

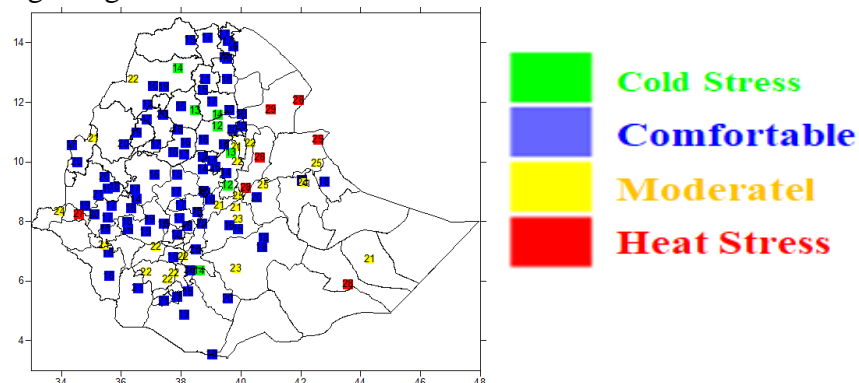


Fig 2:- Comfort index for humans during July 2024.

1.2.2 Comfortability for Cattle

Moderately heat stress was experienced in Afar and Gambela. While non-significant heat stress condition was observed in Somali, the rest of Afar, and most of Gambela regions. Whereas the rest parts of the country were dominated by non-stress climate conditions as shown in figure 3.

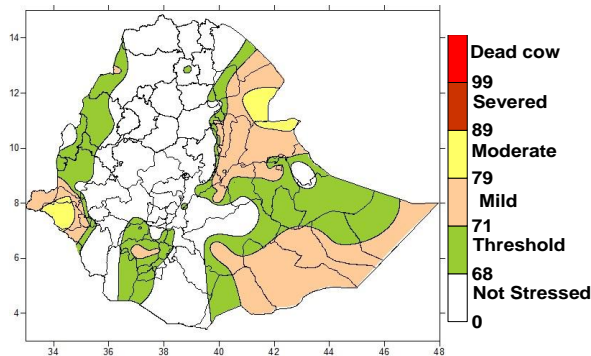


Fig 3:- Comfort index for Cattle during July 2024.

Part Two

2 Expected Weather Impacts on health for first (1-10) dekad of August 2024

2.1 Expected Mosquito Breeding Suitable Areas

During the upcoming first (1-10) dekad of August 2024; encouraging climate condition for mosquito breeding and development will be expected over most of Kiremt rainfall benefiting areas of the country. **Regions** such as; south and south-west Ethiopia, Central Ethiopia, Gambela, Benishangul, most parts of western, central and eastern Oromia, most parts of western Amhara, Border of Eastern Amhara and Afar, and Tigray regions will be in a suitable weather condition in the coming ten days. This expanded and amplified situation, resulting from the previous month's flattering climate effect, will increase the incidence of cases as illustrated in red in figure 4.

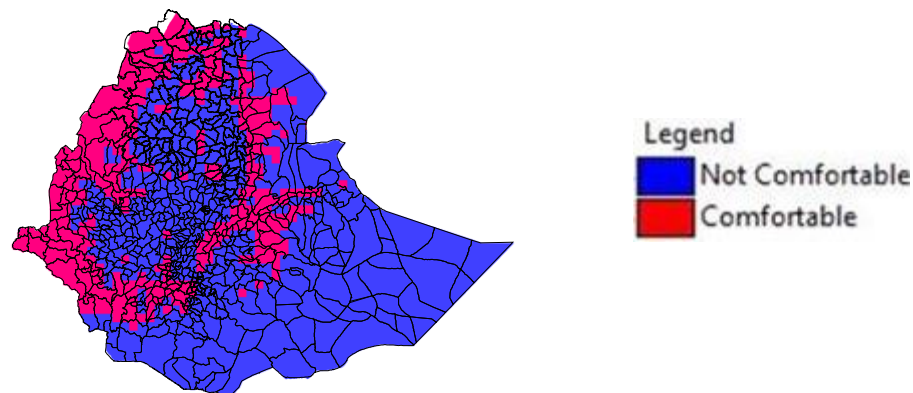


Fig 4: Suitable weather conditions for malaria breeding for August 1st dekade 2024

2.2 Expected Climate comfort Conditions

2.2.1 Comfortability for Cattle

Moderately to sever stress will be expected for the coming ten days in Afar for dairy and none-dairy cattle respectively. For the rest parts of the country there will be non-significant heat stress condition as shown in Figure 5.

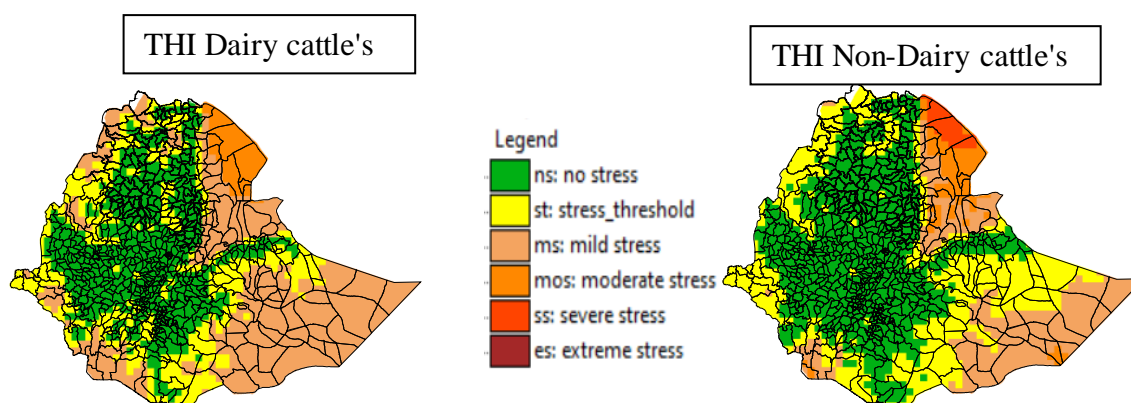


Fig 5: Comfort index for Cattle during 1st Dekad of August 2024

2.2.2 Comfortability for Human

For the coming ten days of August 2024, severe heat stress will be experienced in the northern Afar region. A partial (50%) uncomfortable weather situation will be expected over southern and northern Somalia, southern Afar, and southern Ethiopia.

Conversely, most of the rest of the country will enjoy fully comfortable (100%) weather conditions, as shown in Figure 6 below.

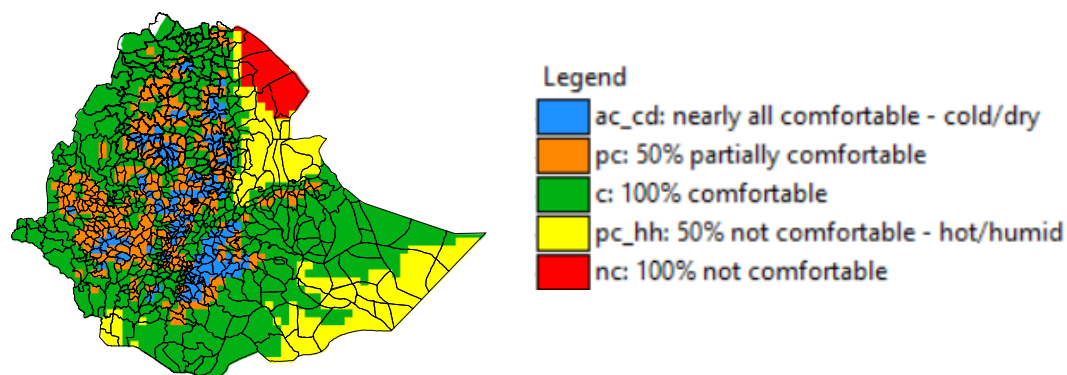


Fig 6: Comfort index for humans during 1st Dekad of August 2024

3. Conclusion

Based on the climate-health analysis for July 2024, it has been observed that, there were low to moderate suitable climate conditions to the breeding and transmission of vector-borne diseases in Kiremt rainfall benefiting areas. 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, and Gambela might be affected by heat stress in some hotspot lowland areas. Looking ahead to the next 10 days of August first dekad, the low-lying border areas of the country, especially Afar region will experience moderately to severe 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.