

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



Climate Information  
For  
The Health Sector

May 1-10 2024 Assessment  
And  
10-20 Forecasts

MAY- 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 strategy of diversifying climate application products to the basic developmental sectors (such as the Health, water, agricultural sectors, 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](http://www.ethiomet.gov.et/bulletins/health_bulletins)

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# Part One

## 1. Weather Assessment of Last Dekade

### 1.1. Malaria Suitable areas during May first Dekade 2024

According to the collected and analyzed climate data for May 1<sup>st</sup> Dekade, favorable climate conditions for the breeding and transmission of malaria were observed Low favorable conditions over Somali, Afar and border of eastern Amhara, eastern and central Oromia, southwest and border of eastern Gambela, Benishangul Gumuz; Whereas moderately favorable condition were observed over southern Oromia, South and Central Ethiopia region, Sidama and Border of western Somali as illustrated in figure 1 below. On the other hand, climate was not conducive for the breeding and transmission of malaria over Amhara, western Oromia, most parts of Gambela eastern tips of Somali, and northern Afar and tigray regions.

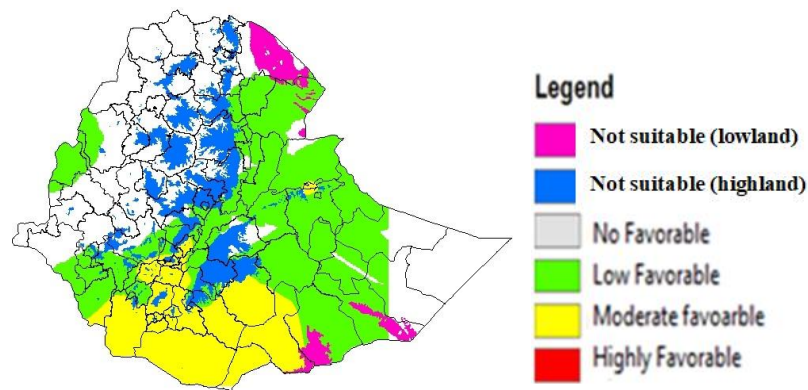


Fig 1:- Malaria suitability areas during May 1<sup>st</sup> Dekade 2024.

### 1.2. THI Conditions during May 1<sup>st</sup> Dekade 2024

#### 1.2.1 THI for Human

As a result of Temperature-Humidity Index (THI) analysis, during the May 1<sup>st</sup> Dekade 2024 heat stress was observed over few places in the lowland parts of southern Somalia, Afar, western Amhara and Gambela. Whereas, the rest most parts of the country experienced comfortable weather conditions

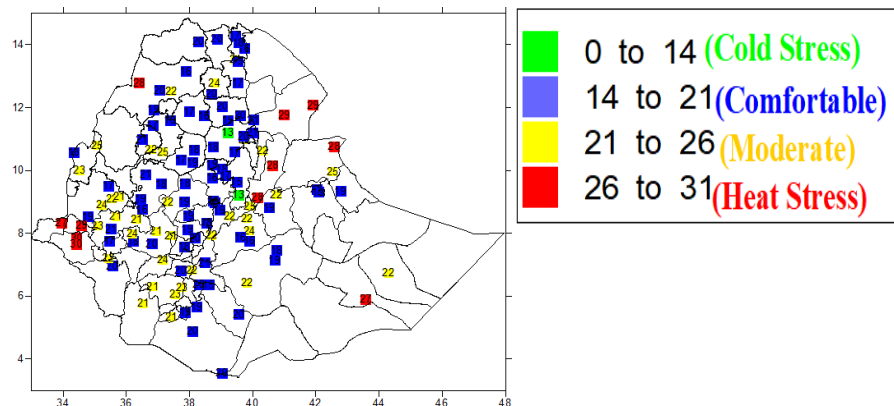


Fig 2; THI for human May 1st Dekade 2024

### 1.2.2. THI for Cattle.

According to the collected meteorological data During May 1st Dekade 2024 Severed to moderate heat stress was observed in the Northern Afar, lowlands of Western Amhara and border of dire dawa while mild heat stress was observed over the rest most parts Northern Afar, Somalia, Gambela, Benishangul Gumuz regions. Whereas the rest parts of the country were dominated by not-stress weather conditions.

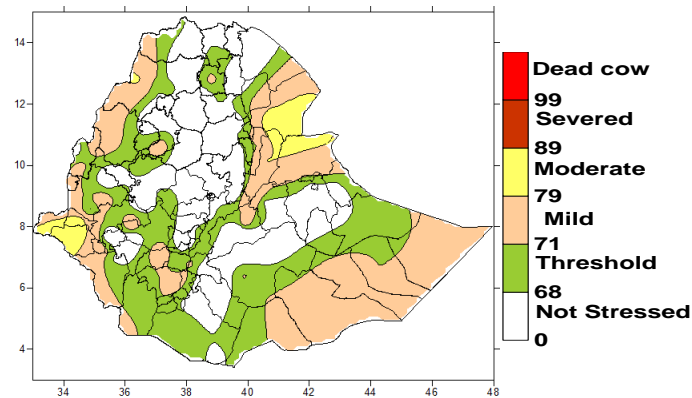


Fig 3:- THI for Cattle during the May 1st Dekade 2024.

## Part Two

## 2. Expected Weather Impacts on health for the May 2nd Dekade 2024

### 2.1. Expected Mosquito breeding suitable areas

During the coming May 2<sup>nd</sup> Dekade 2024 favorable climate condition for malaria mosquito breeding and development will be expected over Southwest Ethiopia region, south Ethiopia region, Central Ethiopia region, southern eastern Oromia and Some parts of Gambela regions will be more suitable areas for malaria transmission. Whereas the rest parts of the country will not comfortable conditions.

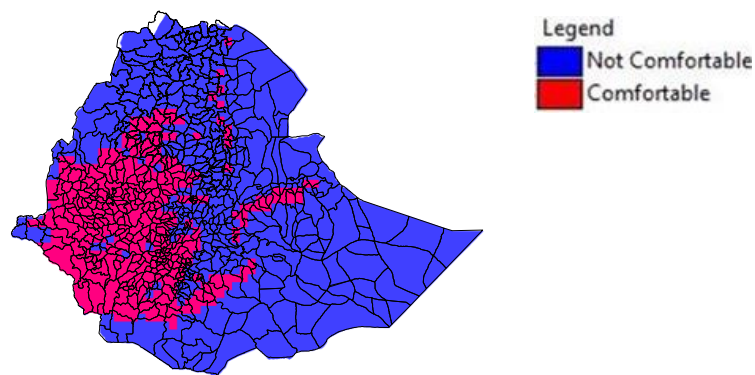


Fig 4: Suitable weather condition for malaria vector for May 2nd Dekade 2024

## 2.2 Temperature Humidity Index (THI)

### 2.2.1 THI for Cattle

During the coming May 2nd Dekade 2024, Severe to moderate heat stress conditions will occur in the northern Afar, Gambela, Southern Somalia for both dairy and non-dairy Cattle while most parts of Somalia, Benishangul Gumuz, Western Amhara, South west Ethiopia, western Oromia and Gambela regions will expect mild stress in most areas for both dairy and non-diary cattle's. The rest highland portion of the country will expect to be under Stress \_threshold to non-stress conditions.

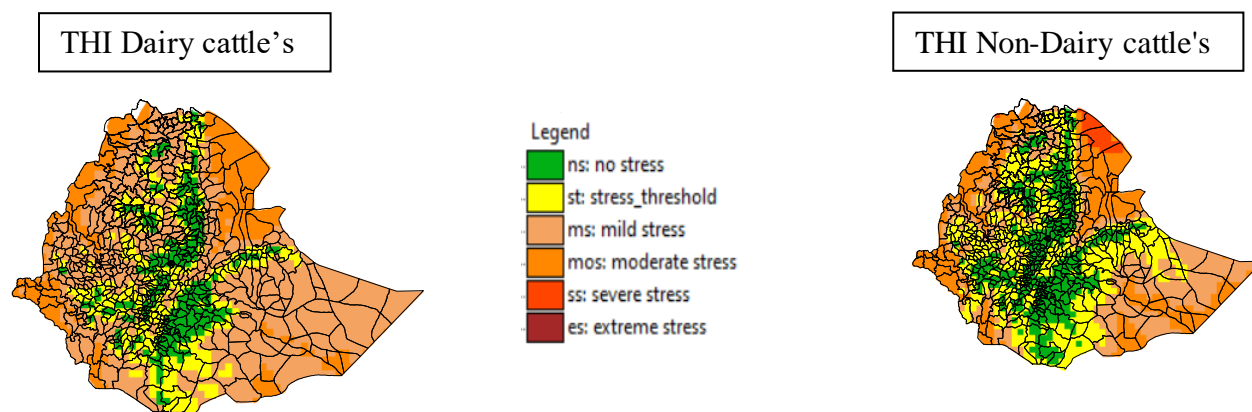


Fig 5: THI condition for Diary and Non-diary Cattles for May 2nd Dekade 2024

### 2.2.2 THI for Human

During the coming May 2nd Dekade 2024, 100% uncomfortable weather conditions will occur over northern Afar, Gambela, West Tigray, south Somalia Also hot and humid 50% uncomfortable conditions will occur over South Somalia, Benishangul Gumuz and southern afar the rest parts of Afar, southern Ethiopia, Whereas, most of the rest parts of the country will be under comfortable weather conditions. Similarly, Cold and dry weather conditions will happen in the highlands of Northern, Central, and Southern parts of the country.

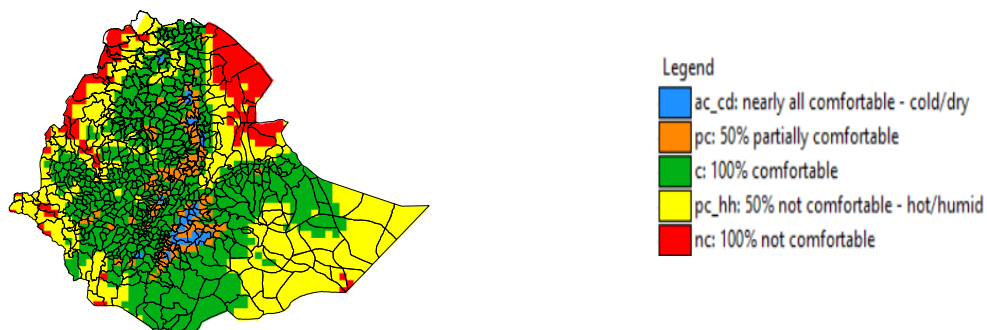


Fig 6: THI for Human May 2nd Dekade 2024

### 3. Conclusion

According to the climate health analysis for May 1<sup>st</sup> Dekade 2024 most parts of the country were very less conducive for the breeding and development of vector-borne diseases especially the malaria mosquito. There will be a Low incidence of malaria in the Low favorable areas and a low incidence in the low favorable areas of the country and Based on the analysis data, moderately favorable condition were observed in Southern part of Ethiopia. On the other way, for the next 10 days, most parts of the country such as Southwest Ethiopia region, south Ethiopia region, southern and eastern Oromia will be under suitable conditions for mosquito development and survival rate.

Concerning the comfortability of climate situation, in most parts of the country were more comfortable conditions for humans. And Severe to moderate heat stress conditions were occur in the Afar, western Amhara Cattle. On the other way for the coming 10 days of the May 2<sup>nd</sup> Dekade 2024, Northern parts of Afar will be in heat stress for humans and non-dairy cattle tips of Gambela will be in moderately heat stress conditions.

### 4. Recommendations

As rainfall continues in most parts of the country, suitable conditions will be more favoured for the development and breeding of vector-borne diseases. Therefore the following are suggested:

- ❖ Attention to any incidence, especially for malaria disease in such favourable 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.