

# Global Heat Hazards Outlooks

Date of Issuance: 27 May 2025

Week-1 Valid : 28 May 2025 – 03 Jun 2025

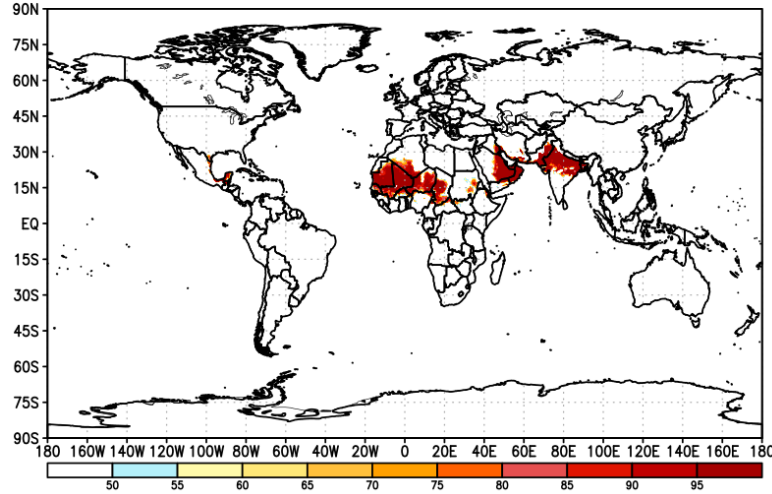
Week-2 Valid: 04 Jun 2025 – 10 Jun 2025

Numerical Weather Prediction Model: NCEP GEFS

# GEFS Week-1 HI/Tmax Hybrid POE with Respect to Fixed Thresholds

## >41°C & > 3 Consc. Days

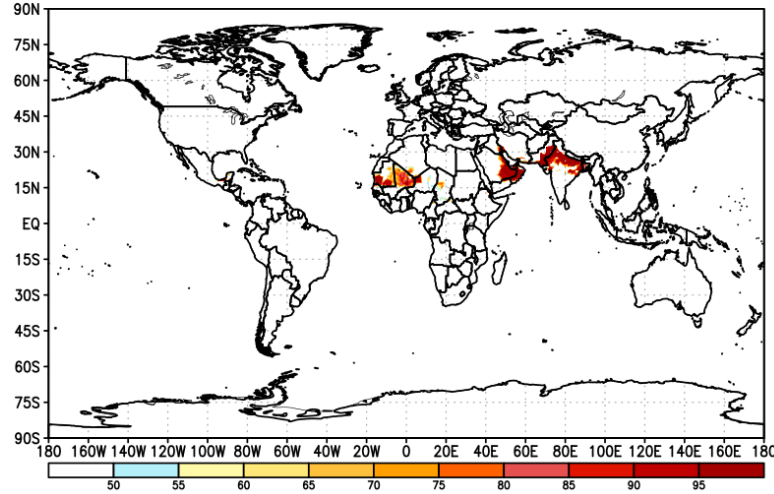
GEFS Week-1 POE Tmax/HI Hybrid > 41 Celc.  
> 3 Cons. days, Valid: 27May2025 – 02Jun2025



[https://ftp.cpc.ncep.noaa.gov/International/global\\_hett/gefs\\_week1\\_prob\\_hybrid\\_3\\_glb\\_41.png](https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week1_prob_hybrid_3_glb_41.png)

## >43°C & > 3 Consc. Days

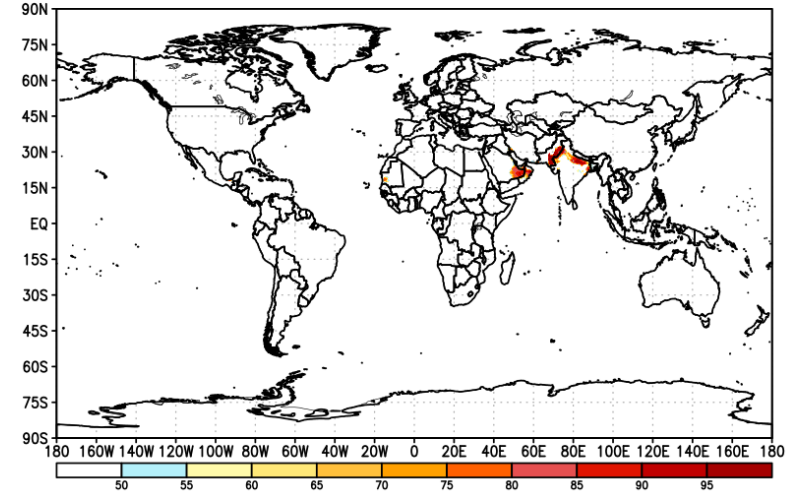
GEFS Week-1 POE Tmax/HI Hybrid > 43 Celc.  
> 3 Cons. days, Valid: 27May2025 – 02Jun2025



[https://ftp.cpc.ncep.noaa.gov/International/global\\_hett/gefs\\_week1\\_prob\\_hybrid\\_3\\_glb\\_43.png](https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week1_prob_hybrid_3_glb_43.png)

## >45°C & > 3 Consc. Days

GEFS Week-1 POE Tmax/HI Hybrid > 45 Celc.  
> 3 Cons. days, Valid: 27May2025 – 02Jun2025



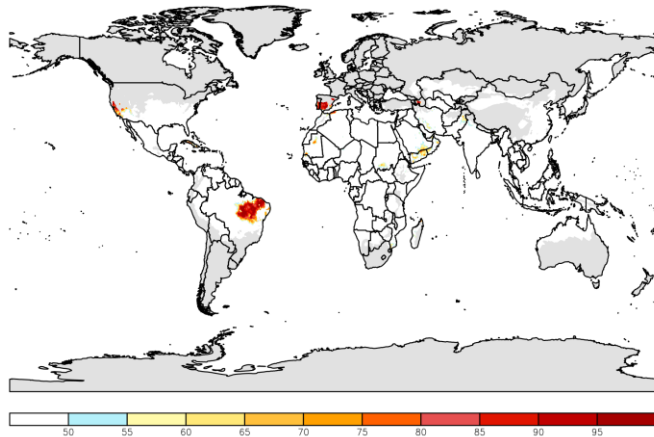
[https://ftp.cpc.ncep.noaa.gov/International/global\\_hett/gefs\\_week1\\_prob\\_hybrid\\_3\\_glb\\_45.png](https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week1_prob_hybrid_3_glb_45.png)

- Probabilities exceed **85%** for the hybrid index to exceed 41°C for at least three consecutive days across the Sahel, the Arabian Peninsula, and northern India.

# GEFS Week-1 POE, Tmax/HI with Calmer Wind (< 5m s-1) and less Cloud Cover (< 50%)

## >80<sup>th</sup> & > 3 Consc. Days

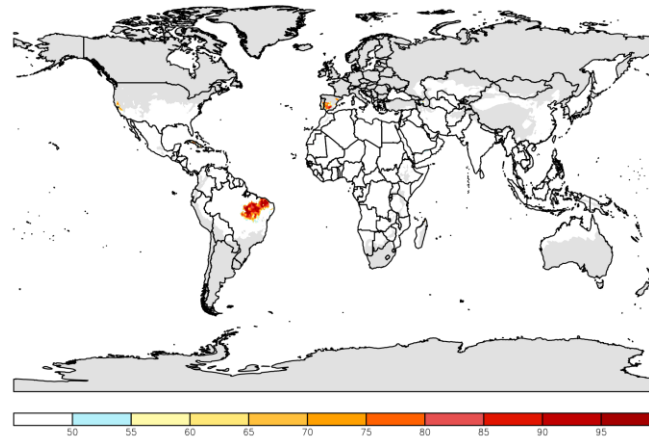
GEFS Week-1 POE Tmax/HI > 80th Pctle. with W. Speed < 5m/sec &  
Cloud C. < 50%, > 3 Cons. days, Valid: 27May2025 - 02Jun2025



[https://ftp.cpc.ncep.noaa.gov/International/extreme\\_fc/st/gefs\\_heat/gefs\\_comb3\\_week1\\_glb\\_prob\\_80.gif](https://ftp.cpc.ncep.noaa.gov/International/extreme_fc/st/gefs_heat/gefs_comb3_week1_glb_prob_80.gif)

## >90<sup>th</sup> & > 3 Consc. Days

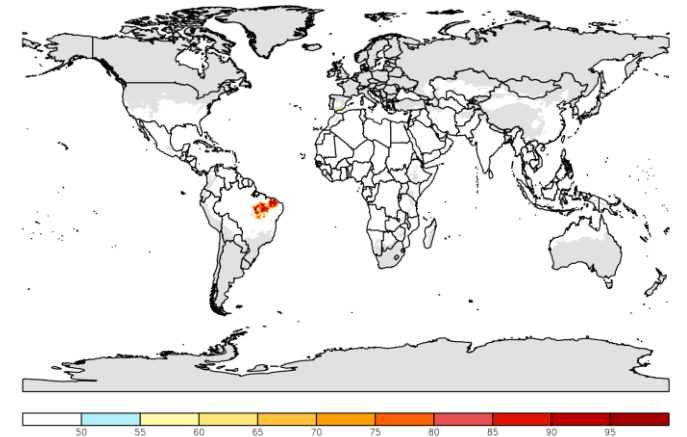
GEFS Week-1 POE Tmax/HI > 90th Pctle. with W. Speed < 5m/sec &  
Cloud C. < 50%, > 3 Cons. days, Valid: 27May2025 - 02Jun2025



[https://ftp.cpc.ncep.noaa.gov/International/extreme\\_fc/st/gefs\\_heat/gefs\\_comb3\\_week1\\_glb\\_prob\\_90.gif](https://ftp.cpc.ncep.noaa.gov/International/extreme_fc/st/gefs_heat/gefs_comb3_week1_glb_prob_90.gif)

## >95<sup>th</sup> & > 3 Consc. Days

GEFS Week-1 POE Tmax/HI > 95th Pctle. with W. Speed < 5m/sec &  
Cloud C. < 50%, > 3 Cons. days, Valid: 27May2025 - 02Jun2025



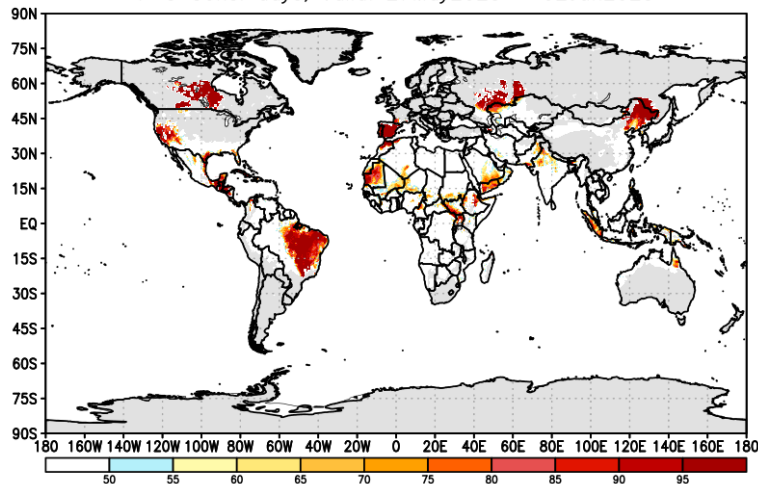
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- Probabilities exceed **70%** for the hybrid index with calmer wind and less cloud cover to exceed the 80<sup>th</sup> percentile for at least three consecutive days in eastern Brazil and part of the Iberian Peninsula.

# GEFS Week-1 HI/Tmax Hybrid POE with Respect to Percentile Climo. Thresholds

## >80<sup>th</sup> & > 3 Consc. Days

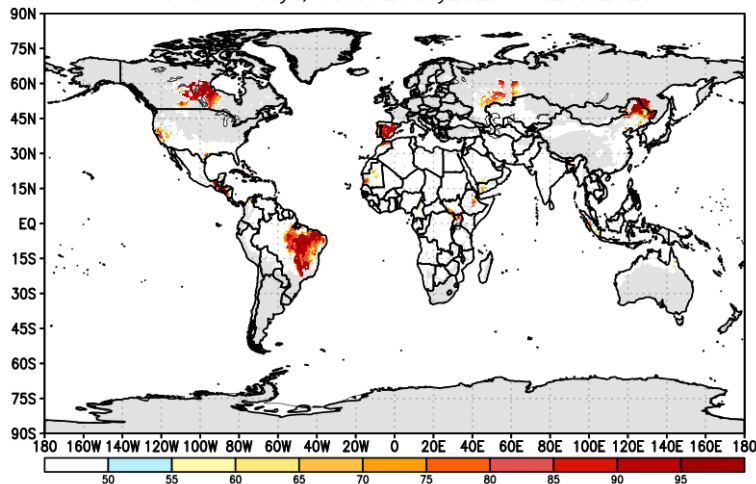
GEFS Week-1 POE Tmax/HI Hybrid > 80th Pctle.  
> 3 Cons. days, Valid: 27May2025 - 02Jun2025



[https://ftp.cpc.ncep.noaa.gov/International/global\\_hett/gefs\\_week1\\_prob\\_hybrid\\_3\\_glb\\_80.png](https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week1_prob_hybrid_3_glb_80.png)

## >90<sup>th</sup> & > 3 Consc. Days

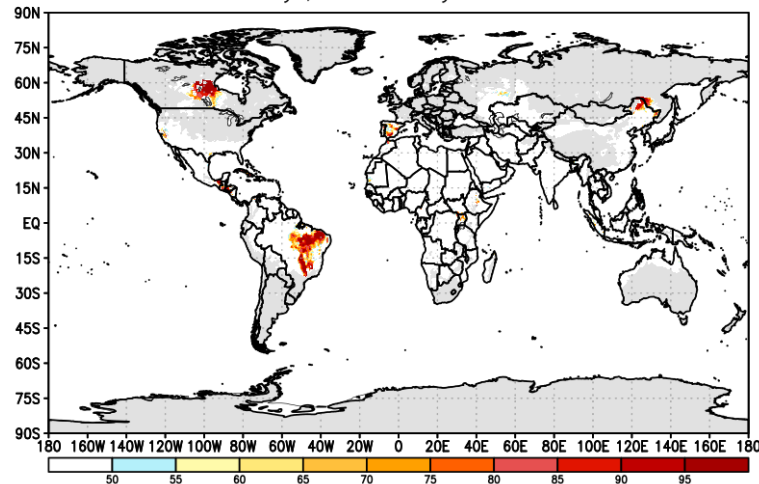
GEFS Week-1 POE Tmax/HI Hybrid > 90th Pctle.  
> 3 Cons. days, Valid: 27May2025 - 02Jun2025



[https://ftp.cpc.ncep.noaa.gov/International/global\\_hett/gefs\\_week1\\_prob\\_hybrid\\_3\\_glb\\_90.png](https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week1_prob_hybrid_3_glb_90.png)

## >95<sup>th</sup> & > 3 Consc. Days

GEFS Week-1 POE Tmax/HI Hybrid > 95th Pctle.  
> 3 Cons. days, Valid: 27May2025 - 02Jun2025



[https://ftp.cpc.ncep.noaa.gov/International/global\\_hett/gefs\\_week1\\_prob\\_hybrid\\_3\\_glb\\_95.png](https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week1_prob_hybrid_3_glb_95.png)

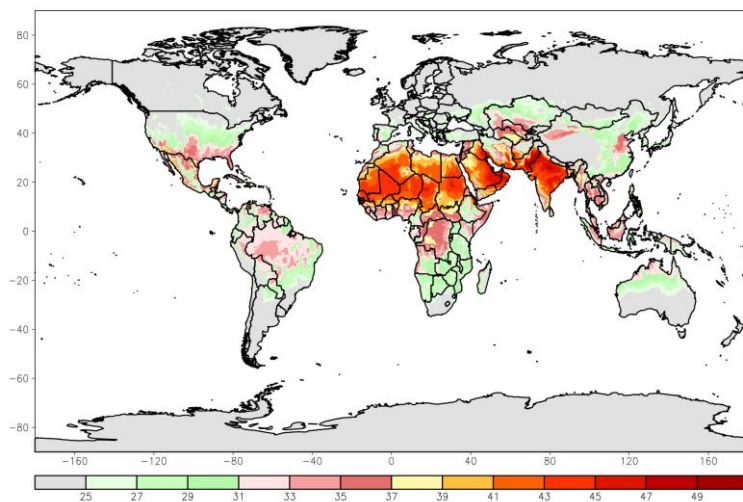
- Probabilities exceed **90%** for the hybrid index to exceed the 80<sup>th</sup> percentile for at least three consecutive days across central Canada, southwestern United States, Central America, eastern Brazil, the Iberian Peninsula, Mauritania, southwestern South Sudan, northern Uganda, parts of Ethiopia, Yemen, southwestern Russia, northwestern Kazakhstan, and northeastern China.

# GEFS Week-1 Tmax Percentile Climatology (°C)

## Tmax 80<sup>th</sup> Percentile

GEFS Week-1 Tmax Percentile Climo (Cels.), 80th Pctle.

Valid: 27May - 02Jun

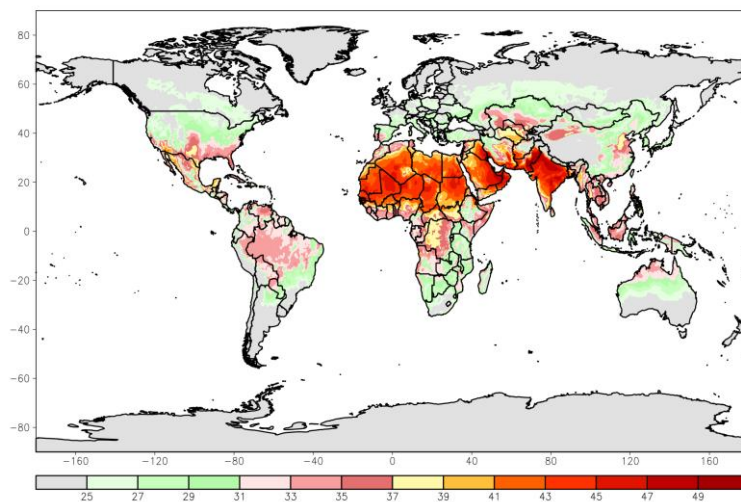


[https://ftp.cpc.ncep.noaa.gov/International/extreme\\_fc/st/gefs\\_heat/gefs\\_hybrid\\_week1\\_glb\\_clm\\_80.gif](https://ftp.cpc.ncep.noaa.gov/International/extreme_fc/st/gefs_heat/gefs_hybrid_week1_glb_clm_80.gif)

## Tmax 90<sup>th</sup> Percentile

GEFS Week-1 Tmax Percentile Climo (Cels.), 90th Pctle.

Valid: 27May - 02Jun

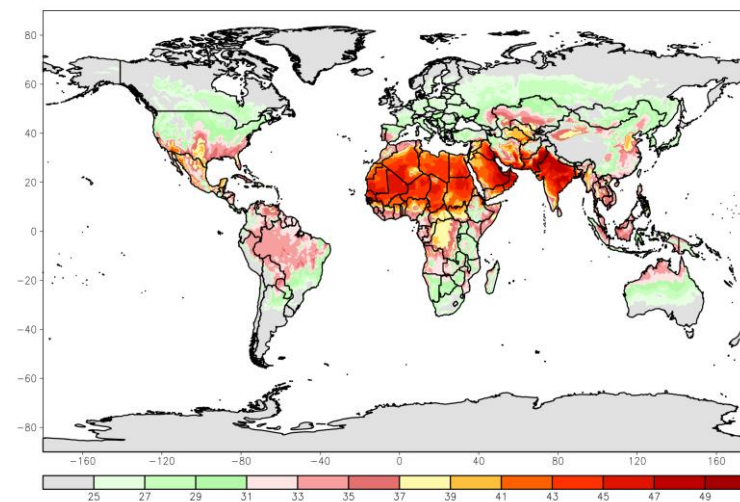


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## Tmax 95<sup>th</sup> Percentile

GEFS Week-1 Tmax Percentile Climo (Cels.), 95th Pctle.

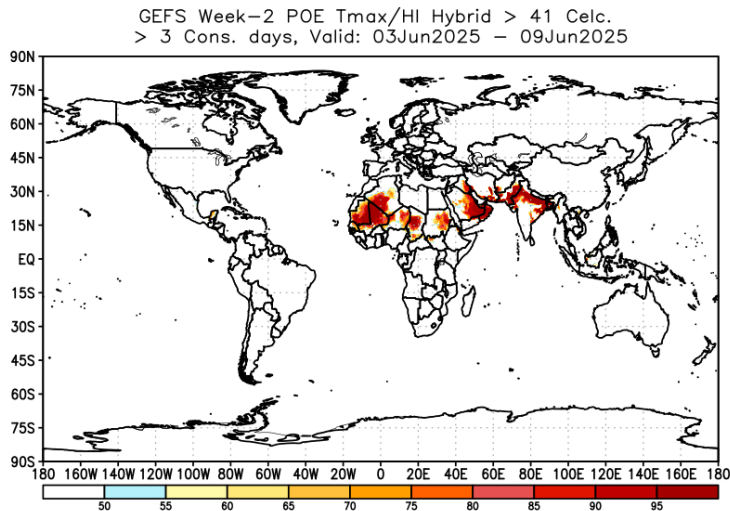
Valid: 27May - 02Jun



[https://ftp.cpc.ncep.noaa.gov/International/extreme\\_fc/st/gefs\\_heat/gefs\\_hybrid\\_week1\\_glb\\_clm\\_95.gif](https://ftp.cpc.ncep.noaa.gov/International/extreme_fc/st/gefs_heat/gefs_hybrid_week1_glb_clm_95.gif)

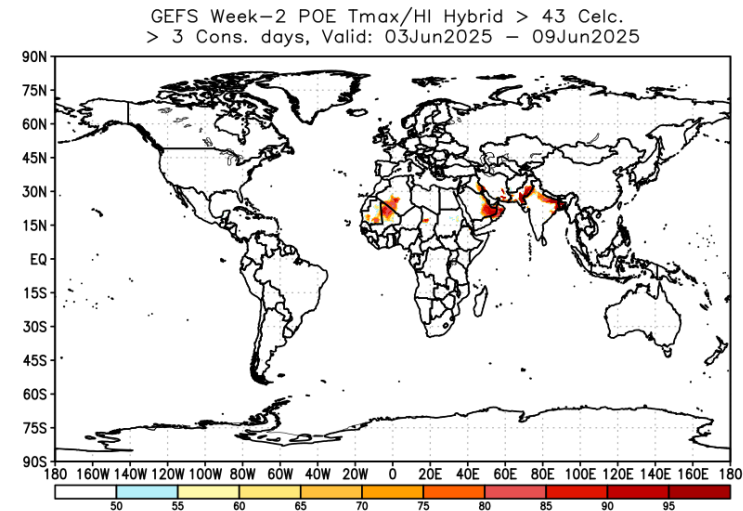
# GEFS Week-2 HI/Tmax Hybrid POE with Respect to Fixed Thresholds

**>41°C & > 3 Consc. Days**



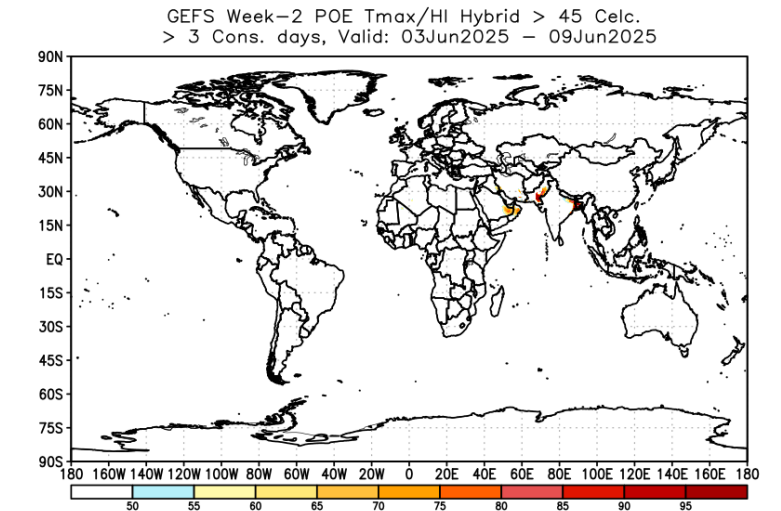
[https://ftp.cpc.ncep.noaa.gov/International/global\\_heat/gefs\\_week2\\_prob\\_hybrid\\_3\\_glb\\_41.png](https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week2_prob_hybrid_3_glb_41.png)

**>43°C & > 3 Consc. Days**



[https://ftp.cpc.ncep.noaa.gov/International/global\\_heat/gefs\\_week2\\_prob\\_hybrid\\_3\\_glb\\_43.png](https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week2_prob_hybrid_3_glb_43.png)

**>45°C & > 3 Consc. Days**



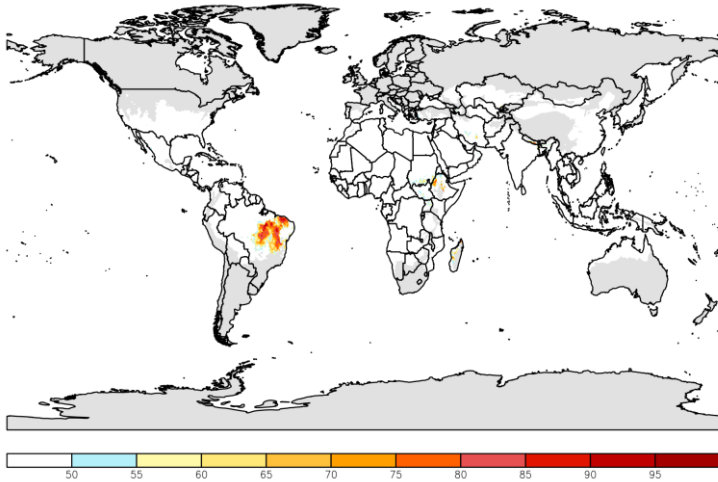
[https://ftp.cpc.ncep.noaa.gov/International/global\\_heat/gefs\\_week2\\_prob\\_hybrid\\_3\\_glb\\_45.png](https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week2_prob_hybrid_3_glb_45.png)

- There is an increased chance for the hybrid index to exceed 41°C for at least three consecutive days across the Sahel, eastern Sudan, the Arabian Peninsula, southern Iran, eastern Pakistan, and northern India.

# GEFS Week-2 POE, Tmax/HI with Calmer Wind (< 5m s-1) and less Cloud Cover (< 50%)

## >80<sup>th</sup> & > 3 Consc. Days

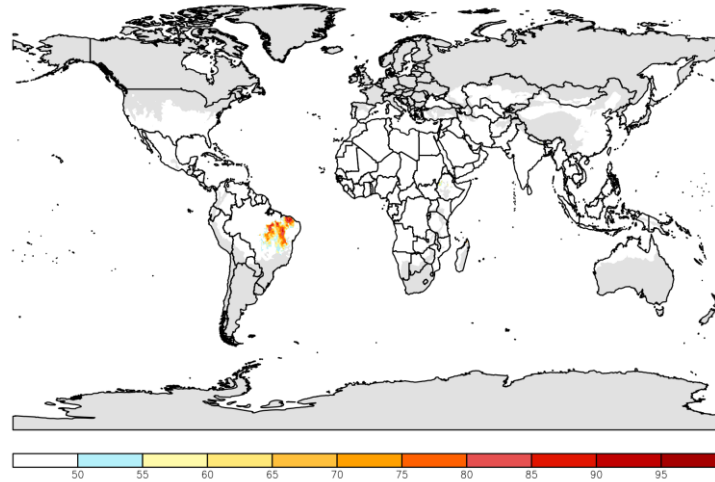
GEFS Week-2 POE Tmax/HI > 80th Pctle. with W. Speed < 5m/sec &  
Cloud C. < 50%, > 3 Cons. days, Valid: 03Jun2025 – 09Jun2025



[https://ftp.cpc.ncep.noaa.gov/International/extreme\\_fcst/gefs\\_heat/gefs\\_comb3\\_week2\\_glb\\_prob\\_80.gif](https://ftp.cpc.ncep.noaa.gov/International/extreme_fcst/gefs_heat/gefs_comb3_week2_glb_prob_80.gif)

## >90<sup>th</sup> & > 3 Consc. Days

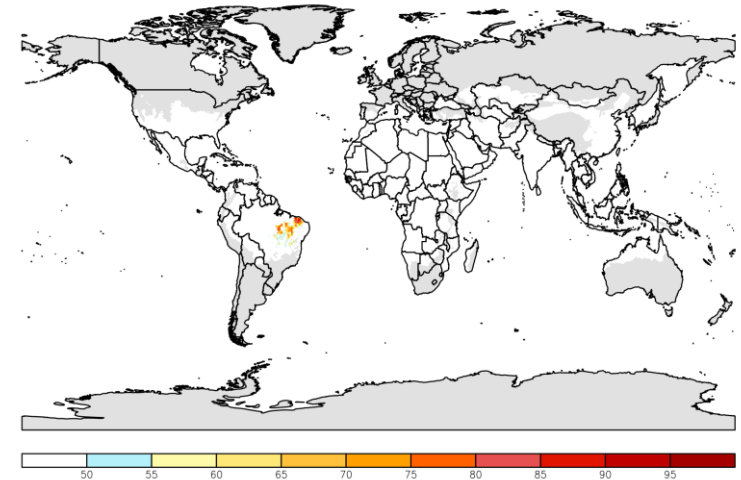
GEFS Week-2 POE Tmax/HI > 90th Pctle. with W. Speed < 5m/sec &  
Cloud C. < 50%, > 3 Cons. days, Valid: 03Jun2025 – 09Jun2025



[https://ftp.cpc.ncep.noaa.gov/International/extreme\\_fcst/gefs\\_heat/gefs\\_comb3\\_week2\\_glb\\_prob\\_90.gif](https://ftp.cpc.ncep.noaa.gov/International/extreme_fcst/gefs_heat/gefs_comb3_week2_glb_prob_90.gif)

## >95<sup>th</sup> & > 3 Consc. Days

GEFS Week-2 POE Tmax/HI > 95th Pctle. with W. Speed < 5m/sec &  
Cloud C. < 50%, > 3 Cons. days, Valid: 03Jun2025 – 09Jun2025



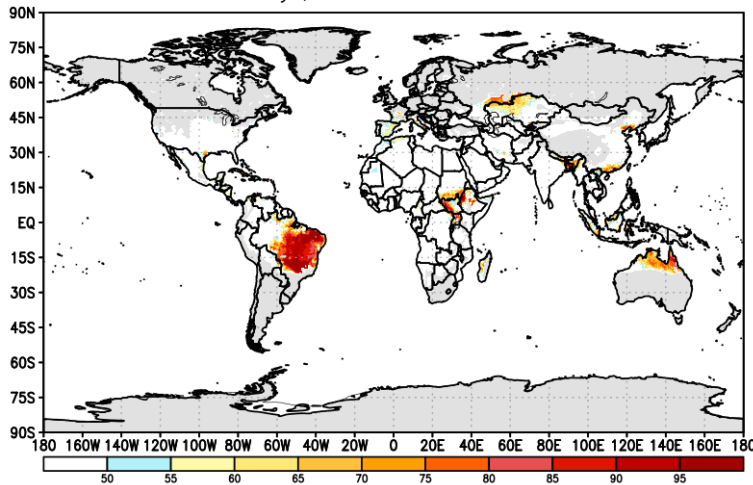
[https://ftp.cpc.ncep.noaa.gov/International/extreme\\_fcst/gefs\\_heat/gefs\\_comb3\\_week2\\_glb\\_prob\\_95.gif](https://ftp.cpc.ncep.noaa.gov/International/extreme_fcst/gefs_heat/gefs_comb3_week2_glb_prob_95.gif)

- Probabilities exceed **70%** for the hybrid index with calmer wind and less cloud cover to exceed the 80<sup>th</sup> percentile for at least three consecutive days over eastern Brazil.

# GEFS Week-2 HI/Tmax Hybrid POE with Respect to Percentile Climo. Thresholds

## >80<sup>th</sup> & > 3 Consc. Days

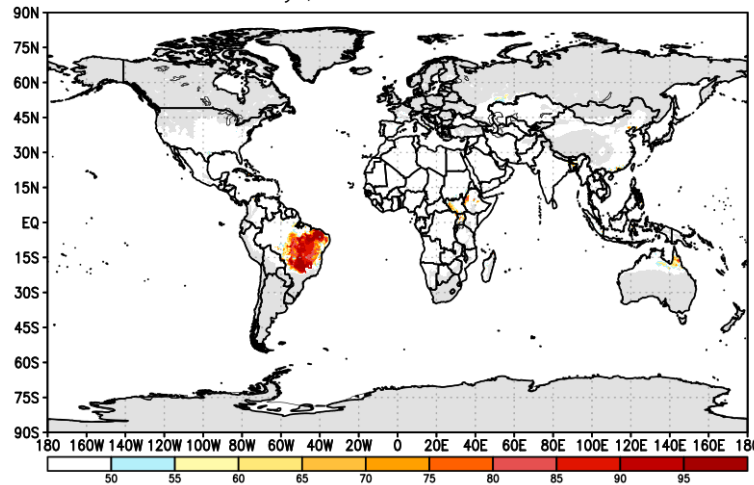
GEFS Week-2 POE Tmax/HI Hybrid > 80th Pctle.  
> 3 Cons. days, Valid: 03Jun2025 - 09Jun2025



[https://ftp.cpc.ncep.noaa.gov/International/global\\_hett/gefs\\_week2\\_prob\\_hybrid\\_3\\_glb\\_80.png](https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week2_prob_hybrid_3_glb_80.png)

## >90<sup>th</sup> & > 3 Consc. Days

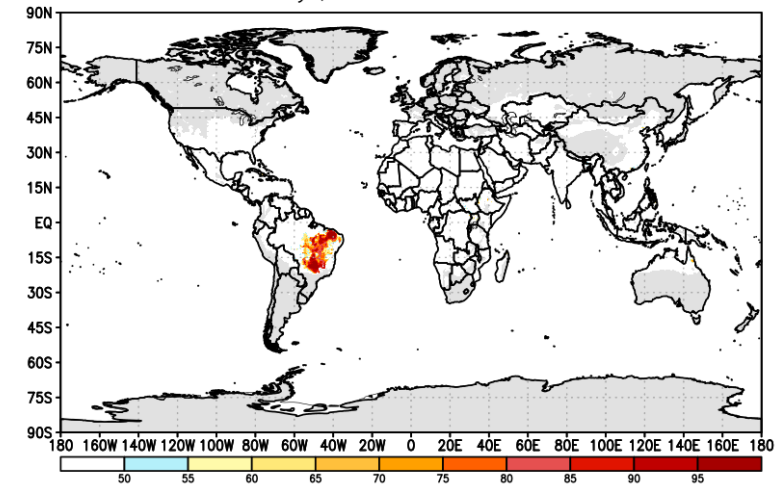
GEFS Week-2 POE Tmax/HI Hybrid > 90th Pctle.  
> 3 Cons. days, Valid: 03Jun2025 - 09Jun2025



[https://ftp.cpc.ncep.noaa.gov/International/global\\_hett/gefs\\_week2\\_prob\\_hybrid\\_3\\_glb\\_90.png](https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week2_prob_hybrid_3_glb_90.png)

## >95<sup>th</sup> & > 3 Consc. Days

GEFS Week-2 POE Tmax/HI Hybrid > 95th Pctle.  
> 3 Cons. days, Valid: 03Jun2025 - 09Jun2025



[https://ftp.cpc.ncep.noaa.gov/International/global\\_hett/gefs\\_week2\\_prob\\_hybrid\\_3\\_glb\\_95.png](https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week2_prob_hybrid_3_glb_95.png)

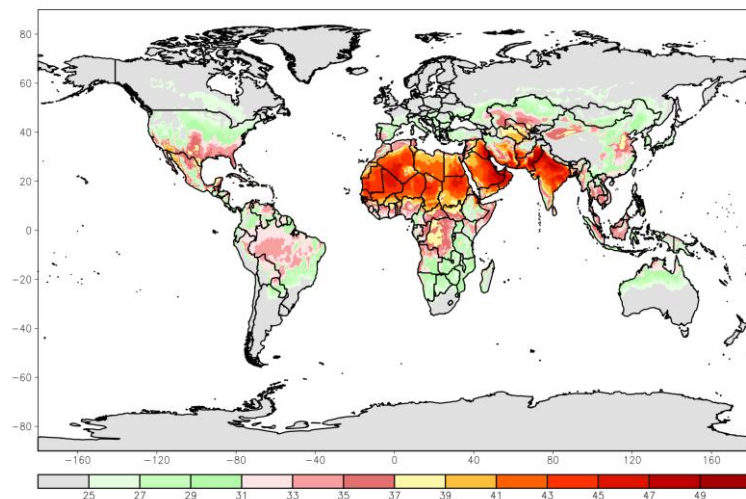
- There is an increased chance (> 80%) for the hybrid index to exceed the 80<sup>th</sup> percentile for at least three consecutive days in Brazil and parts of South Sudan, Uganda, and Ethiopia.

# GEFS Week-2 Tmax Percentile Climatology (°C)

## Tmax 80<sup>th</sup> Percentile

GEFS Week-2 Tmax Percentile Climo (Cels.), 80th Pctle.

Valid: 03Jun - 09Jun

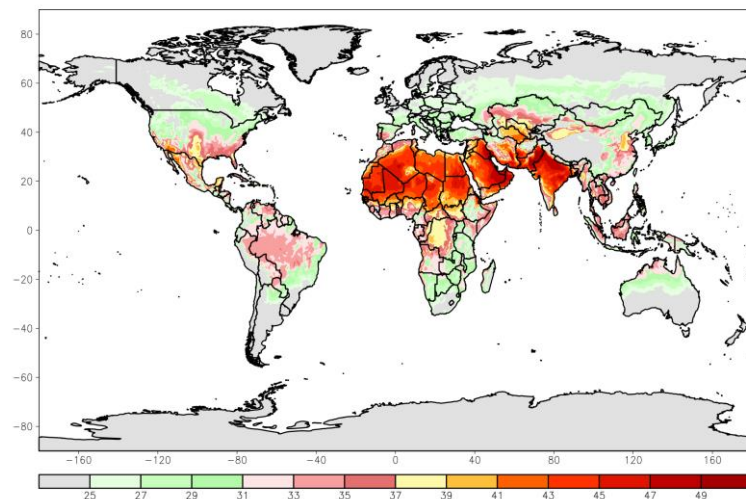


[https://ftp.cpc.ncep.noaa.gov/International/extreme\\_fcst/gefs\\_heat/gefs\\_hybrid\\_week2\\_glb\\_clm\\_80.gif](https://ftp.cpc.ncep.noaa.gov/International/extreme_fcst/gefs_heat/gefs_hybrid_week2_glb_clm_80.gif)

## Tmax 90<sup>th</sup> Percentile

GEFS Week-2 Tmax Percentile Climo (Cels.), 90th Pctle.

Valid: 03Jun - 09Jun

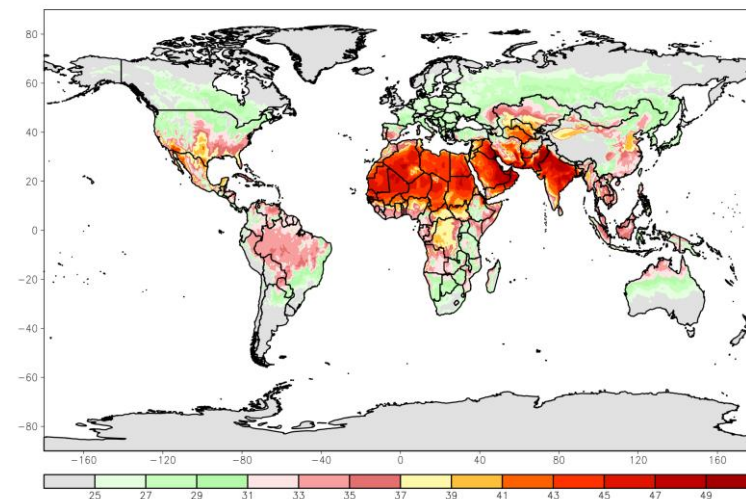


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## Tmax 95<sup>th</sup> Percentile

GEFS Week-2 Tmax Percentile Climo (Cels.), 95th Pctle.

Valid: 03Jun - 09Jun

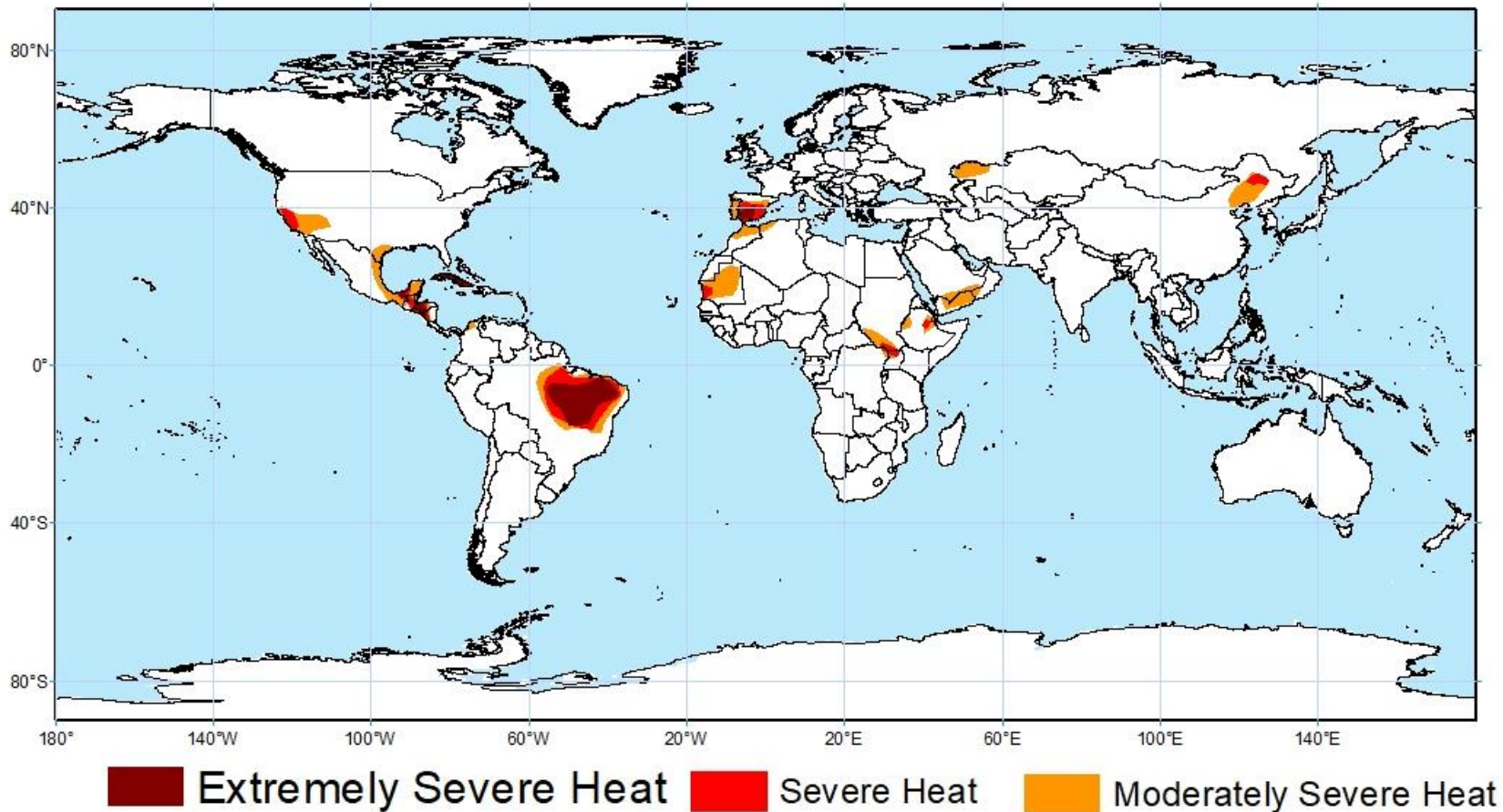


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## Week-1 Experimental Global Heat Hazard Outlook

Issued: 27 May 2025

Valid: 28 May 2025 - 3 June 2025



- There is an increased chance of **moderately severe heat** over parts of Central America, eastern Brazil, Mauritania, Morocco, the Iberian Peninsula, western South Sudan, northern Uganda, parts of Ethiopia, Yemen, northwestern Kazakhstan, and northeastern China.
- There is an increased chance of **severe heat** in eastern Brazil and Spain.
- There is an increased chance for **extremely severe heat** in eastern Brazil.

**Extremely Severe Heat:** Tmax/HI are among the 5% highest values over the 30-year period 1991-2020

**Severe Heat:** Tmax/HI are among the 10% highest values over the 30-year period 1991-2020

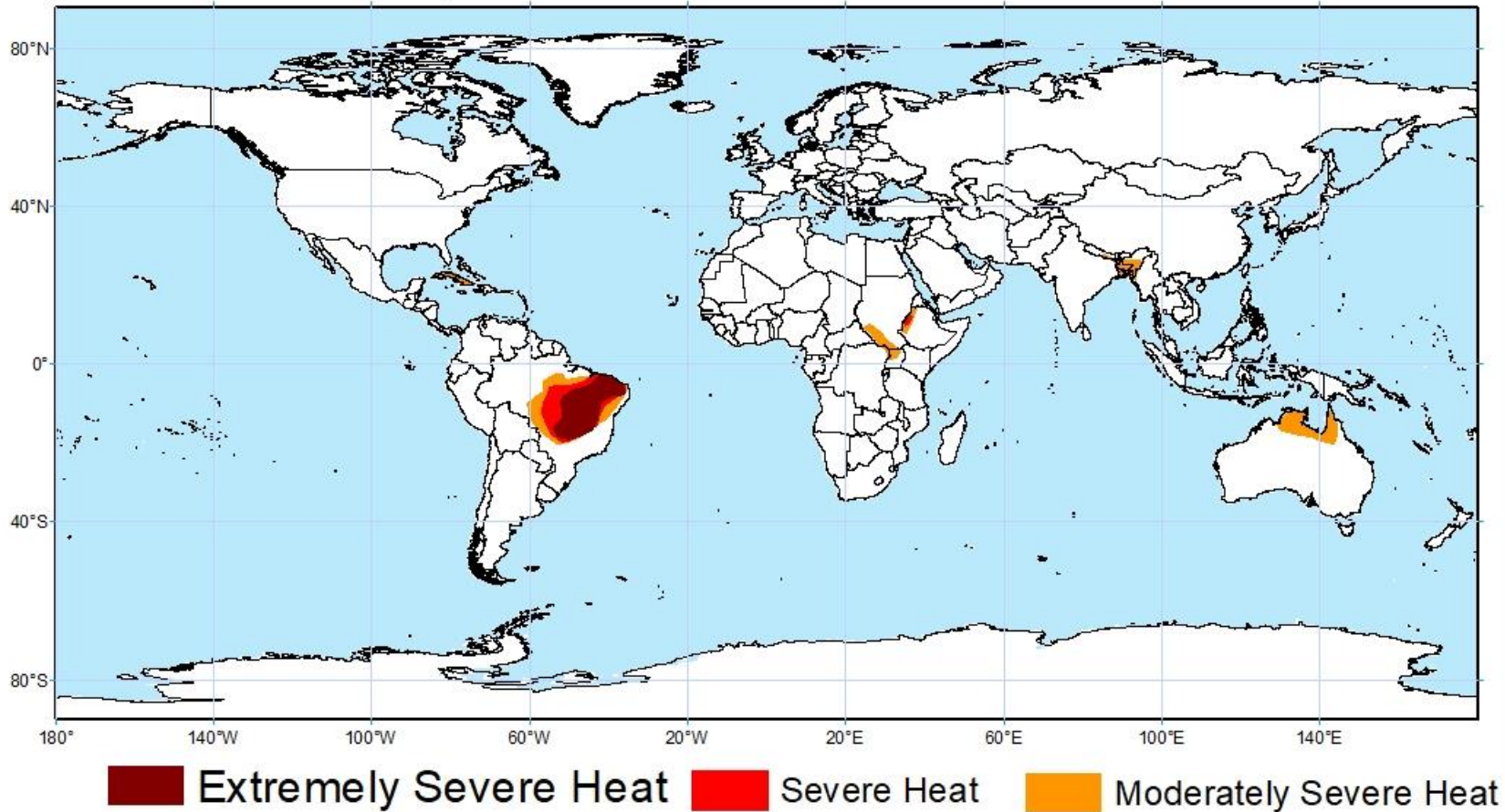
**Moderately Severe Heat:** Tmax/HI are among the 20% highest values over the 30-year period 1991-2020

**Note:** For the Sahel region in Africa: **Tmax/HI hybrid > 41°C for at least 3 consecutive days** is also considered as **Moderately Severe Heat**

## Week-2 Experimental Global Heat Hazard Outlook

Valid: 4 June 2025 - 10 June 2025

Issued: 27 May 2025



- There is an increased chance of **moderately severe heat** in eastern Brazil, southwestern South Sudan, northwestern Uganda, western Ethiopia, Bangladesh, northeastern India, and northern Australia.
- There is an increased chance of **severe heat** in eastern Brazil.
- There is an increased chance for **extremely severe heat** in eastern Brazil.

**Extremely Severe Heat:** Tmax/HI are among the 5% highest values over the 30-year period 1991-2020

**Severe Heat:** Tmax/HI are among the 10% highest values over the 30-year period 1991-2020

**Moderately Severe Heat:** Tmax/HI are among the 20% highest values over the 30-year period 1991-2020

**Note:** For the Sahel region in Africa: **Tmax/HI hybrid > 41°C for at least 3 consecutive days** is also considered as **Moderately Severe Heat**