

# **Global Heat Hazards Outlooks**

**Date of Issuance: 11 Feb 2025**

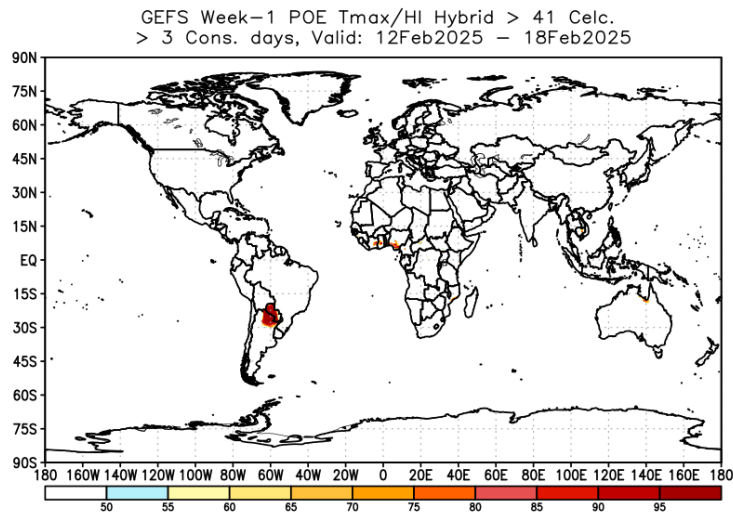
**Week-1 Valid: 12 Feb 2025 – 18 Feb 2025**

**Week-2 Valid: 19 Feb 2025 – 25 Feb 2025**

**Numerical Weather Prediction Model: NCEP GEFS**

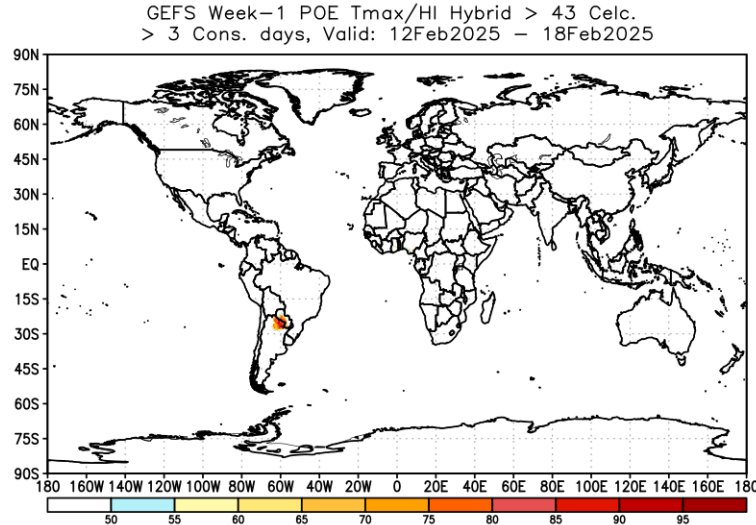
# GEFS Week-1 HI/Tmax Hybrid POE with Respect to Fixed Thresholds

## >41°C & > 3 Consc. Days



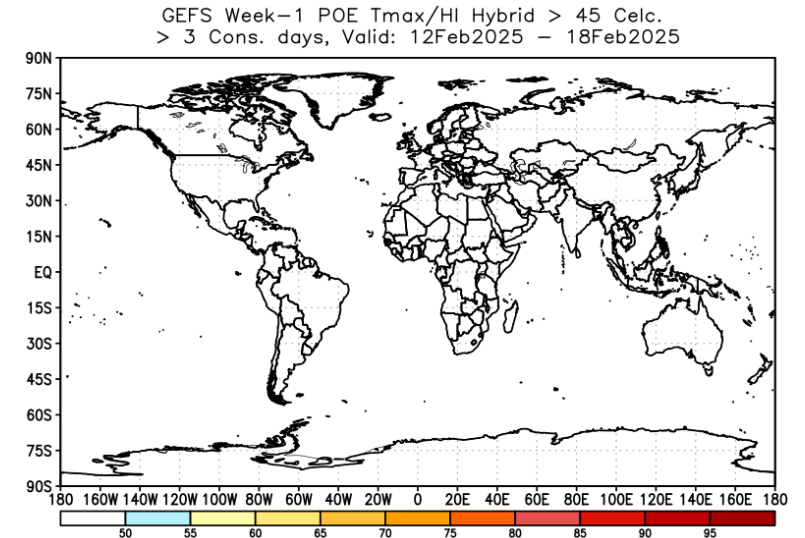
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## >43°C & > 3 Consc. Days



[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



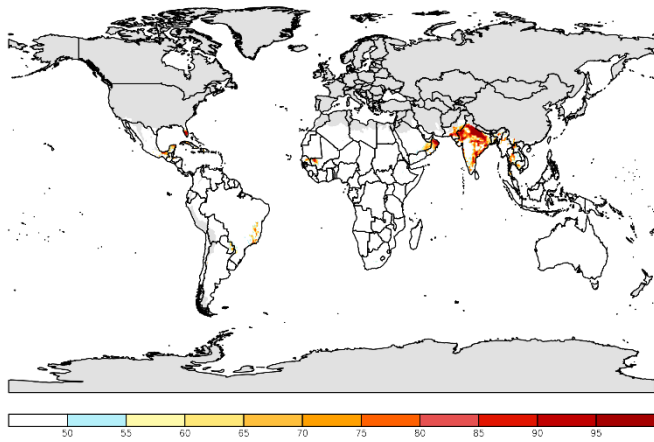
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- There is an increased chance for the hybrid index to exceed 41°C for at least three consecutive days in Paraguay and northeastern Argentina.

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

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

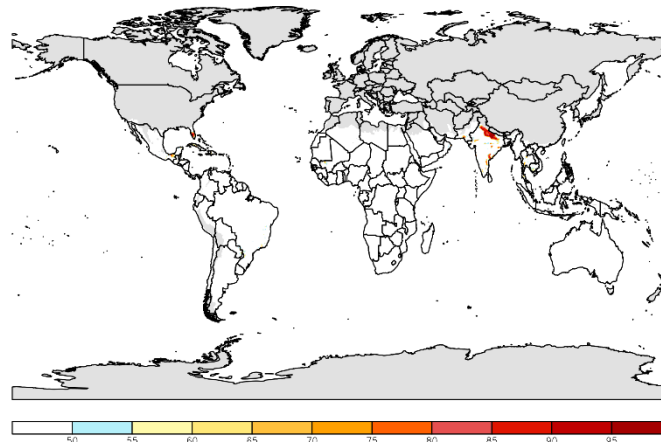
GEFS Week-1 POE Tmax/HI > 80th Pctle. with W. Speed < 5m/sec &  
Cloud C. < 50%, > 3 Cons. days, Valid: 12Feb2025 – 18Feb2025



[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

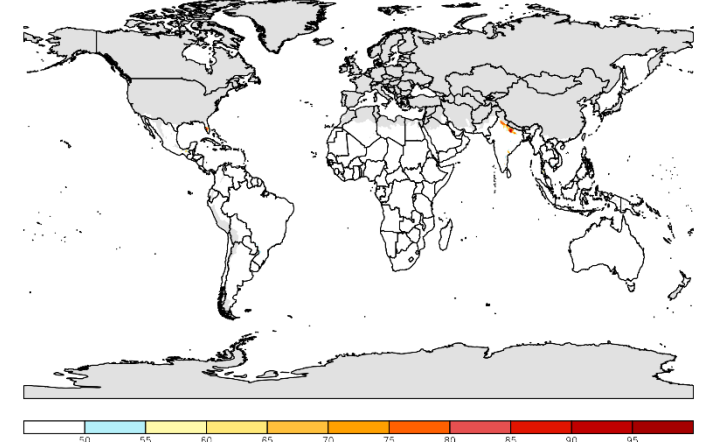
GEFS Week-1 POE Tmax/HI > 90th Pctle. with W. Speed < 5m/sec &  
Cloud C. < 50%, > 3 Cons. days, Valid: 12Feb2025 – 18Feb2025



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## >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: 12Feb2025 – 18Feb2025

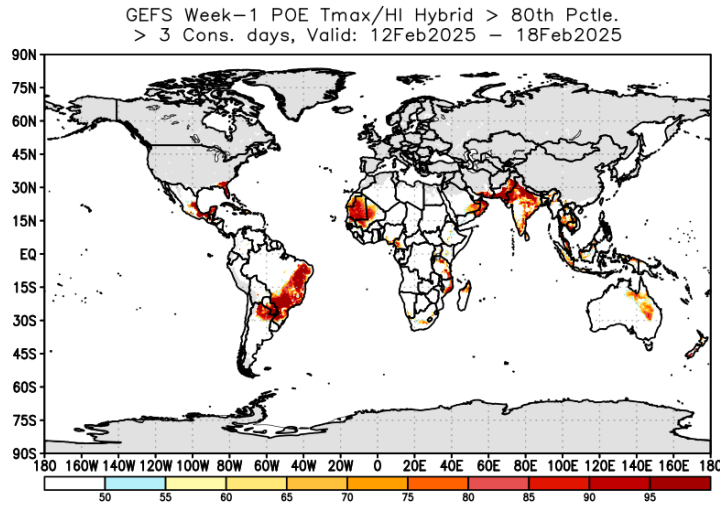


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- Probabilities exceed 85% for the hybrid index with calmer wind and less cloud cover to exceed the 80<sup>th</sup> percentile for at least three consecutive days in eastern Oman and the far eastern and northern India.

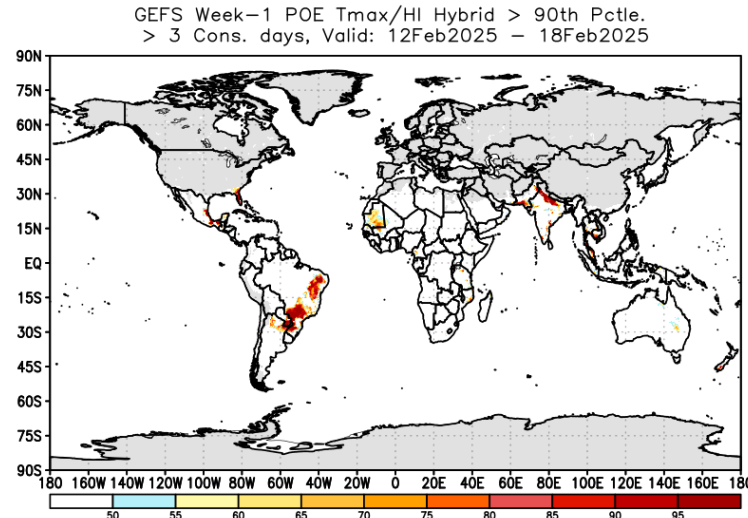
# GEFS Week-1 HI/Tmax Hybrid POE with Respect to Percentile Climo. Thresholds

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



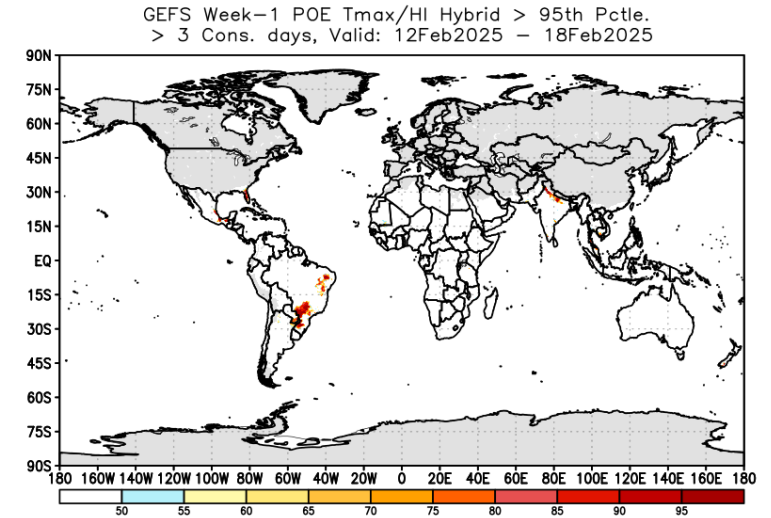
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## >90<sup>th</sup> & > 3 Consc. Days



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



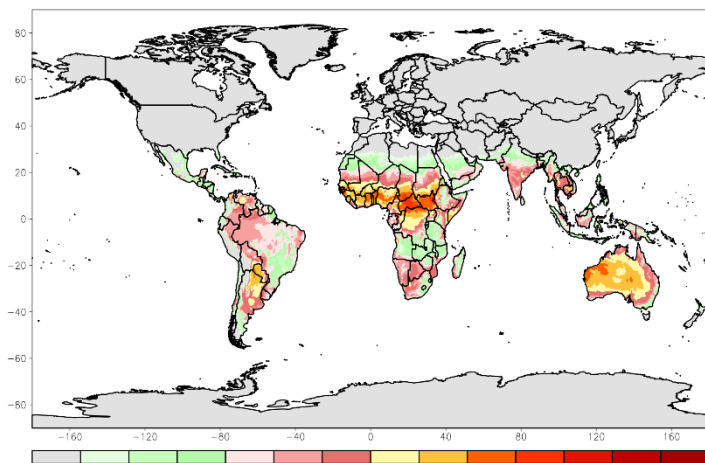
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- Probabilities exceed 90% for the hybrid index to exceed the 90<sup>th</sup> percentile for at least three consecutive days in parts of Mexico, southern and isolated areas of northern Brazil, northeastern Argentina, and far northern India.

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

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

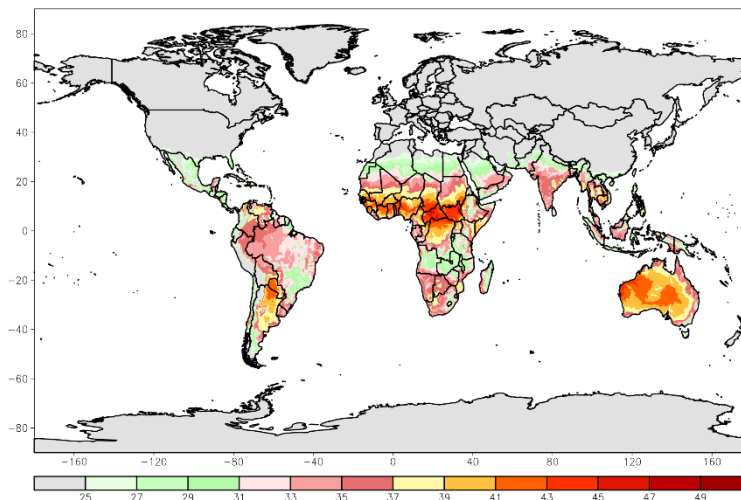
GEFS Week-1 Tmax Percentile Climo (Cels.), 80th Pctle.  
Valid: 12Feb - 18Feb



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

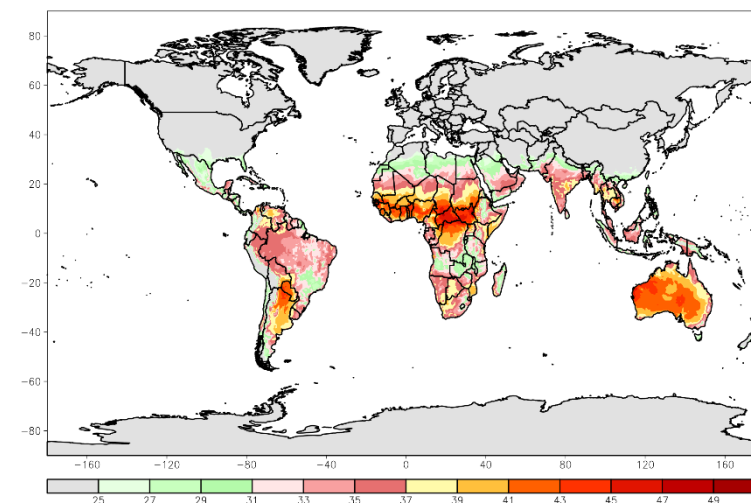
GEFS Week-1 Tmax Percentile Climo (Cels.), 90th Pctle.  
Valid: 12Feb - 18Feb



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

GEFS Week-1 Tmax Percentile Climo (Cels.), 95th Pctle.  
Valid: 12Feb - 18Feb

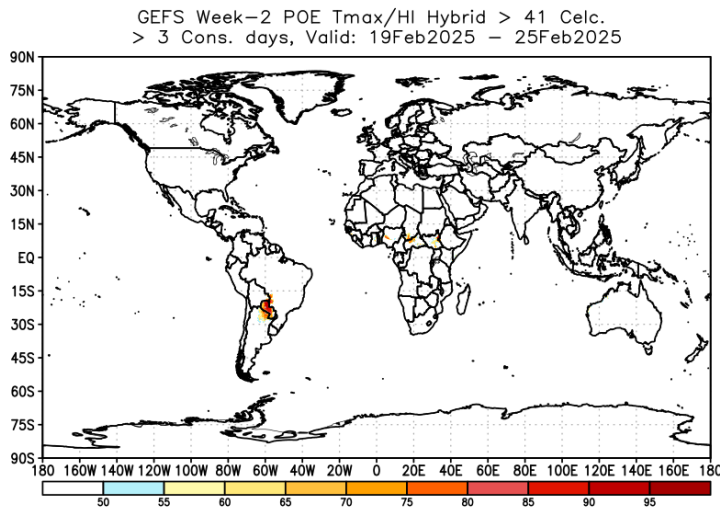


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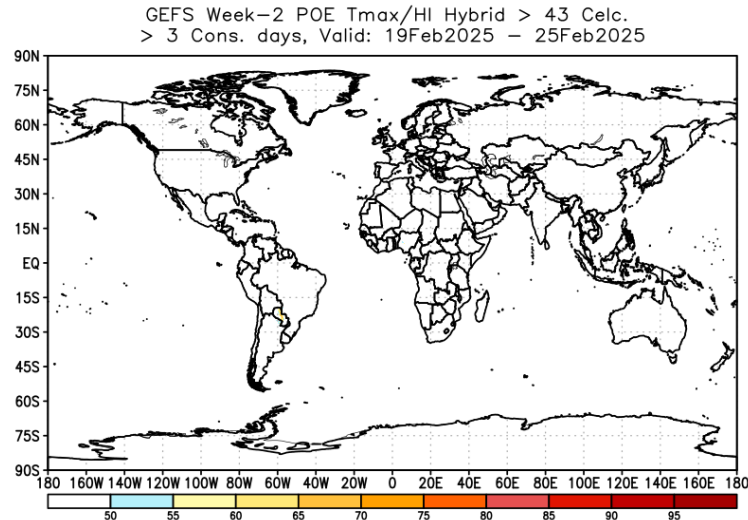
# GEFS Week-2 HI/Tmax Hybrid POE with Respect to Fixed Thresholds

## >41°C & > 3 Consc. Days



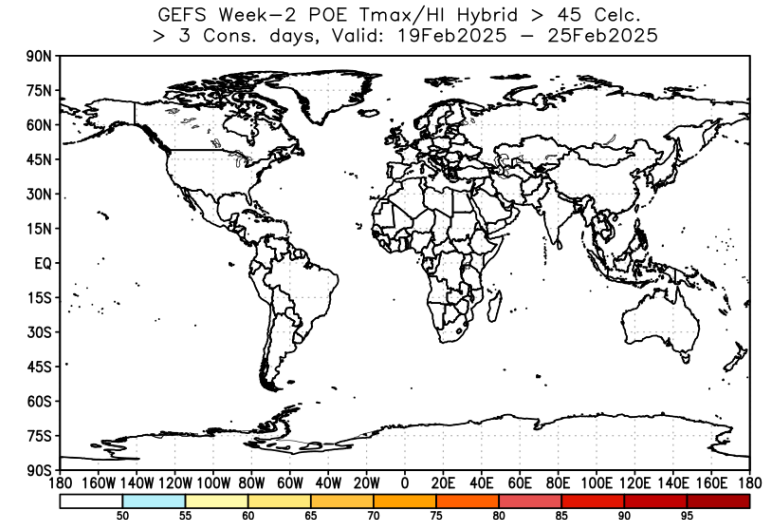
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## >43°C & > 3 Consc. Days



[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



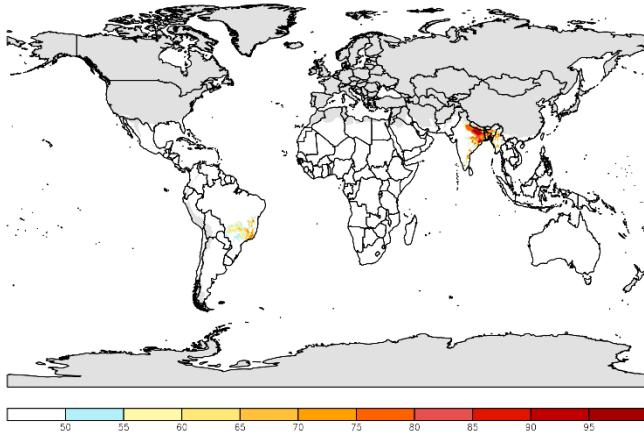
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- There is an increased chance for the hybrid index to exceed 41°C for at least three consecutive days in Paraguay and northeastern Argentina.

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

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

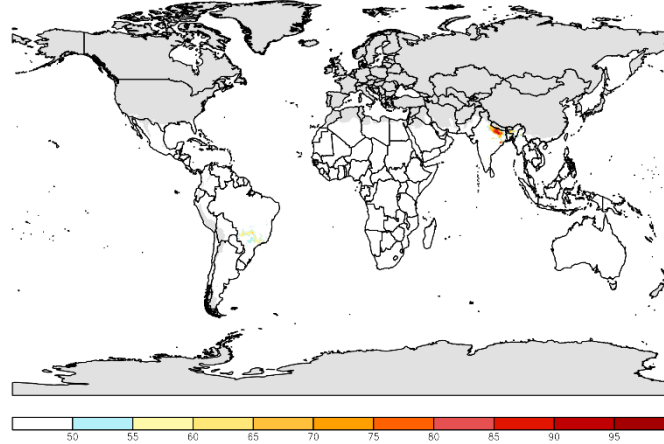
GEFS Week-2 POE Tmax/HI > 80th Pctle. with W. Speed < 5m/sec &  
Cloud C. < 50%, > 3 Cons. days, Valid: 19Feb2025 – 25Feb2025



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

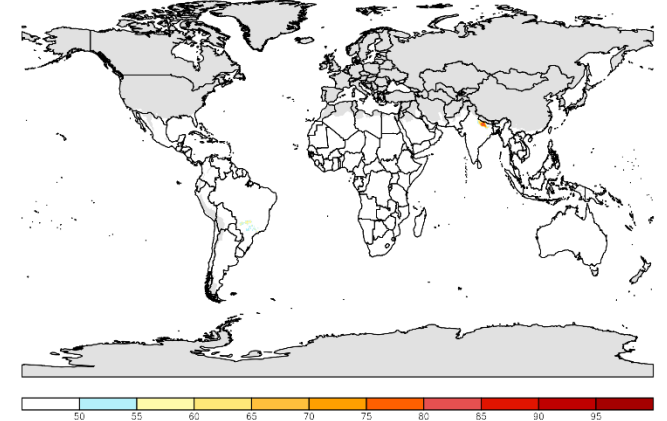
GEFS Week-2 POE Tmax/HI > 90th Pctle. with W. Speed < 5m/sec &  
Cloud C. < 50%, > 3 Cons. days, Valid: 19Feb2025 – 25Feb2025



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## >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: 19Feb2025 – 25Feb2025



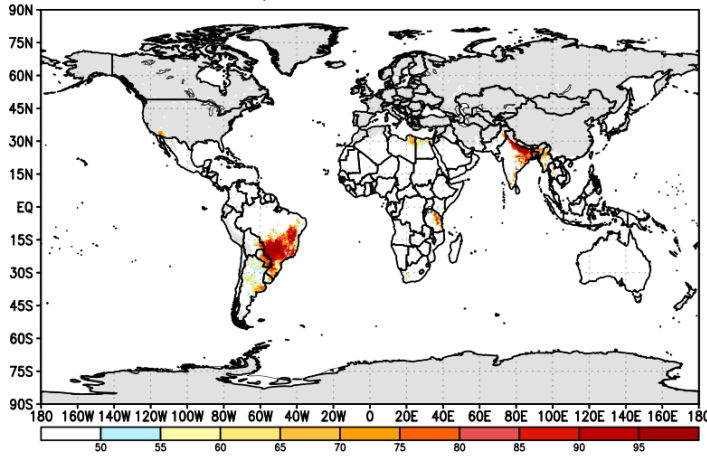
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- There is an increased chance (> 80%) for the hybrid index with calmer wind and less cloud cover to exceed the 80<sup>th</sup> percentile for at least three consecutive days in northeastern India and Bangladesh.

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

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

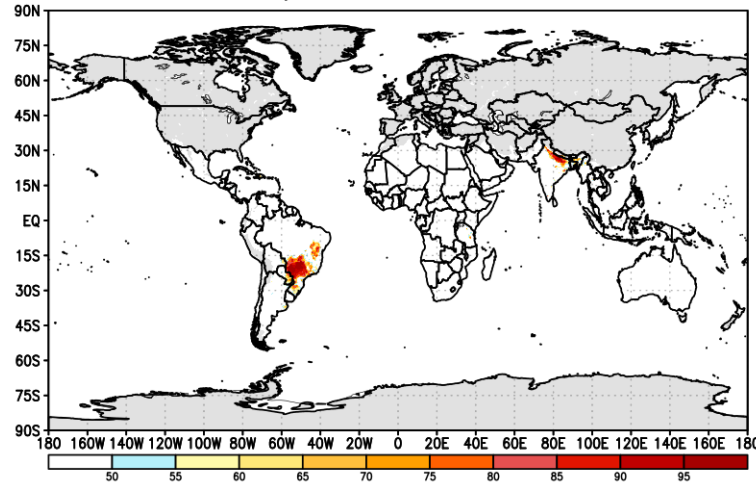
GEFS Week-2 POE Tmax/HI Hybrid > 80th Pctle.  
> 3 Cons. days, Valid: 19Feb2025 - 25Feb2025



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

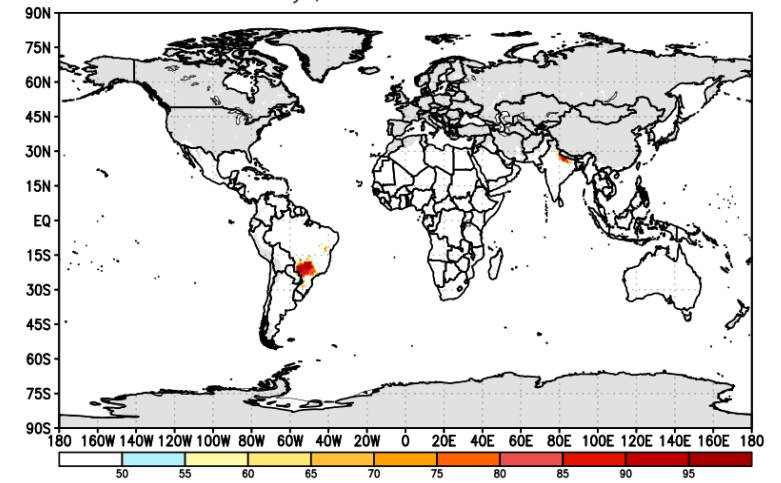
GEFS Week-2 POE Tmax/HI Hybrid > 90th Pctle.  
> 3 Cons. days, Valid: 19Feb2025 - 25Feb2025



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

GEFS Week-2 POE Tmax/HI Hybrid > 95th Pctle.  
> 3 Cons. days, Valid: 19Feb2025 - 25Feb2025



[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)

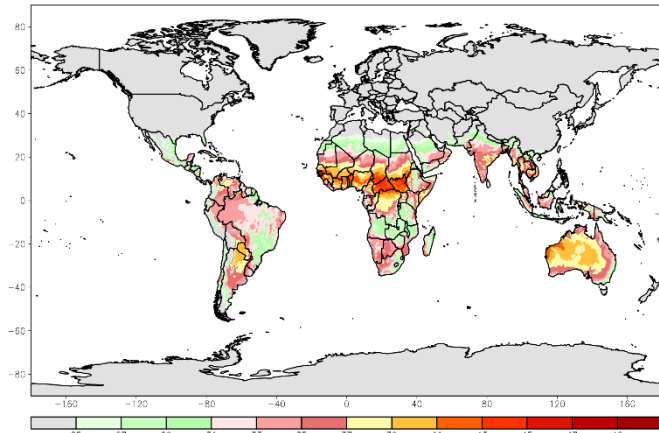
- There is an increased chance for the hybrid index to exceed the 90<sup>th</sup> percentile for at least three consecutive days in southern and eastern Brazil and northeastern India.



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

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

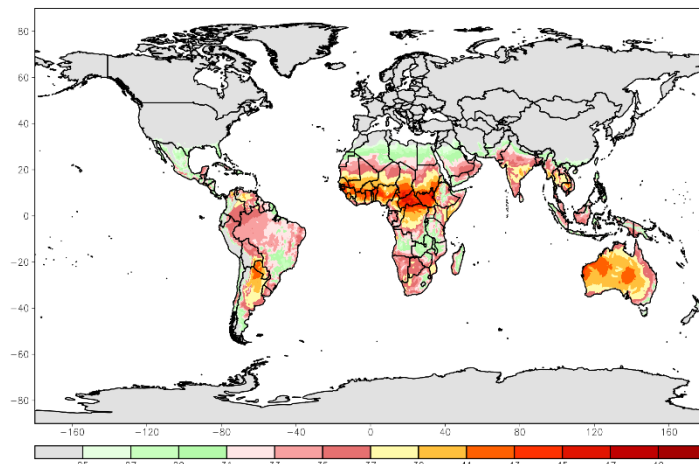
GEFS Week-2 Tmax Percentile Climo (Cels.), 80th Pctle.  
Valid: 19Feb - 25Feb



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

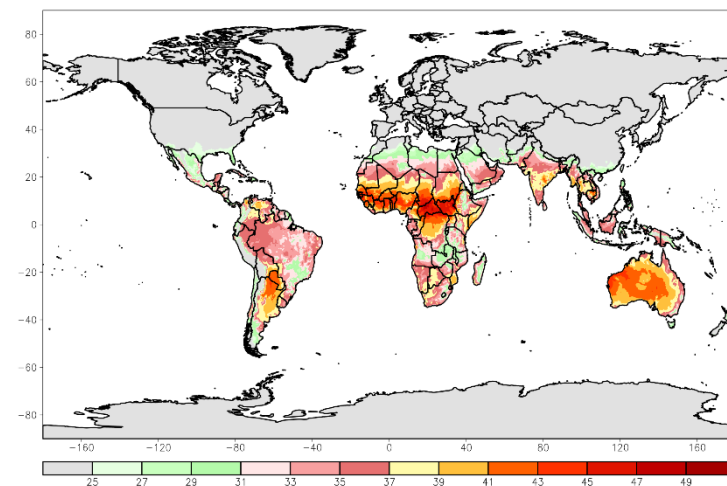
GEFS Week-2 Tmax Percentile Climo (Cels.), 90th Pctle.  
Valid: 19Feb - 25Feb



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

GEFS Week-2 Tmax Percentile Climo (Cels.), 95th Pctle.  
Valid: 19Feb - 25Feb

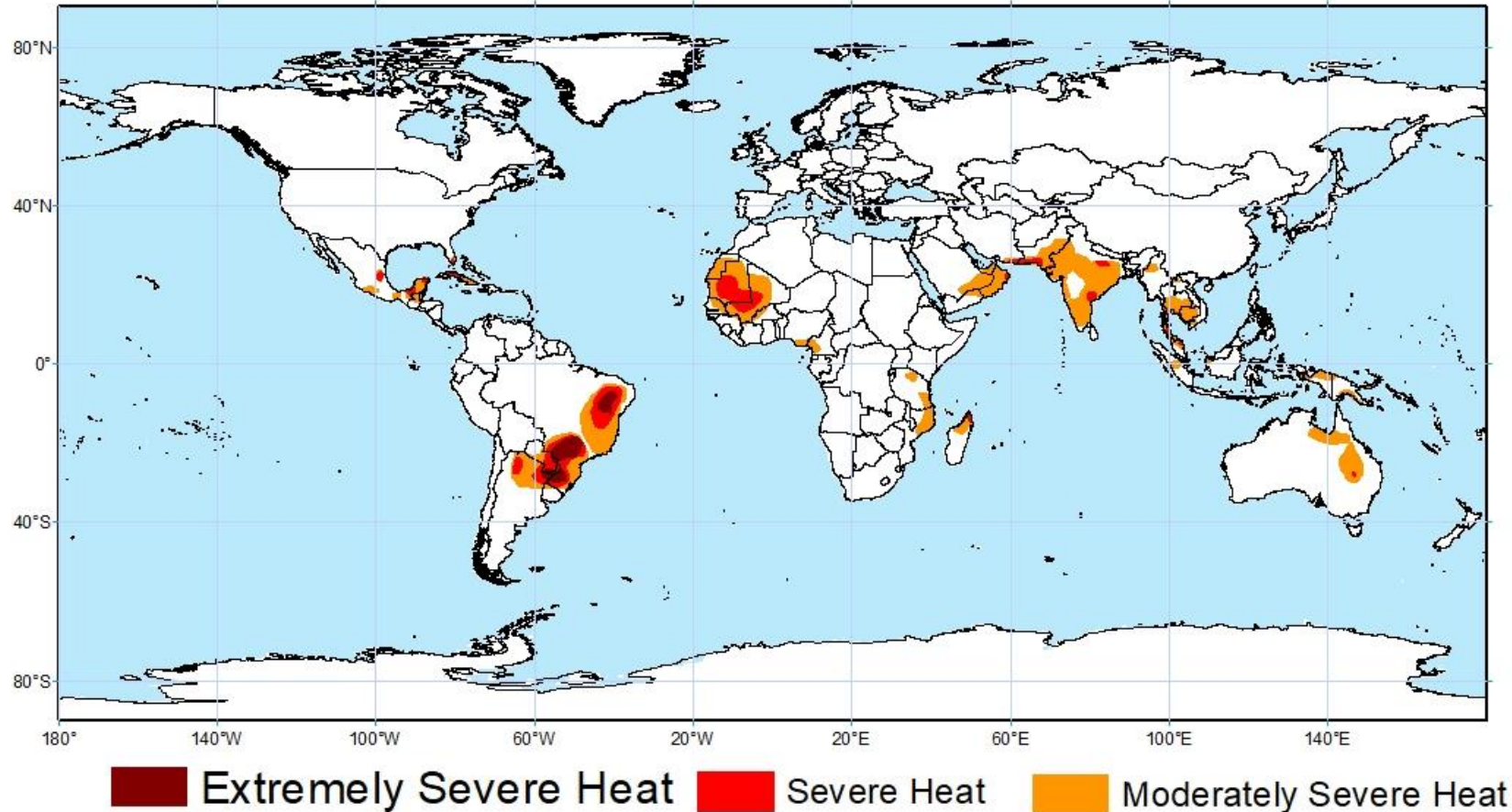


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## Week-1 Experimental Global Heat Hazard Outlook

Issued: 11 Feb 2025

Valid: 12 Feb 2025 - 18 Feb 2025



- There is an increased chance of *moderately severe heat* in northeastern Argentina, northeastern and southern Brazil, and far southern Paraguay, Part of Mexico, Mauritania, Mali, Western Sahara and northern Madagascar, part of eastern yamen, Oman and India, Myanmar, and Northeastern Australia.
- There is an increased chance of *extremely severe heat* in isolated part of Brazil, and part of Paraguay.

**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

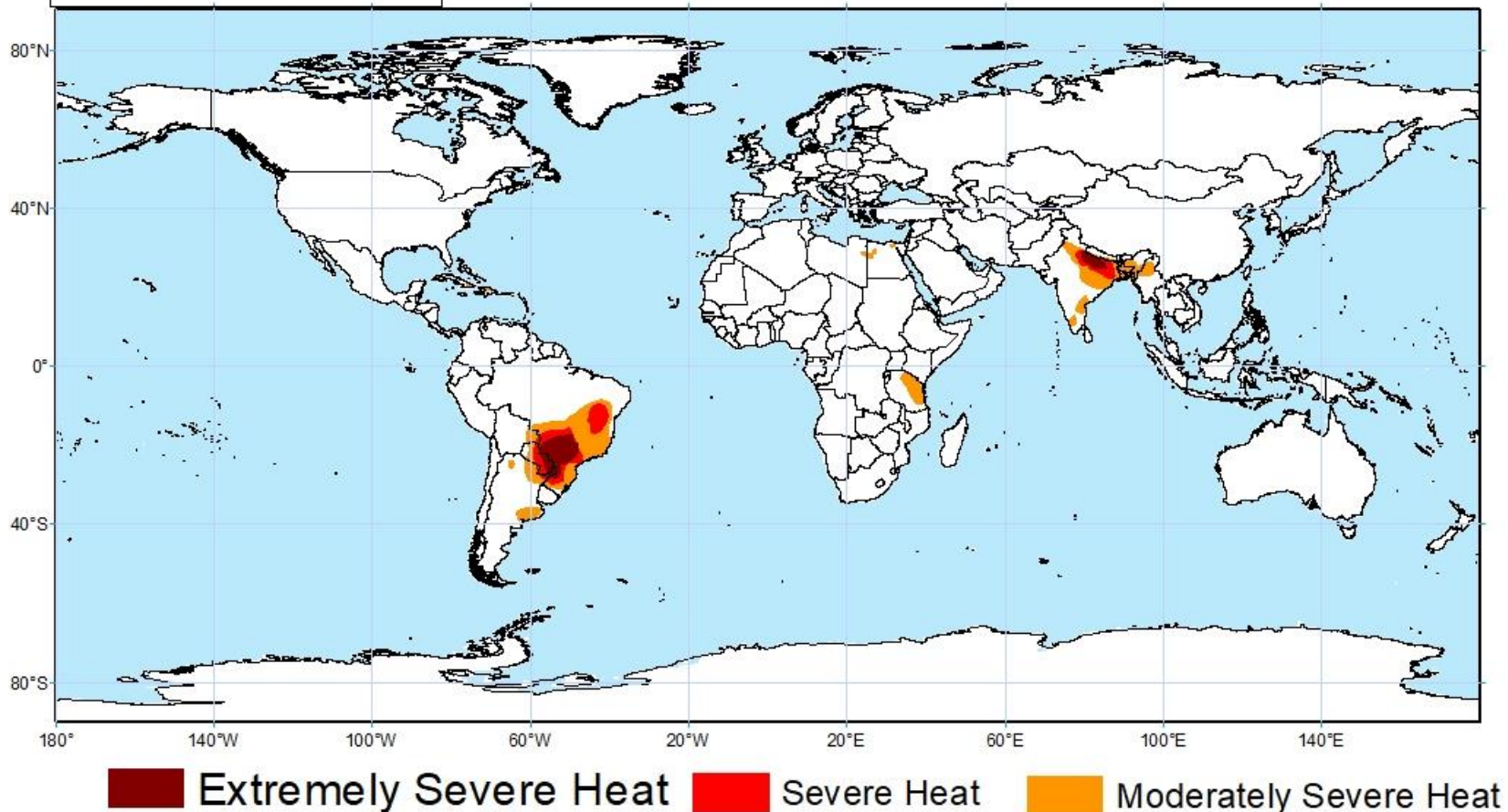
**Moderately Severe Heat:** Tmax/HI are among the 20% highest values over the 30-year period 1991-2020

**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: 19 Feb 2025 - 25 Feb 2025

Issued 11 Feb 2025



**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

- There is an increased chance for *moderately severe heat* in isolated areas in northeastern Argentina, Paraguay, Southern Brazil, Eastern Tanzania, southern, central, and northeastern India, Bangladesh, and Myanmar.
- There is an increased chance for *extremely severe heat* over Paraguay, Brazil, and isolated areas in northeastern India.

**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**