Global Heat Hazards Outlooks

Date of Issuance: 18 Mar 2025

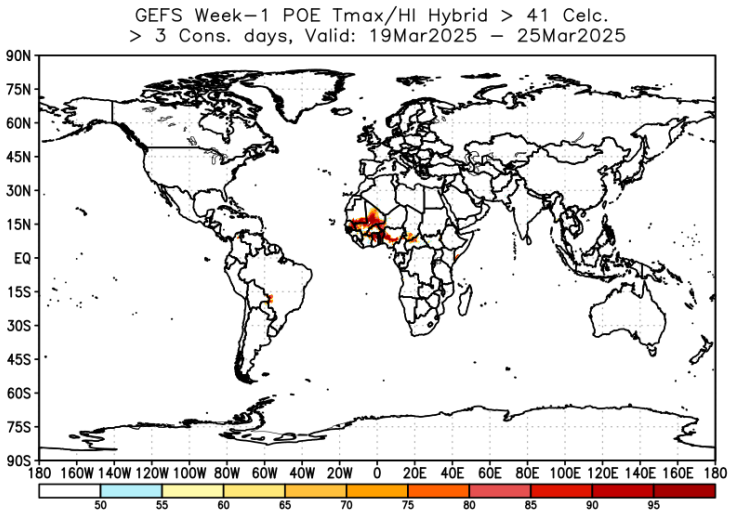
Week-1 Valid: 19 Mar 2025 – 25 Mar 2025

Week-2 Valid: 26 Mar 2025 – 01 Apr 2025

Numerical Weather Prediction Model: NCEP GEFS

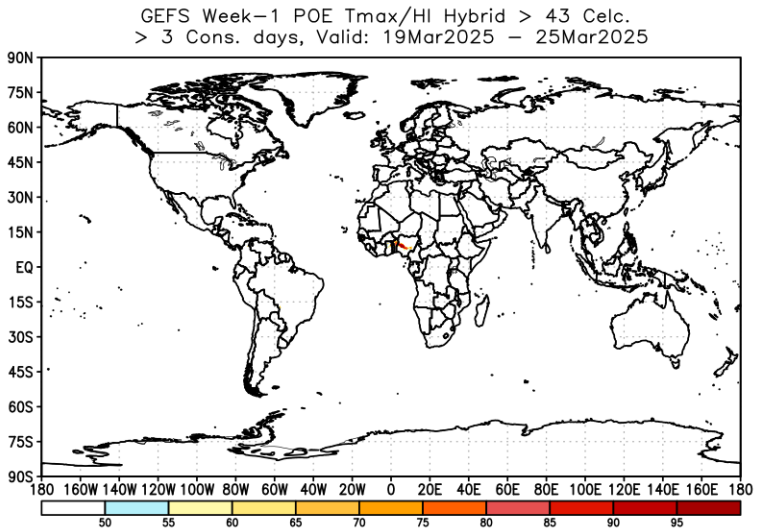
GEFS Week-1 HI/Tmax Hybrid POE with Respect to Fixed Thresholds

>41ºC & > 3 Consc. Days



https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week1_prob_hybrid_3_glb_41.png

>43ºC & > 3 Consc. Days



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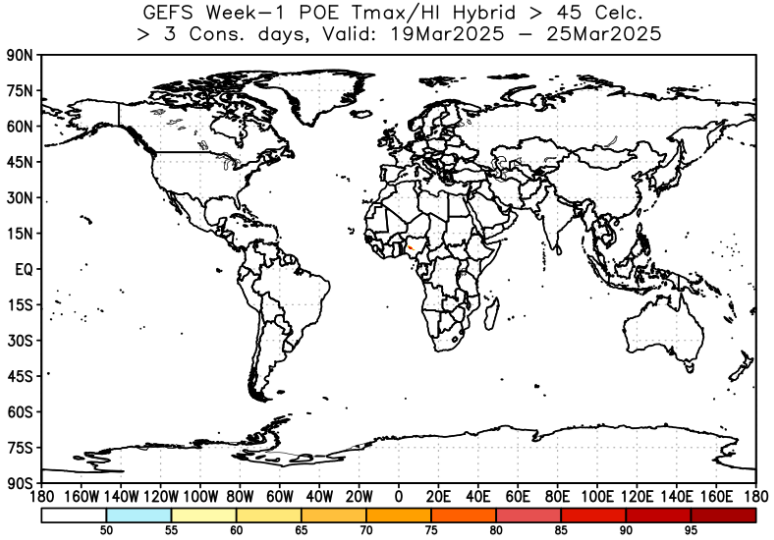
>45ºC & > 3 Consc. Days

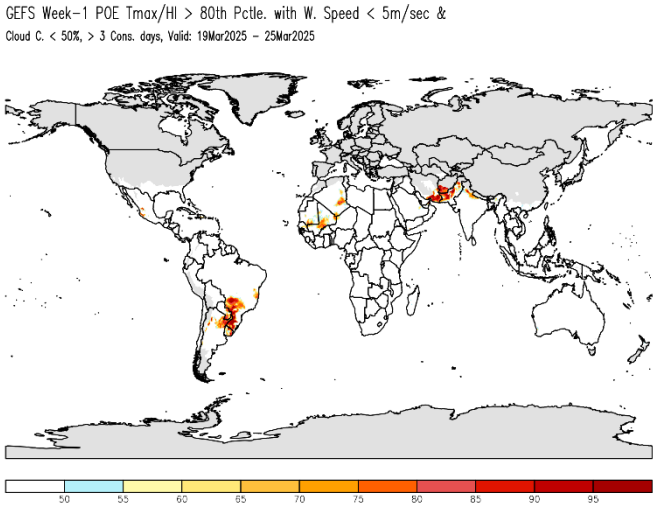


https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week1_prob_hybrid_3_glb_45.png

- Probabilities exceed 85% for the hybrid index to exceed 41ºC for at least three consecutive days in Senegal, Mauritania, Mali, Ghana, southern Chad, Northern central Republic Africa, and Nigeria.

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

>80th & > 3 Consc. Days



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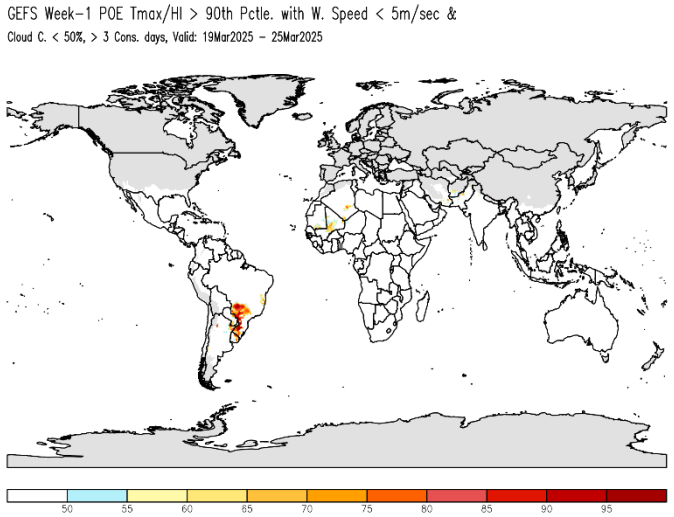
>90th & > 3 Consc. Days



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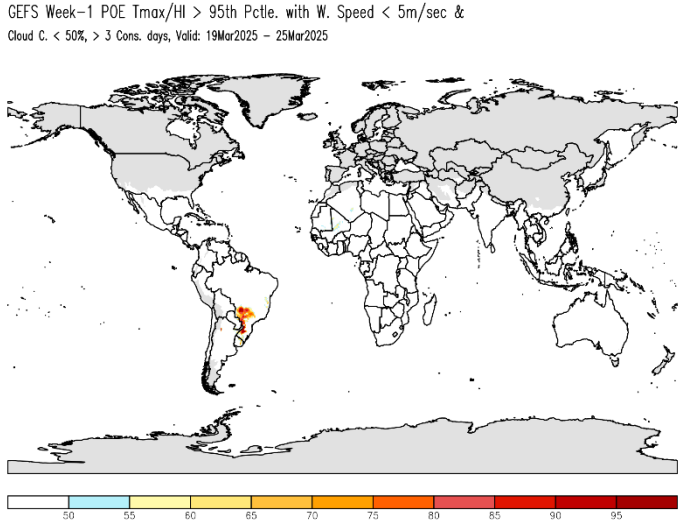
>95th & > 3 Consc. Days

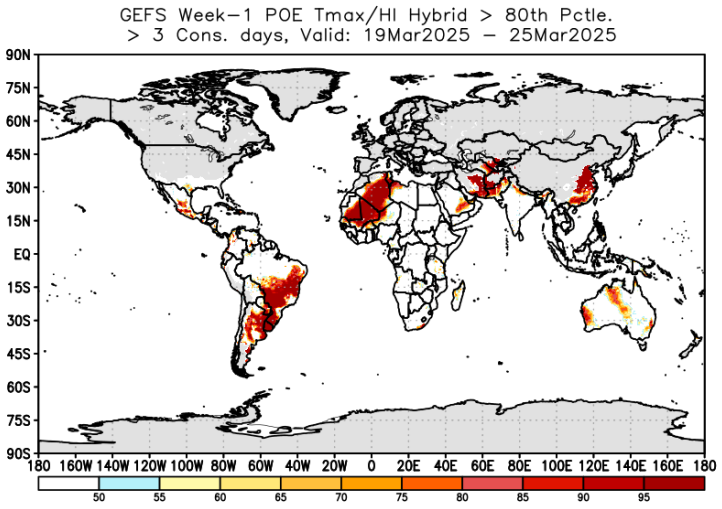


https://ftp.cpc.ncep.noaa.gov/International/extreme_fcst/gefs_heat/gefs_comb3_week1_glb_prob_95.gif

- Probabilities exceed 70% for the hybrid index with calmer wind and less cloud cover to exceed the 80th percentile for at least three consecutive days in northeastern Argentina, Southern Brazil, northeastern Iran, and isolated places in Pakistan,India, Afghanistan, Mali, and Algeria.

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

>80th & > 3 Consc. Days



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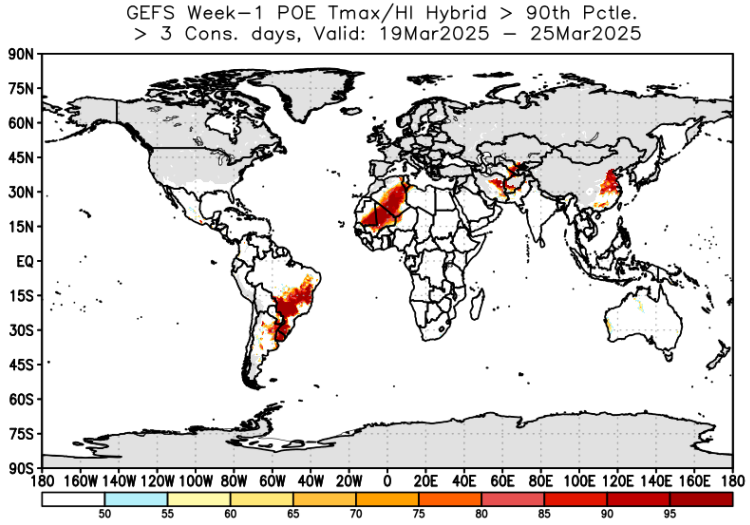
>90th & > 3 Consc. Days



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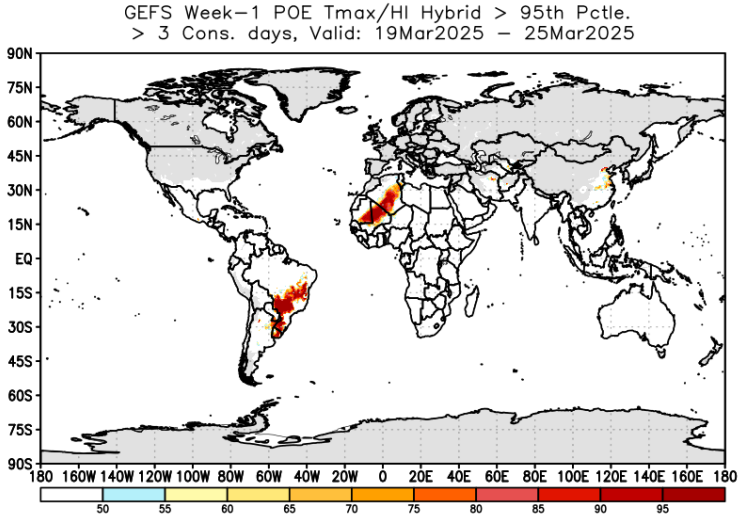
>95th & > 3 Consc. Days

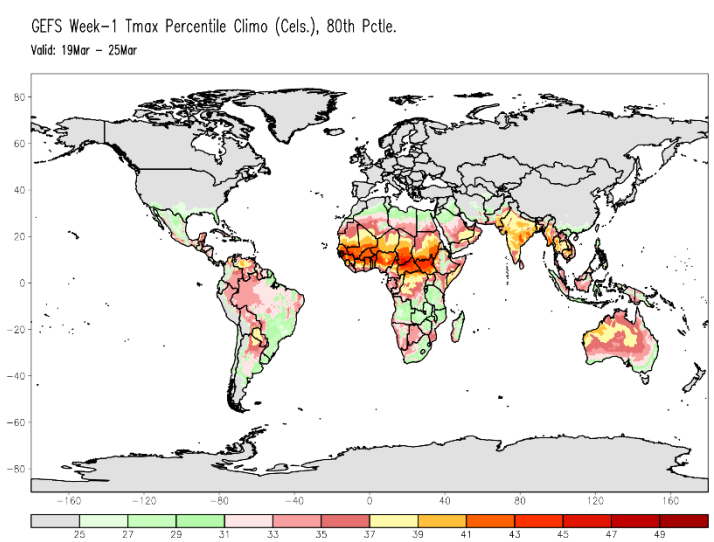


https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week1_prob_hybrid_3_glb_95.png

- Probabilities exceed 90% for the hybrid index to exceed the 95th percentile for at least three consecutive days in southern and eastern and western Brazil, Mauritania, Mali, and Algeria.

GEFS Week-1 Tmax Percentile Climatology (°C)

Tmax 80th Percentile



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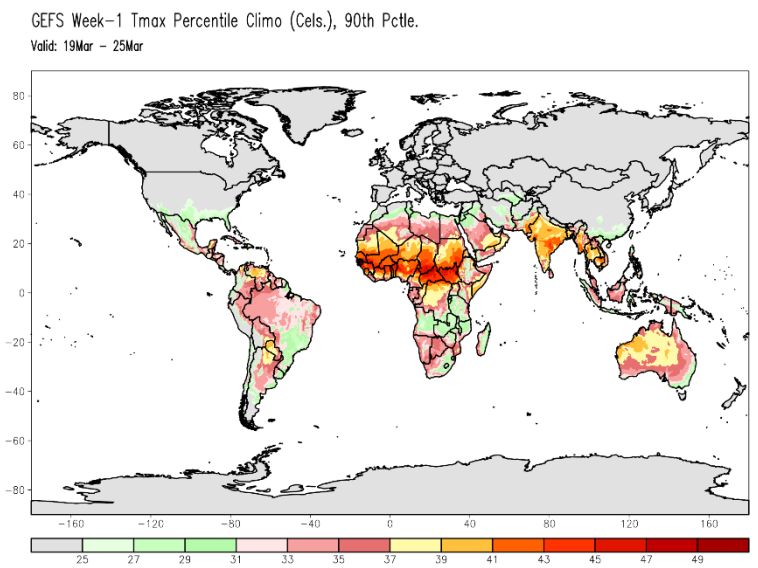
Tmax 90th Percentile



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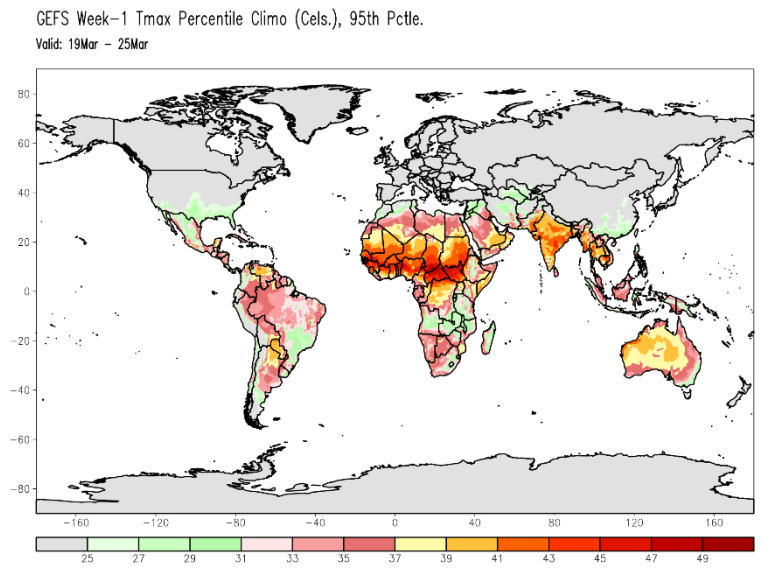
Tmax 95th Percentile



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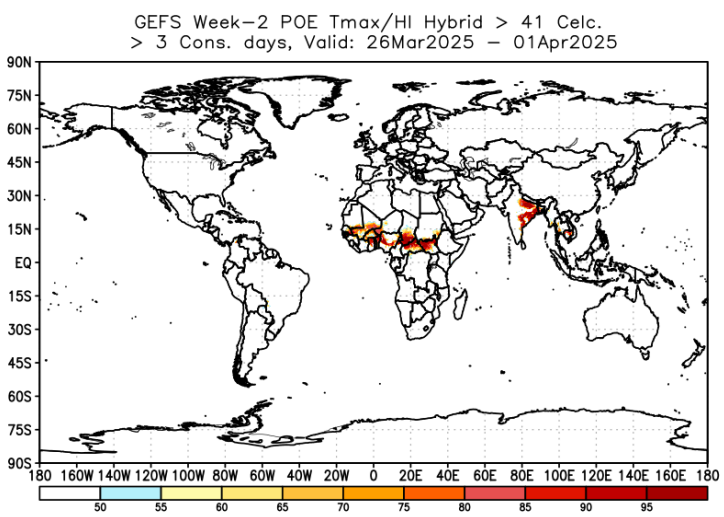
GEFS Week-2 HI/Tmax Hybrid POE with Respect to Fixed Thresholds

>41ºC & > 3 Consc. Days



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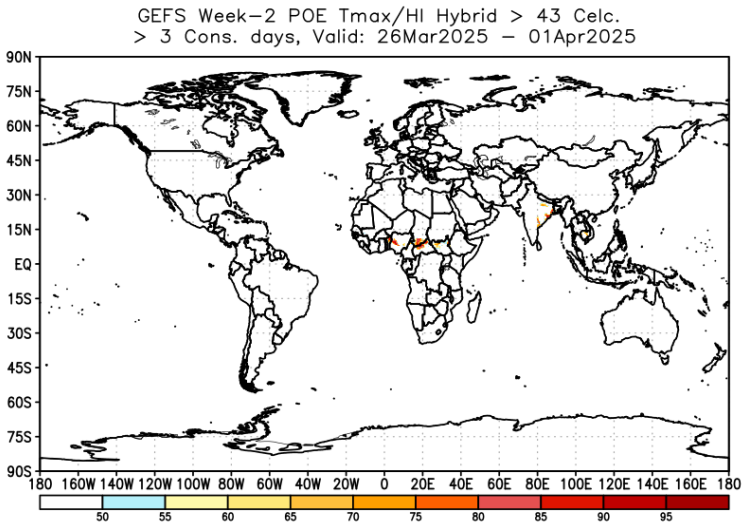
>43ºC & > 3 Consc. Days



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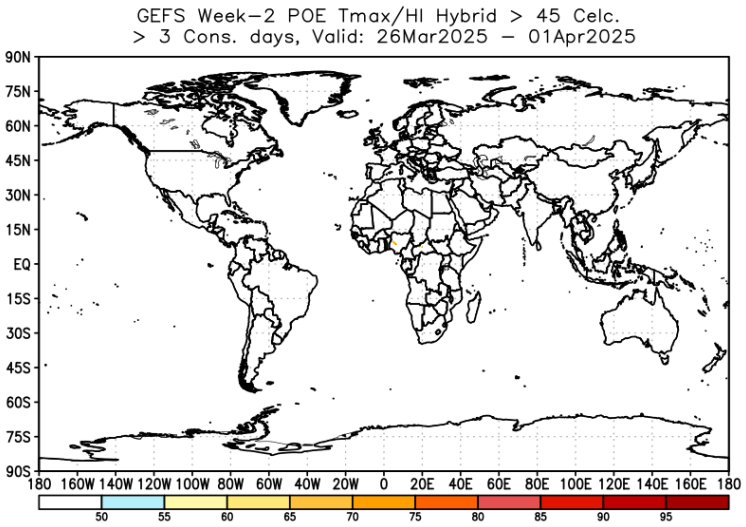
>45ºC & > 3 Consc. Days

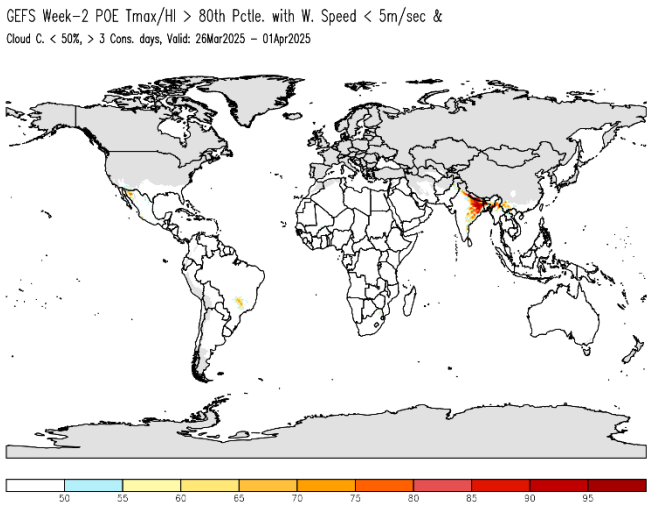


https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week2_prob_hybrid_3_glb_45.png

- There is an increased chance for the hybrid index to exceed 41ºC for at least three consecutive days in southern Chad, Mauritania, Mali, Central African Republic, Nigeria and eastern India.

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

>80th & > 3 Consc. Days



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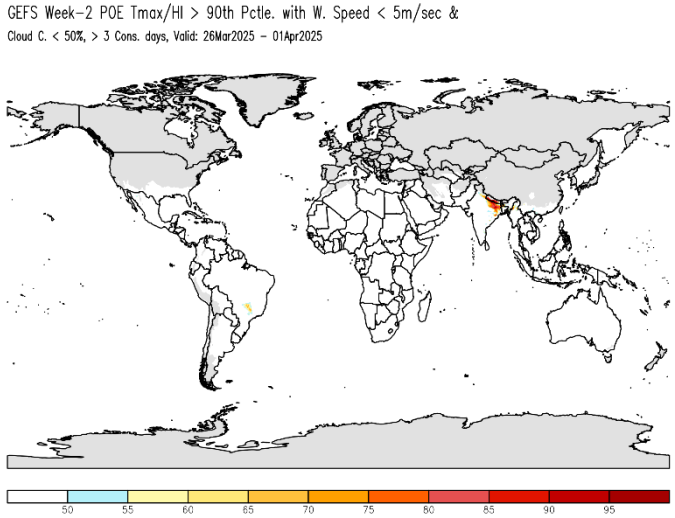
>90th & > 3 Consc. Days



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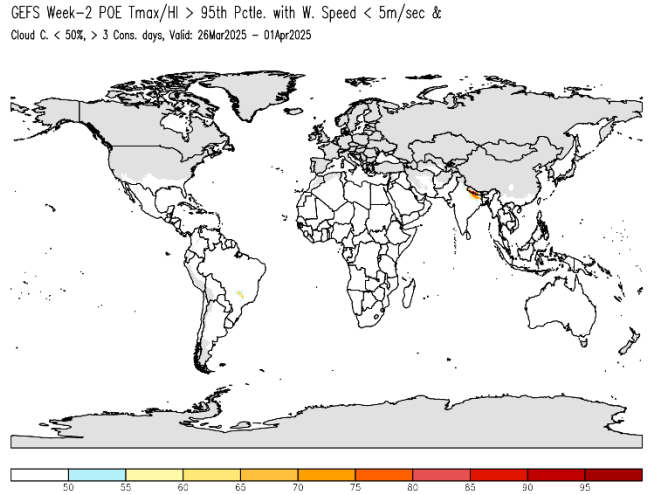
>95th & > 3 Consc. Days

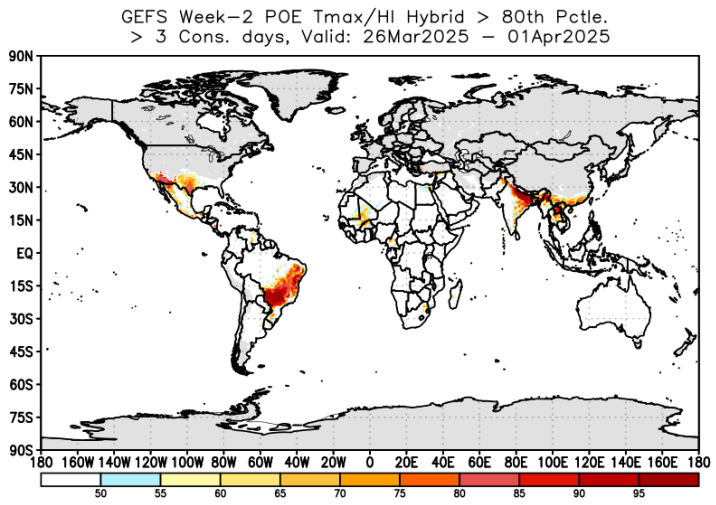


https://ftp.cpc.ncep.noaa.gov/International/extreme_fcst/gefs_heat/gefs_comb3_week2_glb_prob_95.gif

- Probabilities exceed 70% for the hybrid index with calmer wind and less cloud cover to exceed the 80th 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

>80th & > 3 Consc. Days



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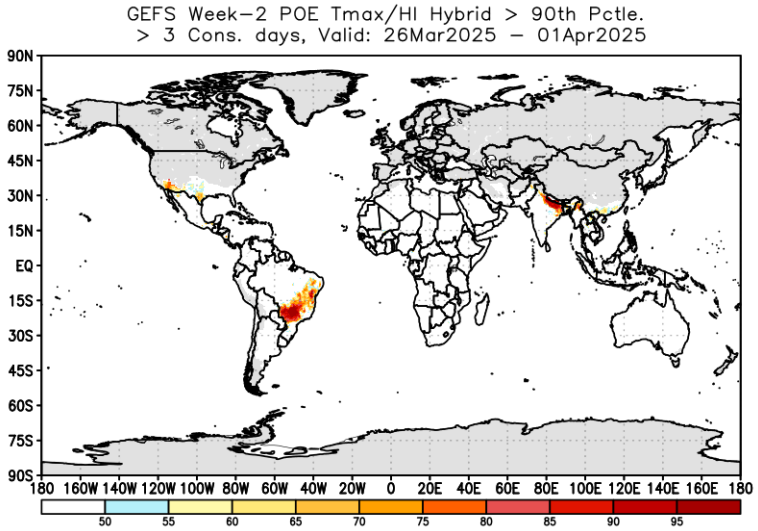

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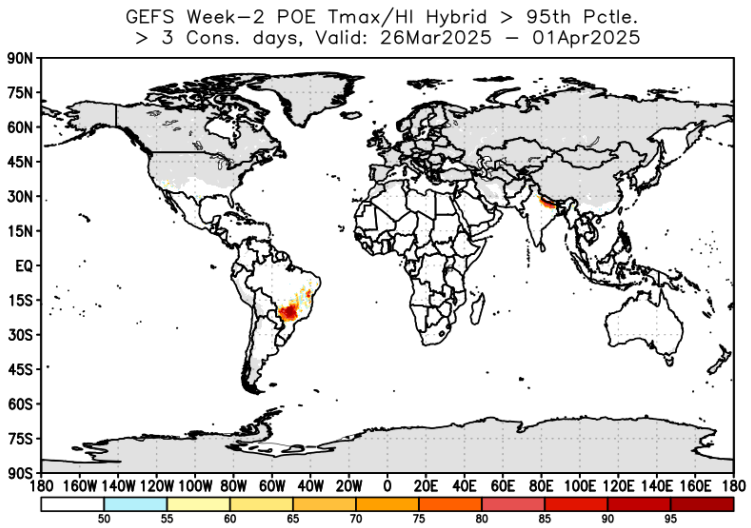
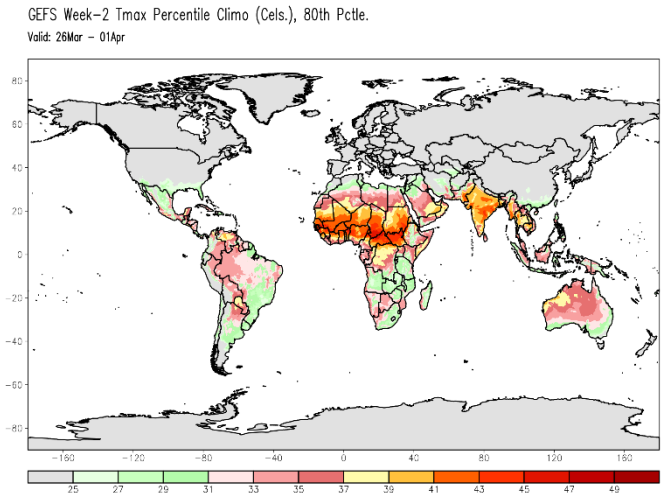


https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week2_prob_hybrid_3_glb_95.png

- There is an increased chance (> 80%) for the hybrid index to exceed the 90th percentile for at least three consecutive days in southern Brazil and northeastern India.

GEFS Week-2 Tmax Percentile Climatology (°C)

Tmax 80th Percentile



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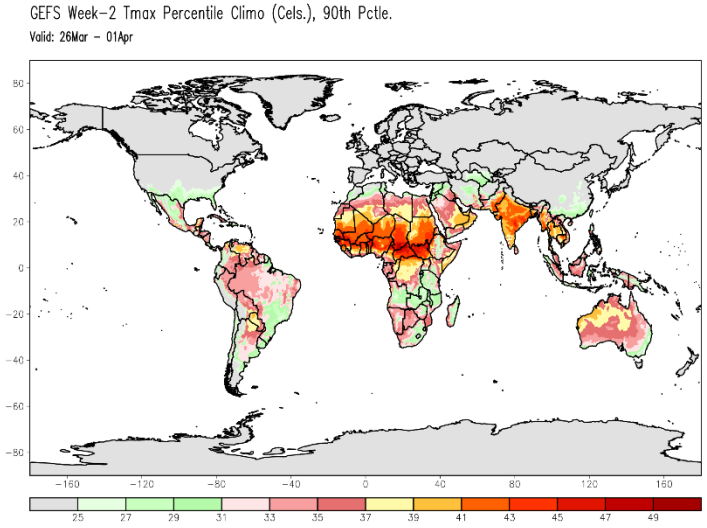
Tmax 90th Percentile



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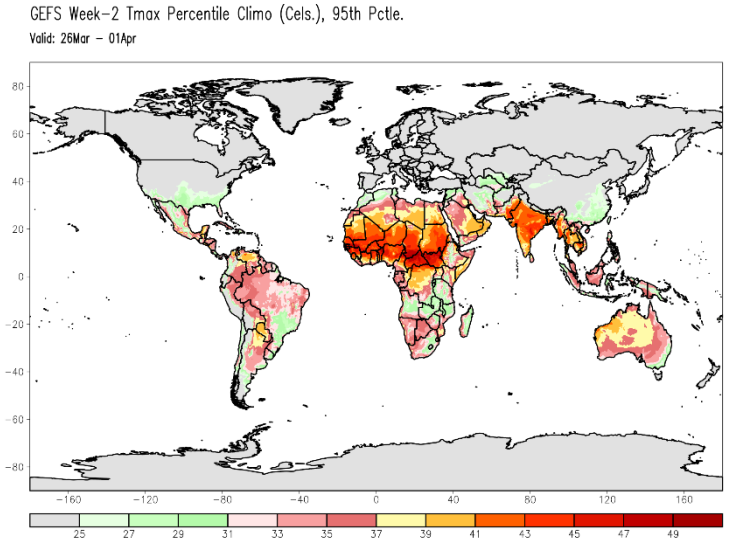
Tmax 95th Percentile



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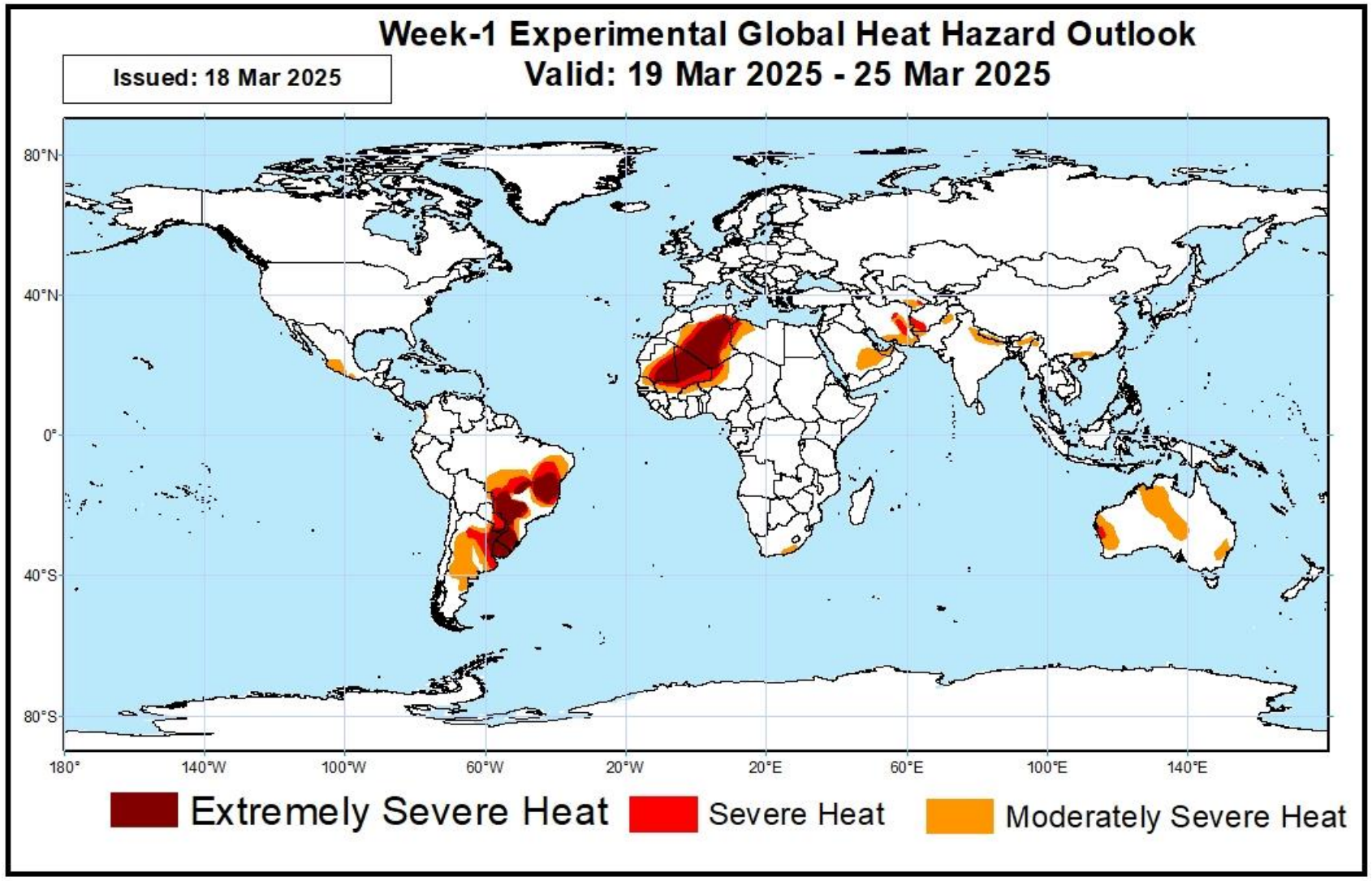
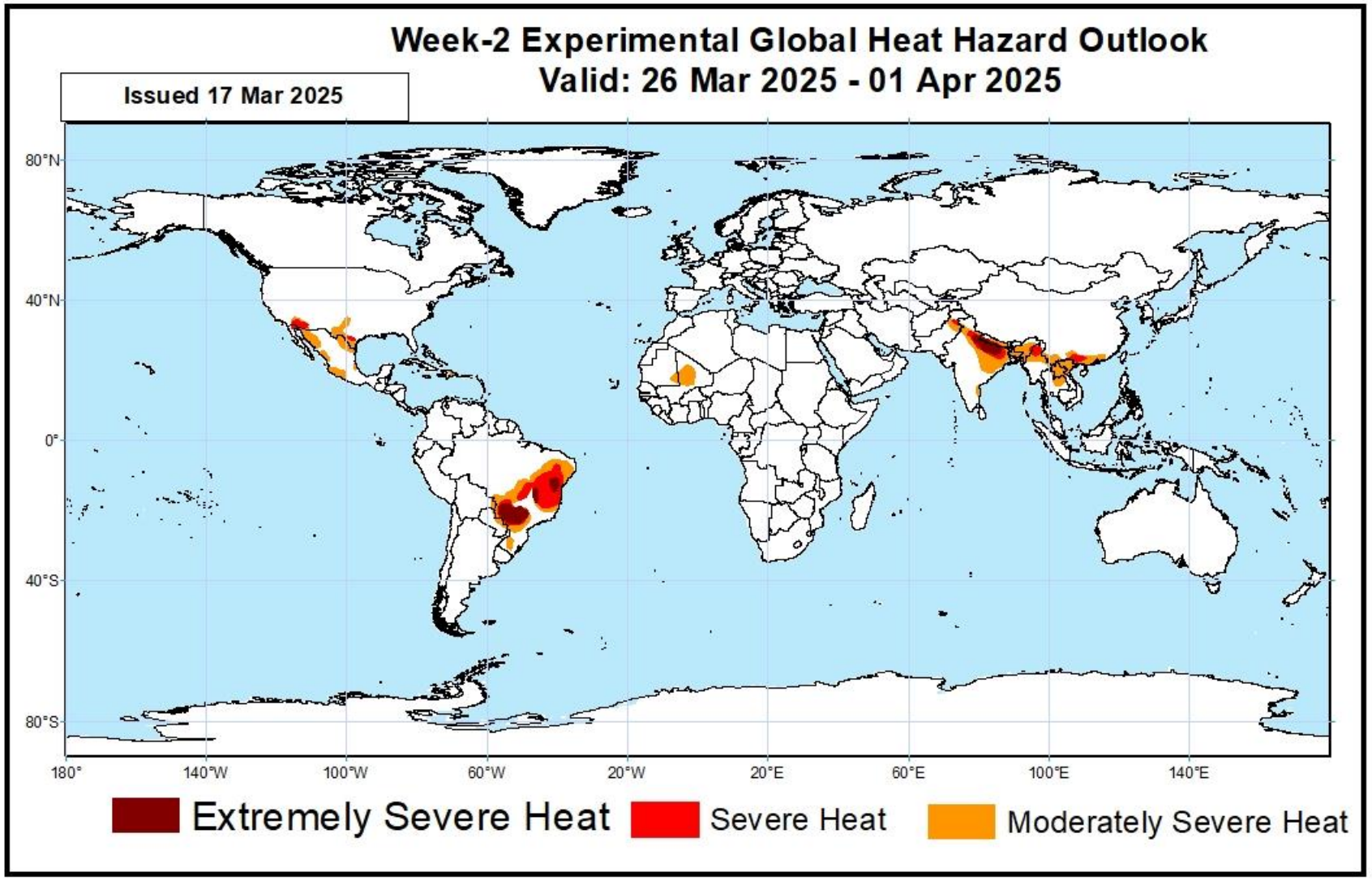


- **There is an increased chance of *moderately severe heat* in far western Mexico, eastern and Southern Brazil, Argentina, Uruguay, southern Paraguay, Mali, Mauritania, Algeria, Western Libya, Senegal, and eastern India, Bangladesh, southeastern Saudi Arabia, and Australia.**
- **There is an increased chance of *extremely severe heat* in eastern and southern Brazil, Uruguay, Mali, and Mauritania.**

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**



- **There is an increased chance for *moderately severe heat* in isolated areas in western and eastern Mexico, northeastern Paraguay, southwestern and northeastern and southern Brazil, pocket of Mauritania, Mali, northern Pakistan, northeastern India, Bangladesh, Myanmar and parts China.**
- **There is an increased chance for *severe heat* over isolated areas in southwestern and northeastern Brazil, and northeastern India.**

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 > 41ºC for at least 3 consecutive days** is also considered as **Moderately Severe Heat**