Global Heat Hazards Outlooks

Date of Issuance: 01 Apr 2025

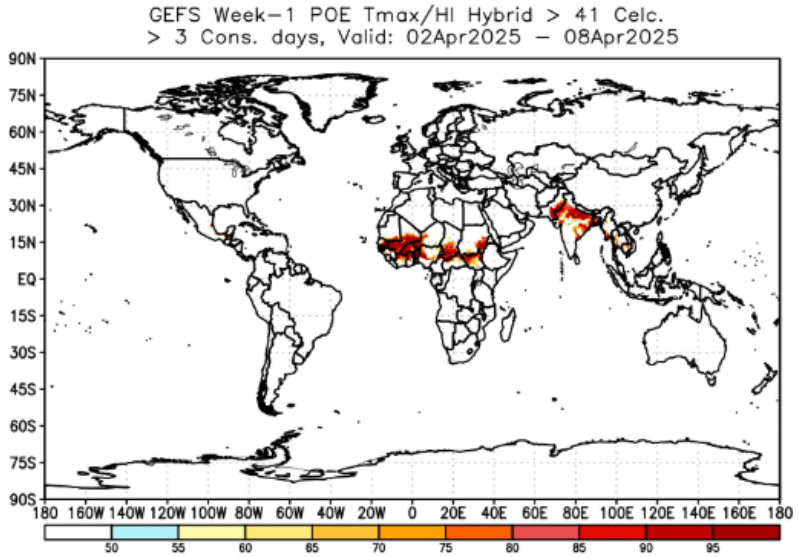
Week-1 Valid: 02 Apr 2025 – 08 Apr 2025

Week-2 Valid: 09 Apr 2025 – 15 Apr 2025

Numerical Weather Prediction Model: NCEP GEFS

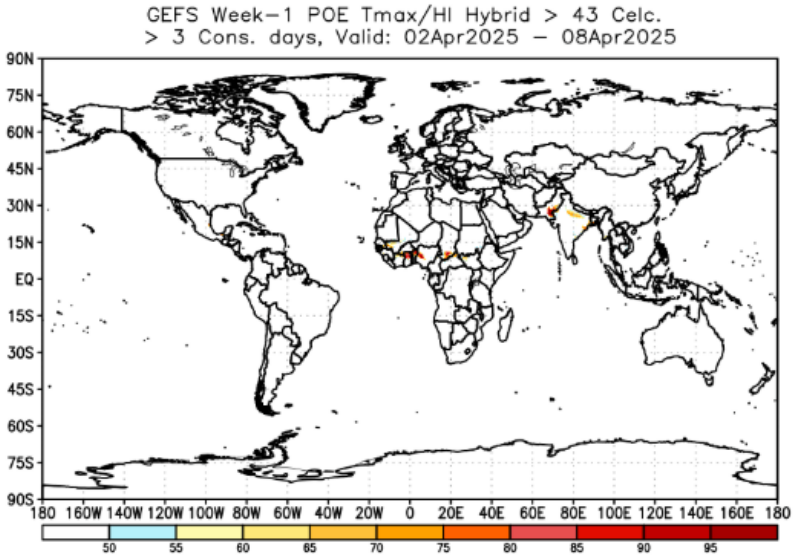
GEFS Week-1 HI/Tmax Hybrid POE with Respect to Fixed Thresholds

>41°C & > 3 Consc. Days



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

>43°C & > 3 Consc. Days



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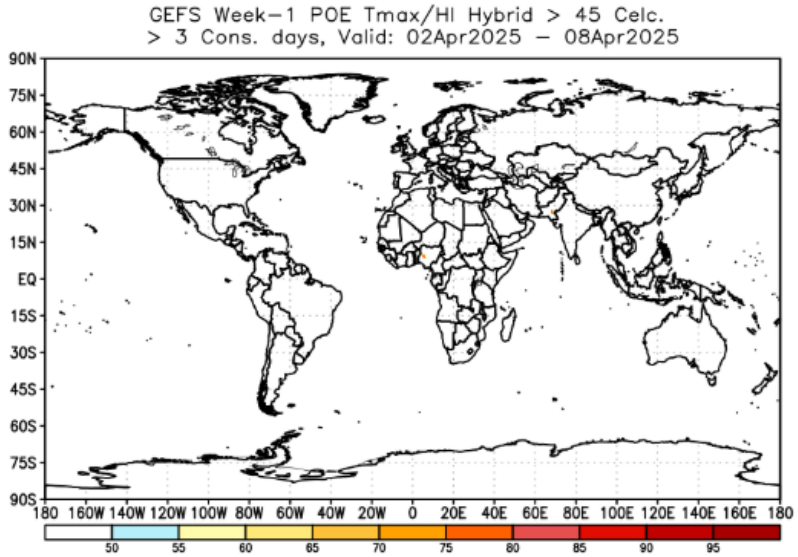
>45°C & > 3 Consc. Days

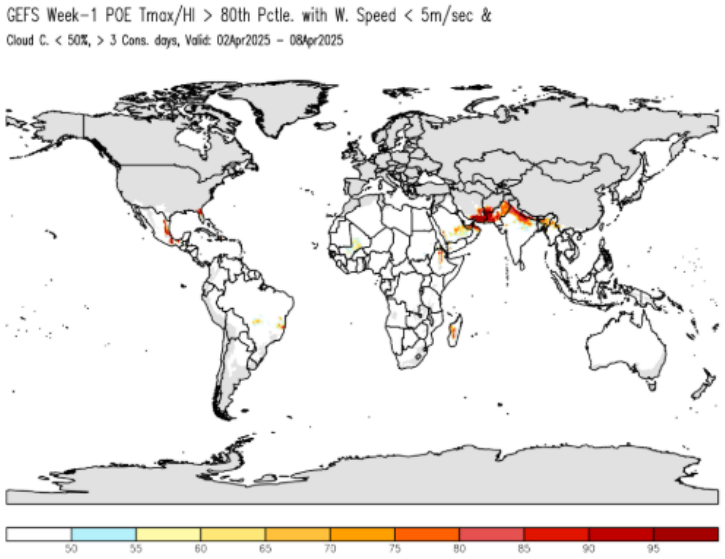


https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week1_prob_hybrid_3_glb_45.png

- Probabilities exceed 85% for the hybrid index to exceed 41°C for at least three consecutive days in Ghana, Burkina Faso, Chad 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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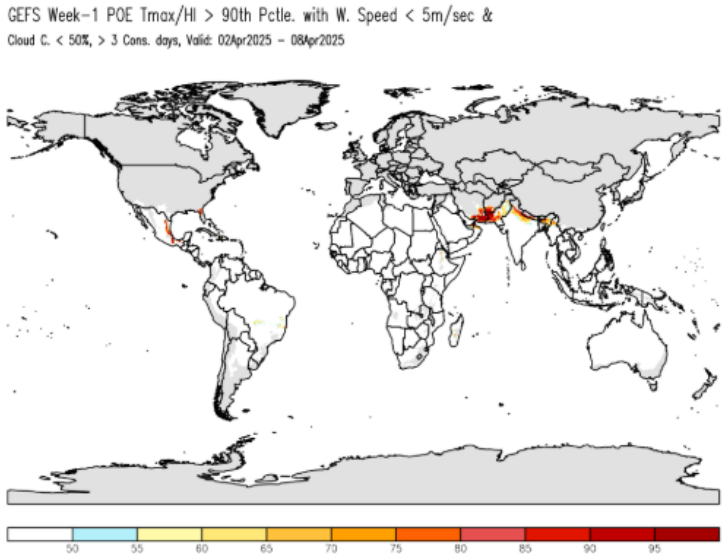
>90th & > 3 Consc. Days



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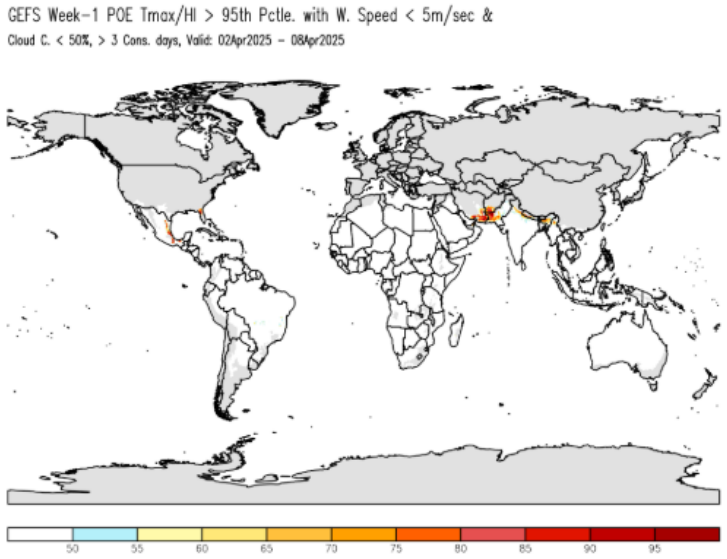
>95th & > 3 Consc. Days

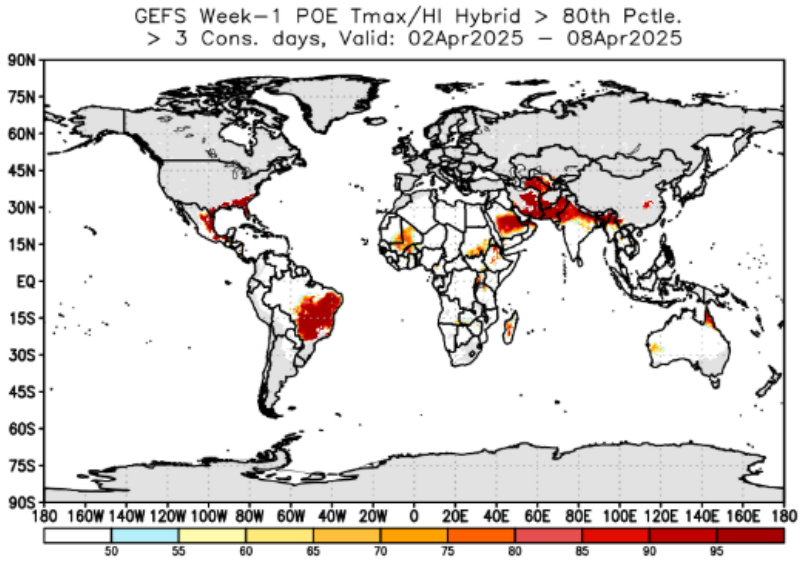


https://ftp.cpc.ncep.noaa.gov/International/extreme_fcst/gefs_heat/gefs_comb3_week1_glb_prob_95.gif

- 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 isolated places in northeastern India, Bangladesh and Myanmar.

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

>80th & > 3 Consc. Davs



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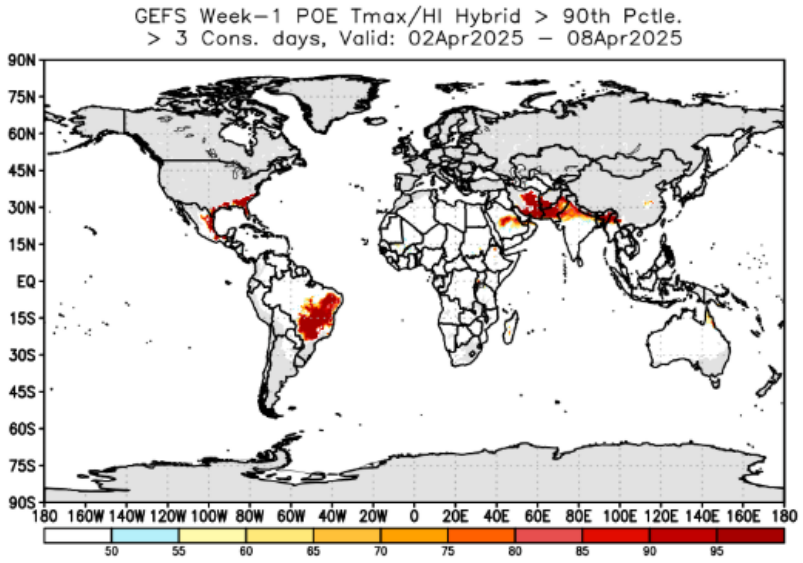
>90th & > 3 Consc. Davs



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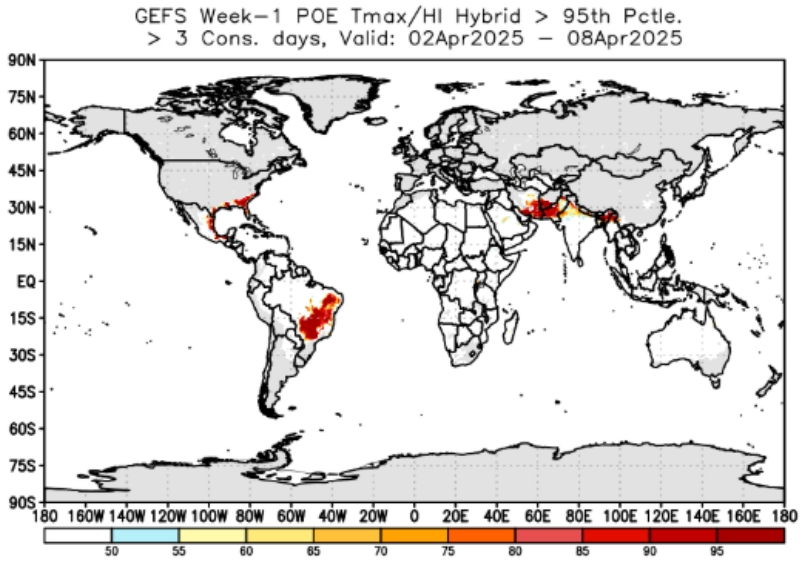
>95th & > 3 Consc. Davs

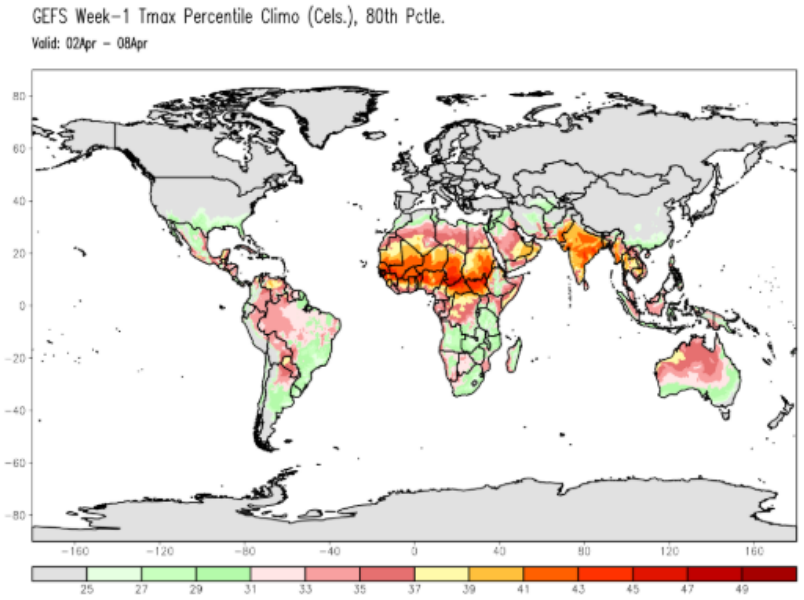


https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week1_prob_hybrid_3_glb_95.png

- Probabilities exceed 90% for the hybrid index to exceed the 80th percentile for at least three consecutive days in southern and eastern Brazil, northeastern India, Bangaldesh , Myanmar, and Southwestern Australia.

GEFS Week-1 Tmax Percentile Climatology (°C)

Tmax 80th Percentile



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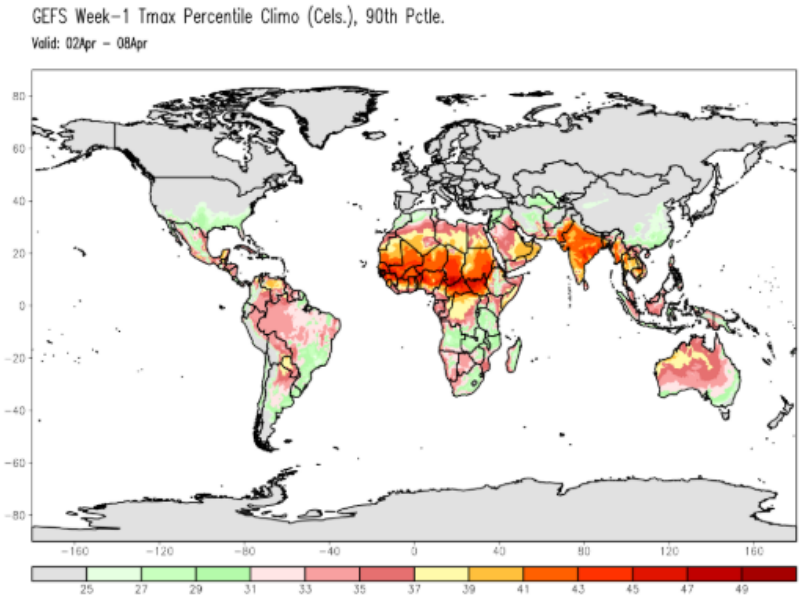
Tmax 90th Percentile



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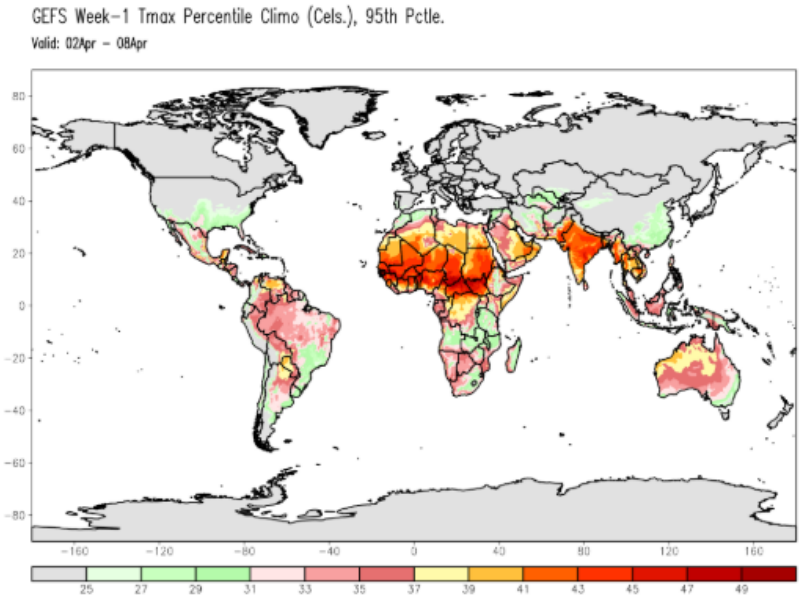
Tmax 95th Percentile



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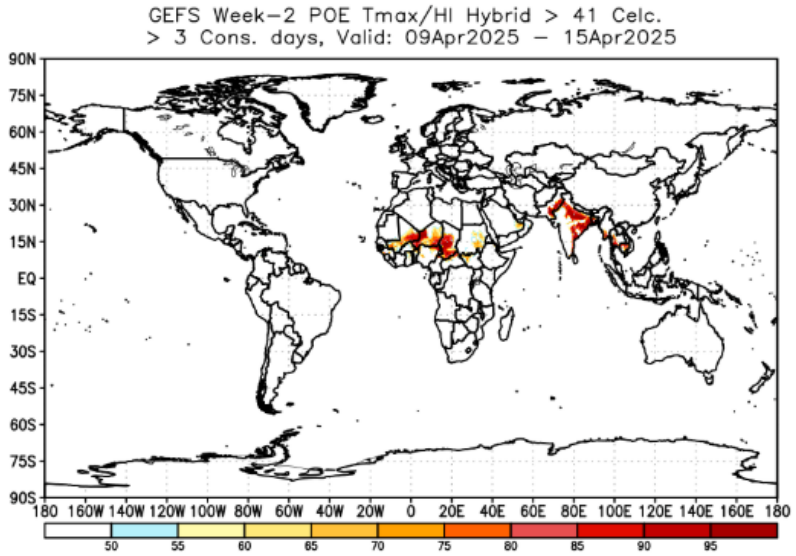
GEFS Week-2 HI/Tmax Hybrid POE with Respect to Fixed Thresholds

>41°C & > 3 Consc. Days



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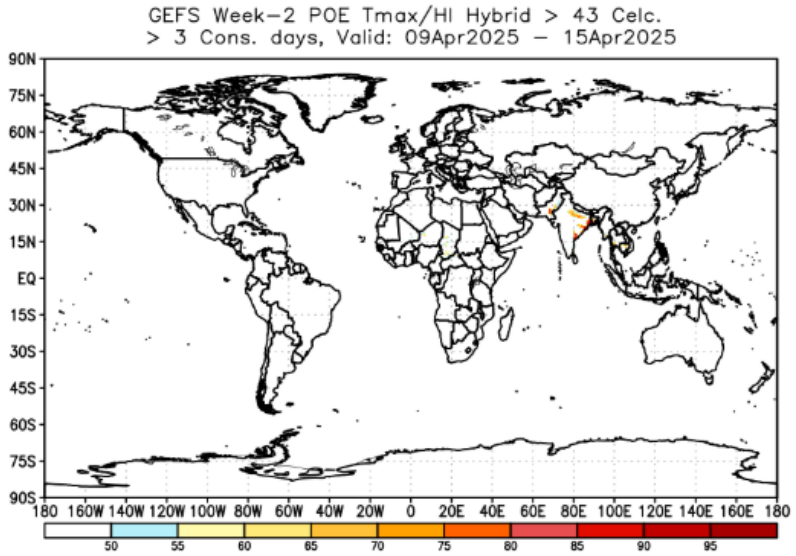
>43°C & > 3 Consc. Days



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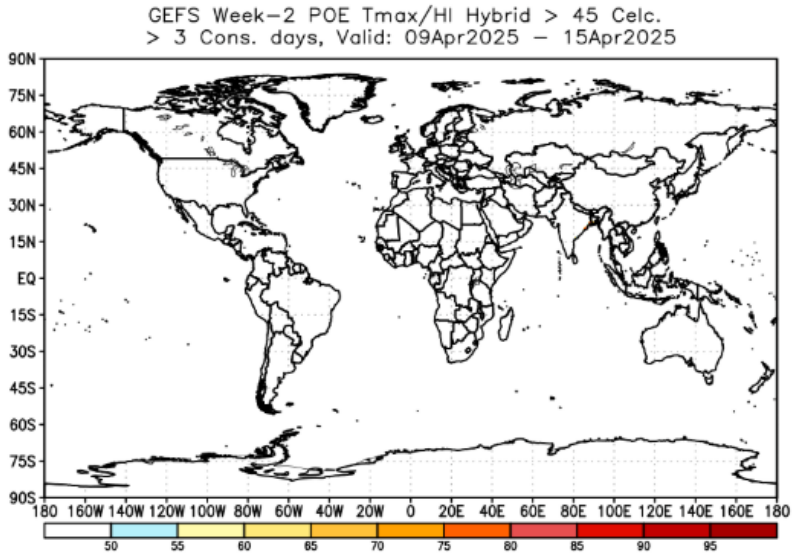
>45°C & > 3 Consc. Days

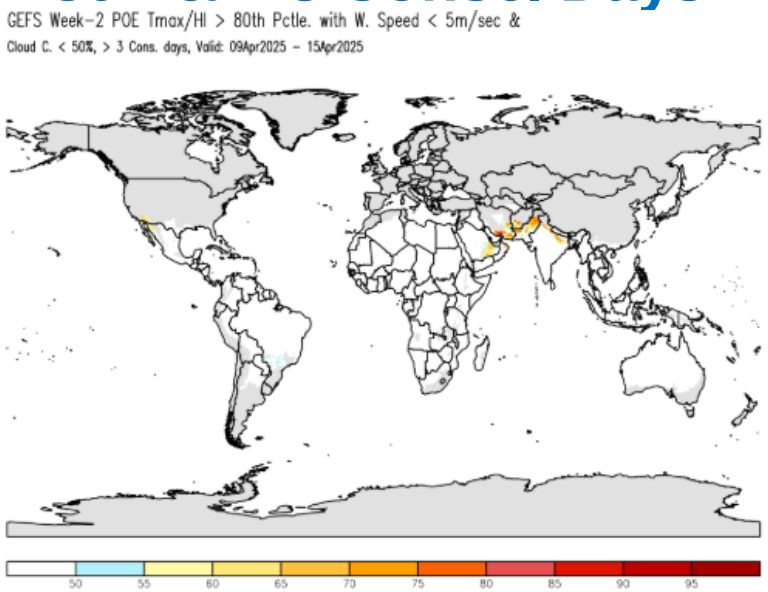


https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week2_prob_hybrid_3_glb_45.png

- There is an increased chance for the hybrid index to exceed 41°C for at least three consecutive days in southern Chad, 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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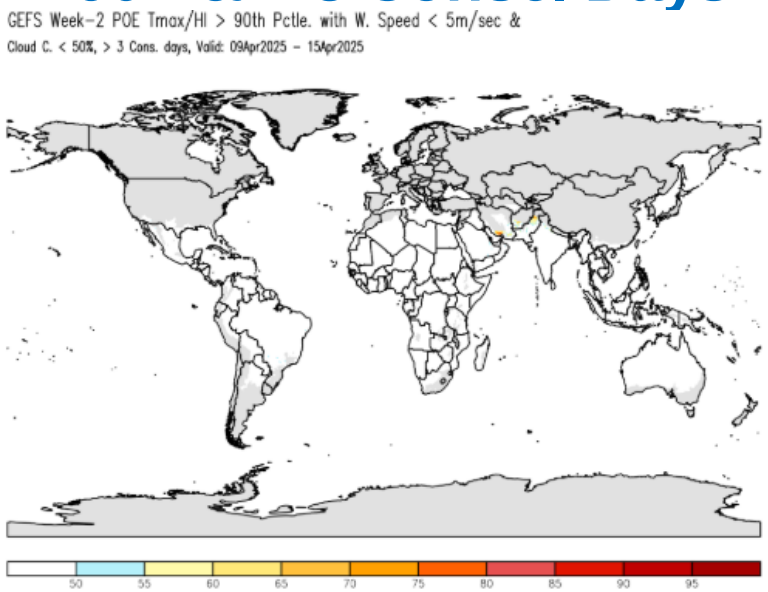
>90th & > 3 Consc. Days



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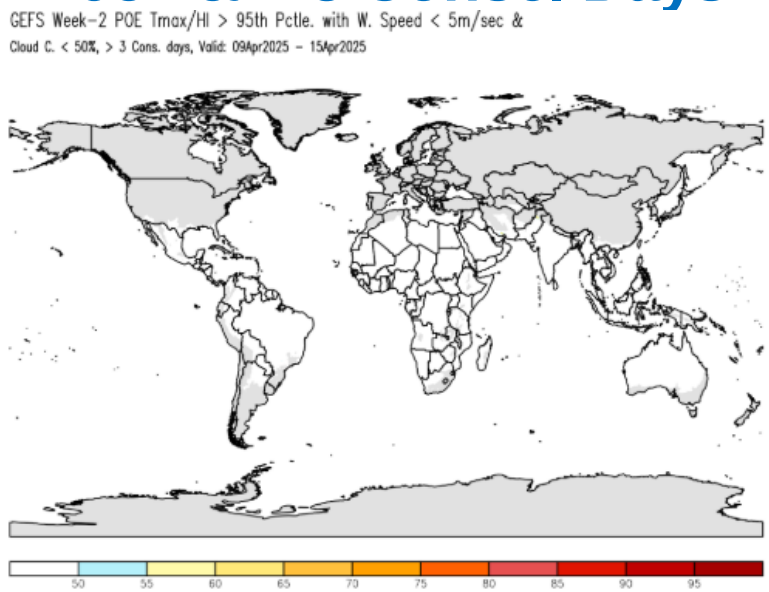
>95th & > 3 Consc. Days



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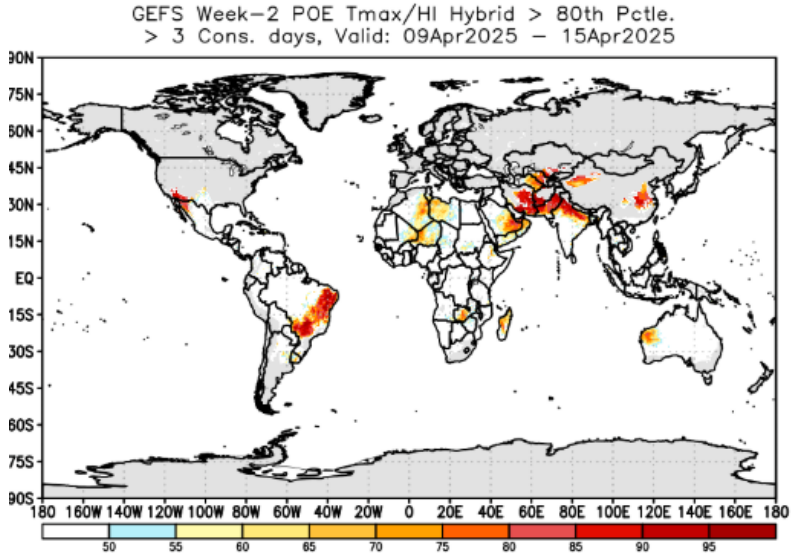
- Probabilities exceed 70% for the hybrid index with calmer wind and less cloud cover to exceed the 80th percentile for at least three consecutive days in northern India.

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

>80th & > 3 Consc. Days



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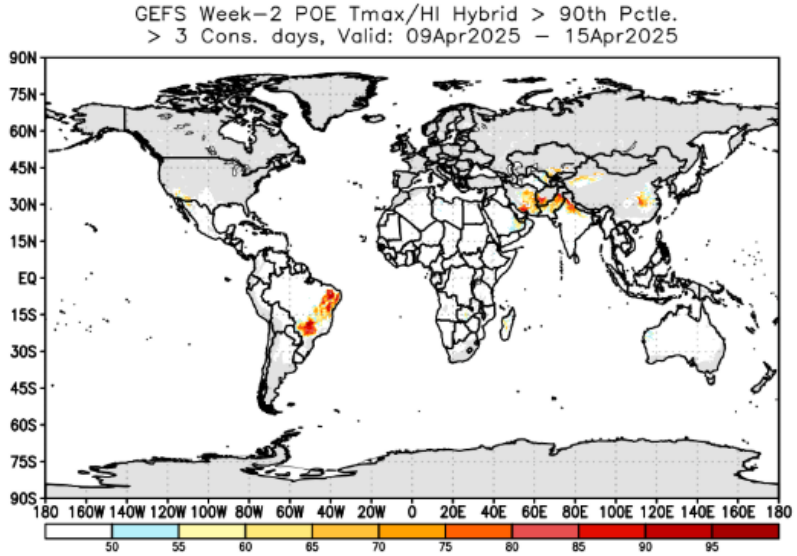

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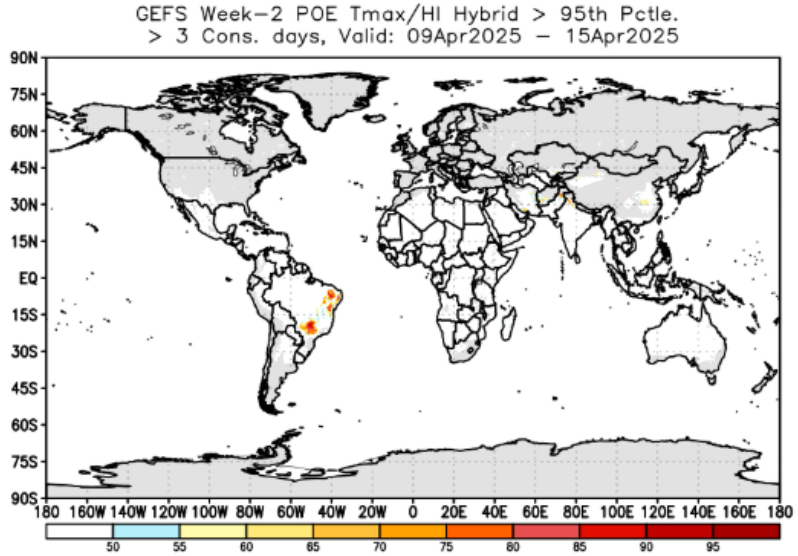

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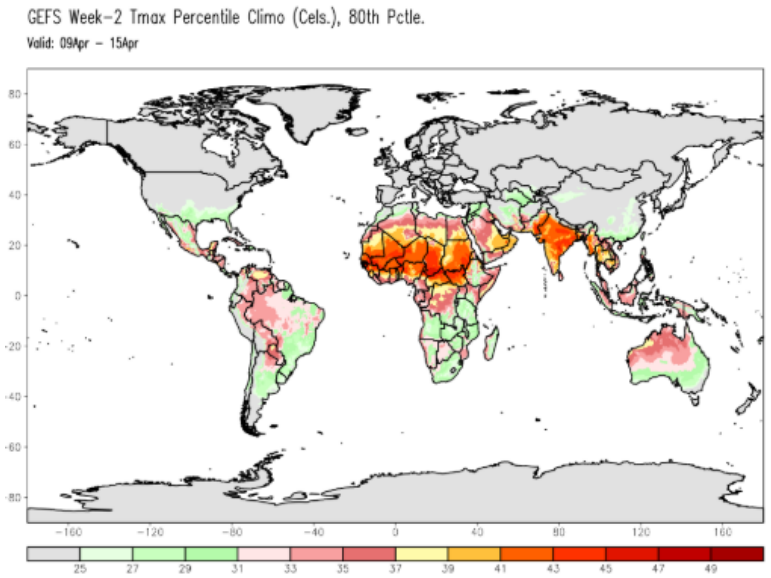
- There is an increased chance (> 80%) for the hybrid index to exceed the 90th percentile for at least three consecutive days in southern Brazil , northeastern India and Bangladesh.

GEFS Week-2 Tmax Percentile Climatology (°C)

Tmax 80th Percentile



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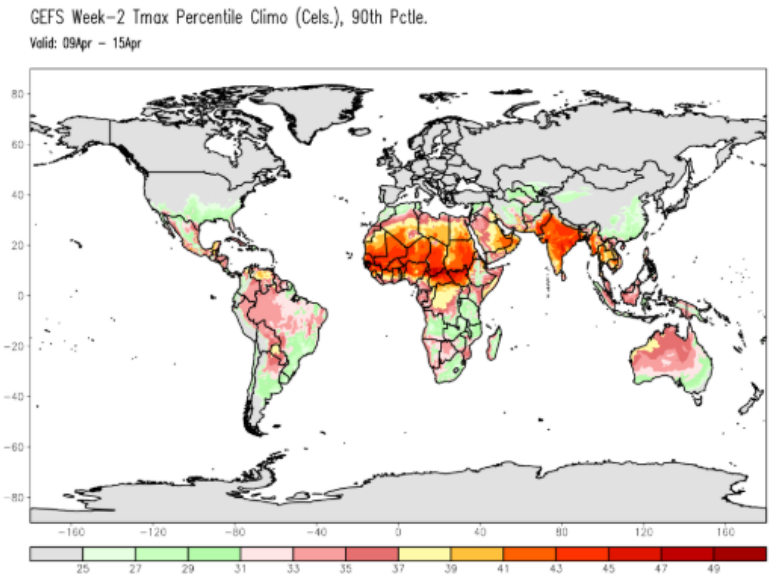
Tmax 90th Percentile



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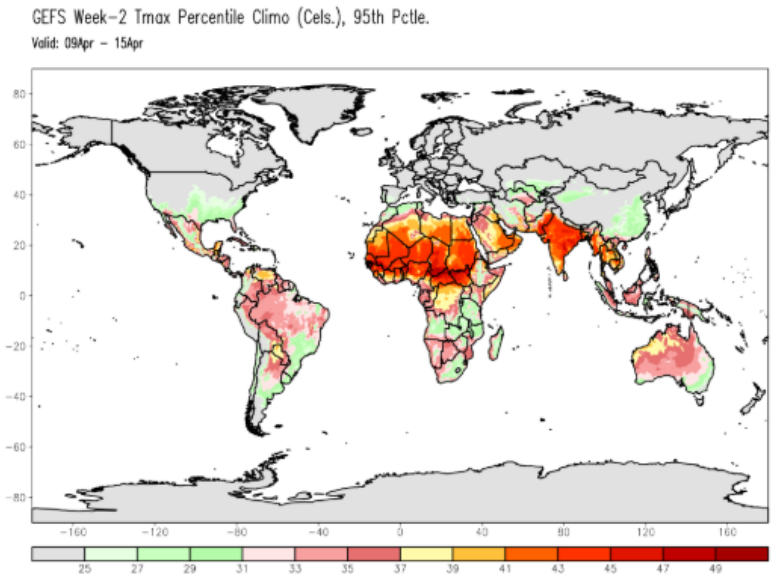
Tmax 95th Percentile



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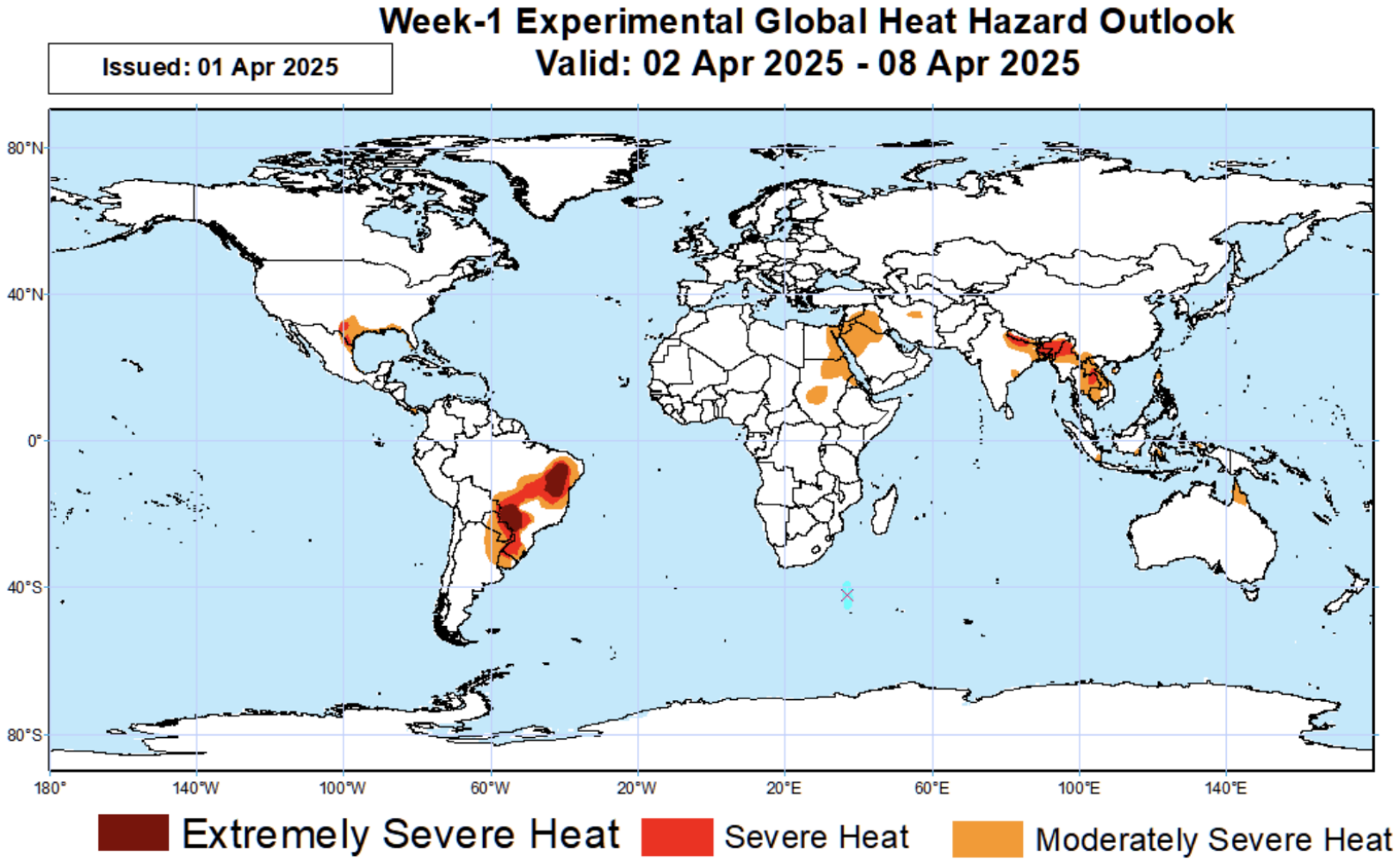
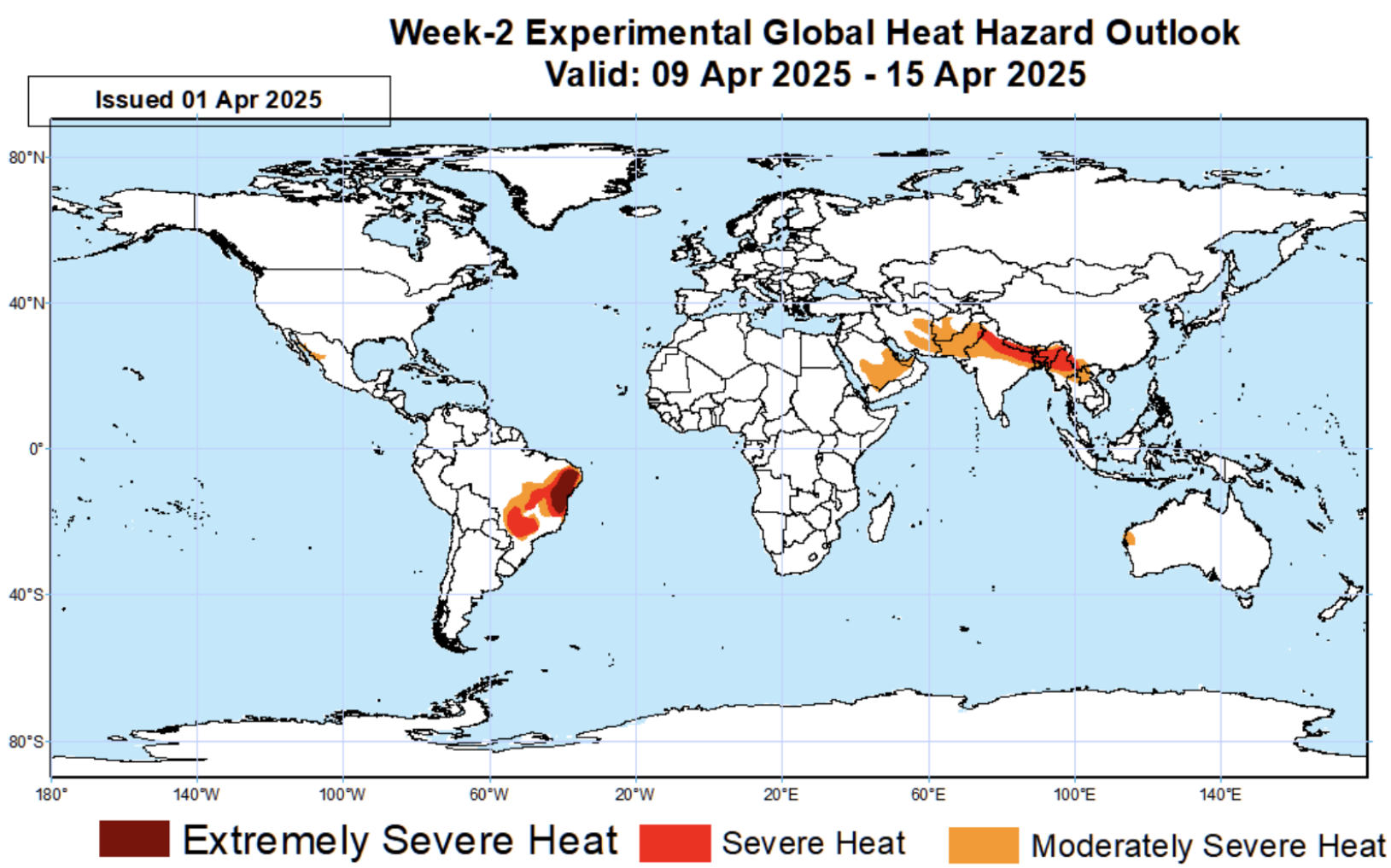


- **There is an increased chance of *moderately severe heat* in far eastern Mexico and southern US, eastern and Southern Brazil, northern Argentina, Uruguay, eastern Egypt, northern Sudan, and northeastern India, Bangladesh, Myanmar, Northern Saudi Arabia, and part of northern Australia.**
- **There is an increased chance of *severe heat* in eastern and southern Brazil, part of northeastern India and Bangladesh.**

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 Mexico, eastern and southwestern Brazil, Iran, Southern Afghanistan, northern Pakistan, northeastern India, Bangladesh and Myanmar.
- There is an increased chance for *severe heat* over isolated areas in southwestern Brazil , northeastern India and Bangladesh.

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**