

Global Heat Hazards Outlooks

Date of Issuance: 31 Dec 2024

Week-1 Valid: 01 Jan 2025 – 07 Jan 2025

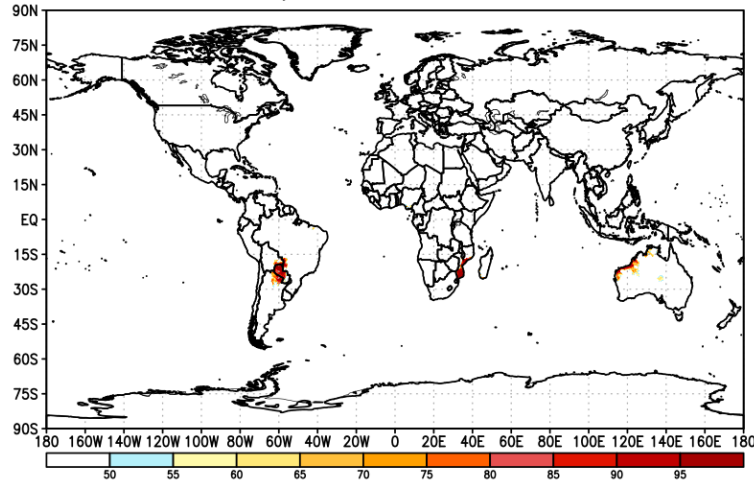
Week-2 Valid: 08 Jan 2025 – 14 Jan 2025

Numerical Weather Prediction Model: NCEP GEFS

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

>41°C & > 3 Consc. Days

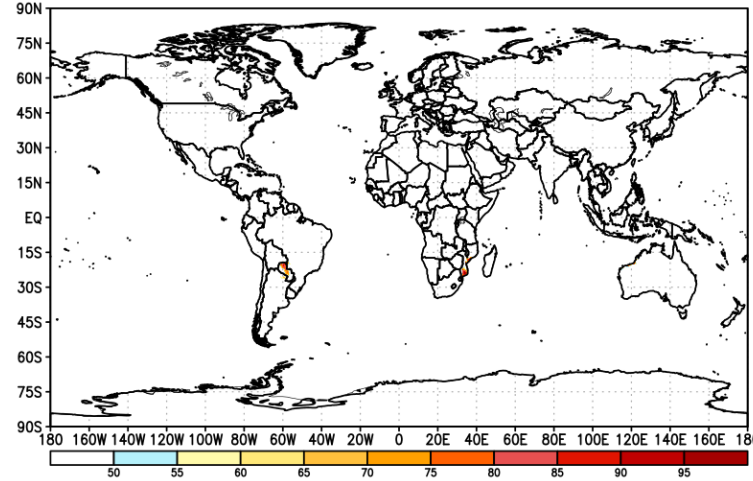
GEFS Week-1 POE Tmax/HI Hybrid > 41 Celc.
> 3 Cons. days, Valid: 01Jan2025 – 07Jan2025



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

>43°C & > 3 Consc. Days

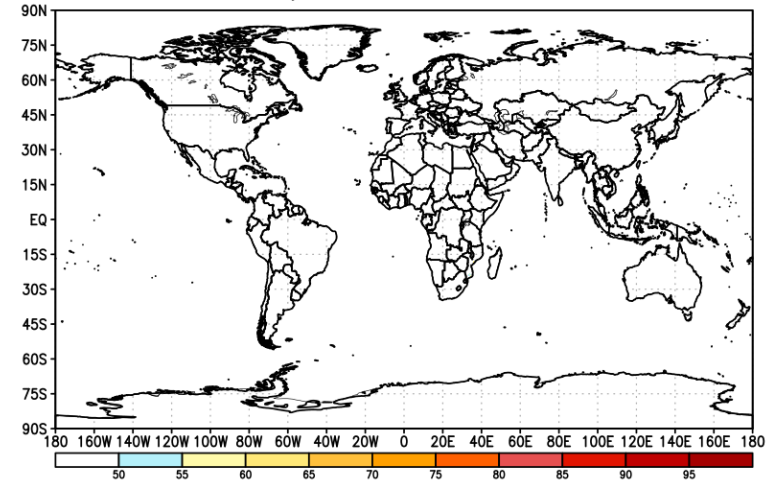
GEFS Week-1 POE Tmax/HI Hybrid > 43 Celc.
> 3 Cons. days, Valid: 01Jan2025 – 07Jan2025



https://ftp.cpc.ncep.noaa.gov/International/global_heat/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: 01Jan2025 – 07Jan2025

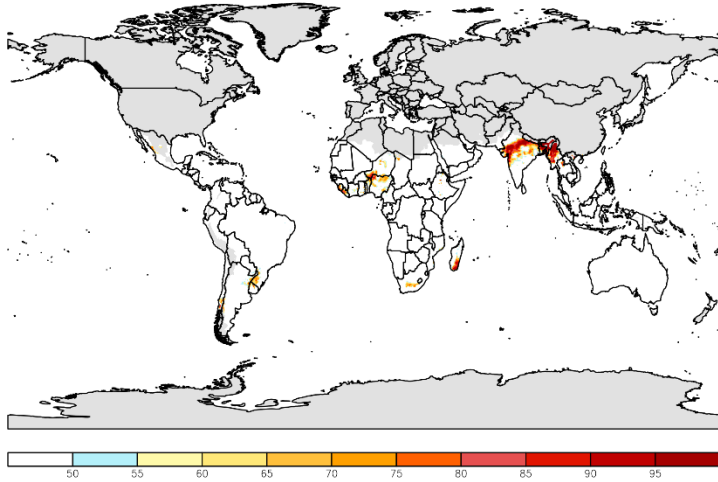


https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week1_prob_hybrid_3_glb_45.png

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

>80th & > 3 Consc. Days

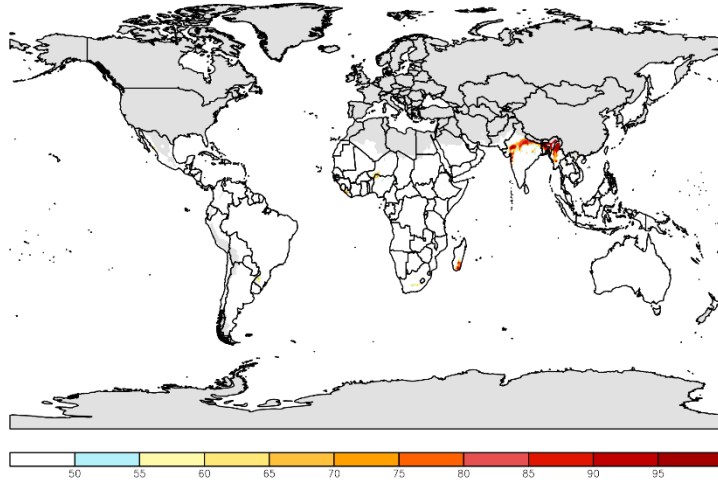
GEFS Week-1 POE Tmax/HI > 80th Pctle. with W. Speed < 5m/sec &
Cloud C. < 50%, > 3 Cons. days, Valid: 01Jan2025 - 07Jan2025



https://ftp.cpc.ncep.noaa.gov/International/extreme_fc/st/gefs_heat/gefs_comb3_week1_glb_prob_80.gif

>90th & > 3 Consc. Days

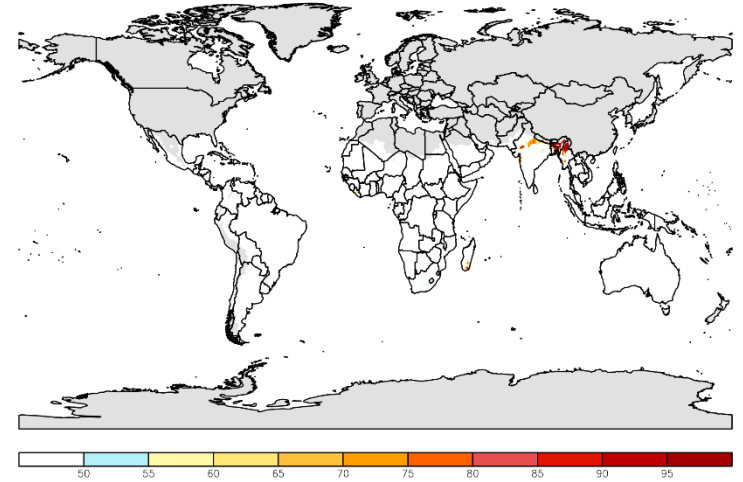
GEFS Week-1 POE Tmax/HI > 90th Pctle. with W. Speed < 5m/sec &
Cloud C. < 50%, > 3 Cons. days, Valid: 01Jan2025 - 07Jan2025



https://ftp.cpc.ncep.noaa.gov/International/extreme_fc/st/gefs_heat/gefs_comb3_week1_glb_prob_90.gif

>95th & > 3 Consc. Days

GEFS Week-1 POE Tmax/HI > 95th Pctle. with W. Speed < 5m/sec &
Cloud C. < 50%, > 3 Cons. days, Valid: 01Jan2025 - 07Jan2025

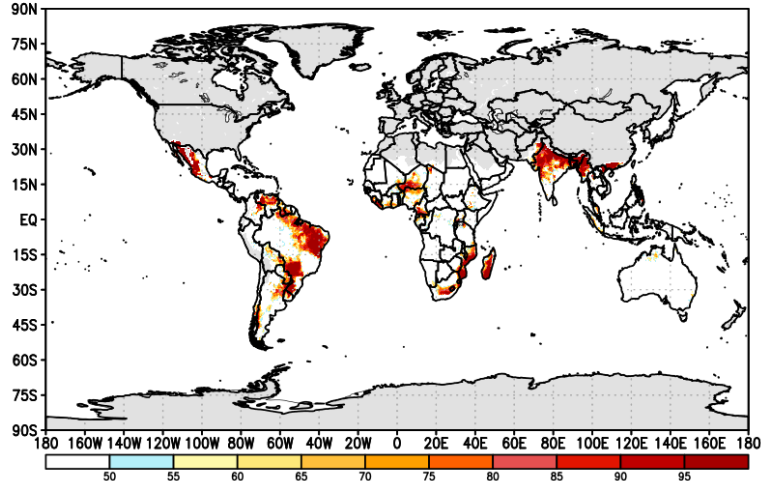


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GEFS Week-1 HI/Tmax Hybrid POE with Respect to Percentile Climo. Thresholds

>80th & > 3 Consc. Days

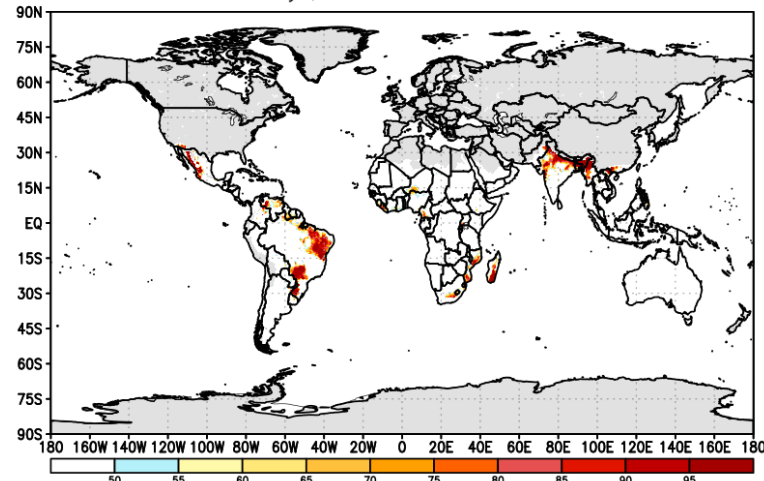
GEFS Week-1 POE Tmax/HI Hybrid > 80th Pctle.
> 3 Cons. days, Valid: 01Jan2025 - 07Jan2025



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>90th & > 3 Consc. Days

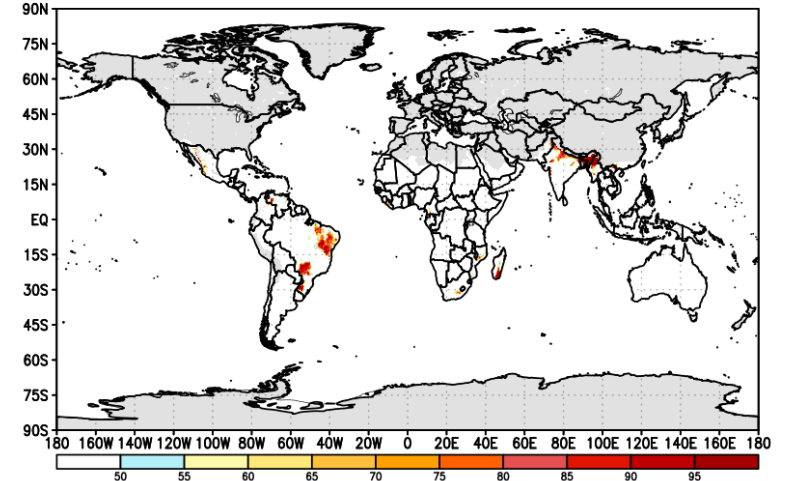
GEFS Week-1 POE Tmax/HI Hybrid > 90th Pctle.
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https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week1_prob_hybrid_3_glb_90.png

>95th & > 3 Consc. Days

GEFS Week-1 POE Tmax/HI Hybrid > 95th Pctle.
> 3 Cons. days, Valid: 01Jan2025 - 07Jan2025

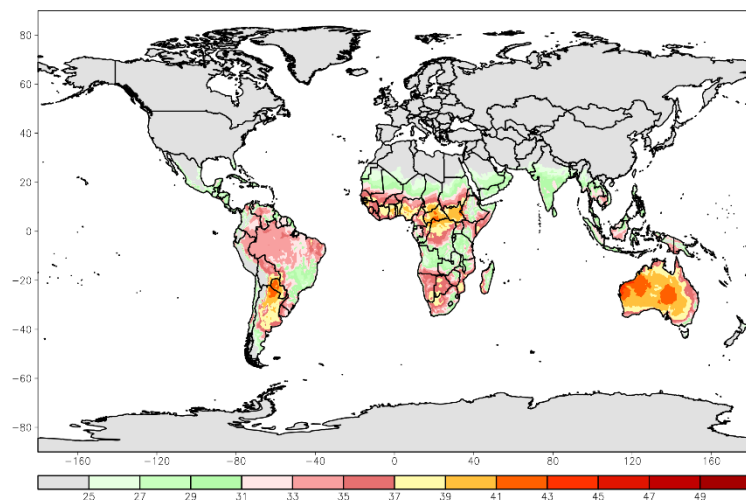


https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week1_prob_hybrid_3_glb_95.png

GEFS Week-1 Tmax Percentile Climatology (°C)

Tmax 80th Percentile

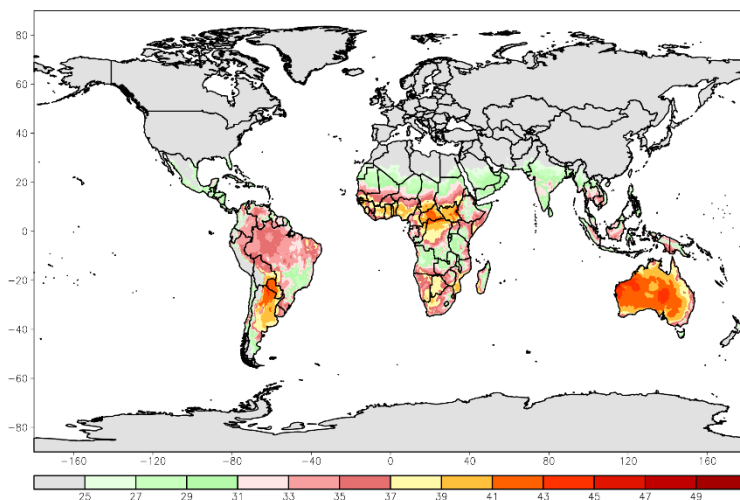
GEFS Week-1 Tmax Percentile Climo (Cels.), 80th Pctle.
Valid: 01Jan - 07Jan



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Tmax 90th Percentile

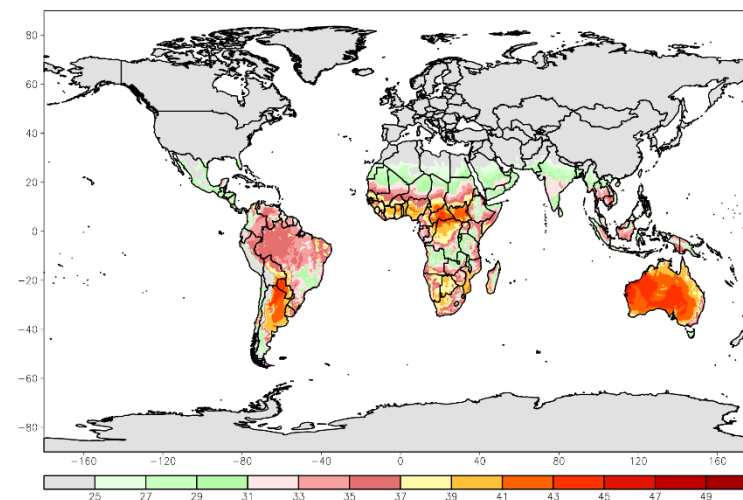
GEFS Week-1 Tmax Percentile Climo (Cels.), 90th Pctle.
Valid: 01Jan - 07Jan



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Tmax 95th Percentile

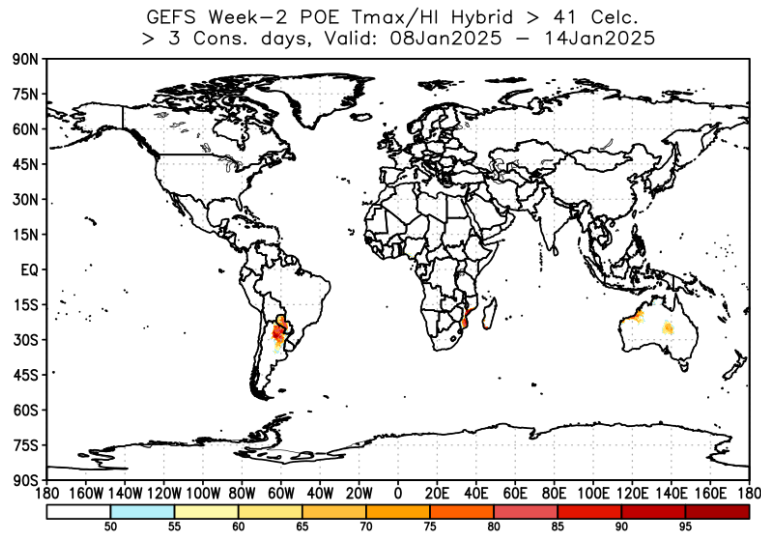
GEFS Week-1 Tmax Percentile Climo (Cels.), 95th Pctle.
Valid: 01Jan - 07Jan



https://ftp.cpc.ncep.noaa.gov/International/extreme_fc/st/gefs_heat/gefs_hybrid_week1_glb_clm_95.gif

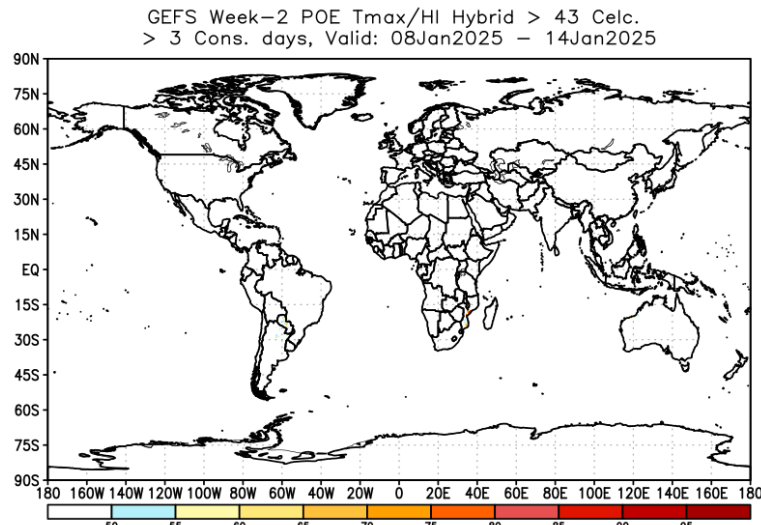
GEFS Week-2 HI/Tmax Hybrid POE with Respect to Fixed Thresholds

>41°C & > 3 Consc. Days



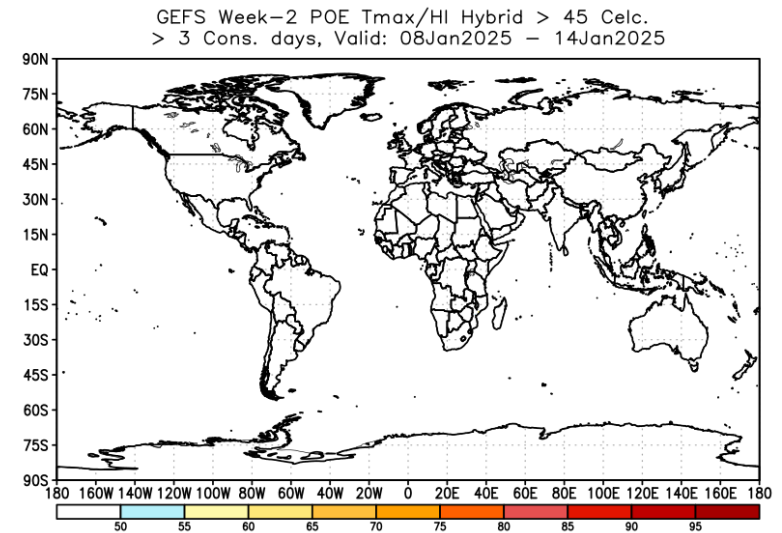
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>43°C & > 3 Consc. Days



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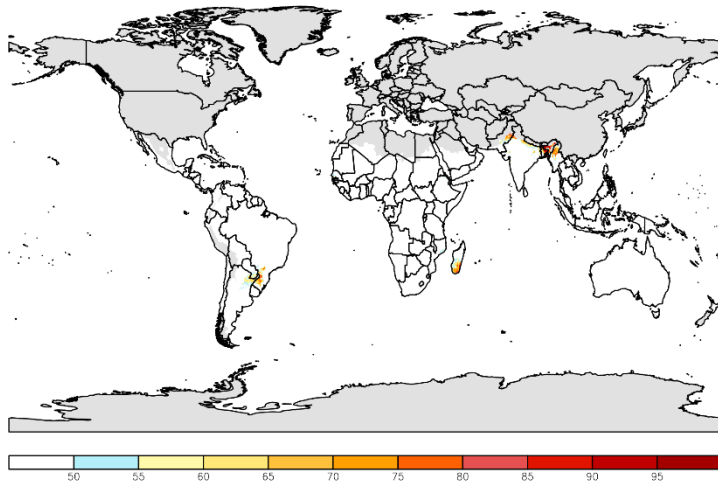


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GEFS Week-2 POE, Tmax/HI with Calmer Wind (< 5m s-1) and less Cloud Cover (< 50%)

>80th & > 3 Consc. Days

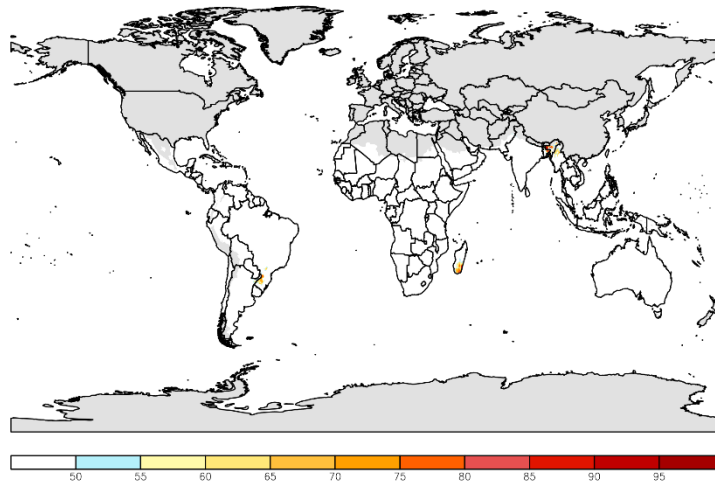
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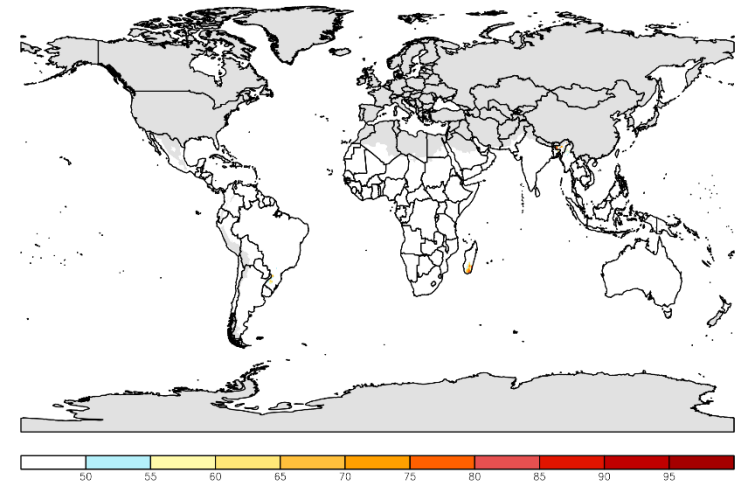
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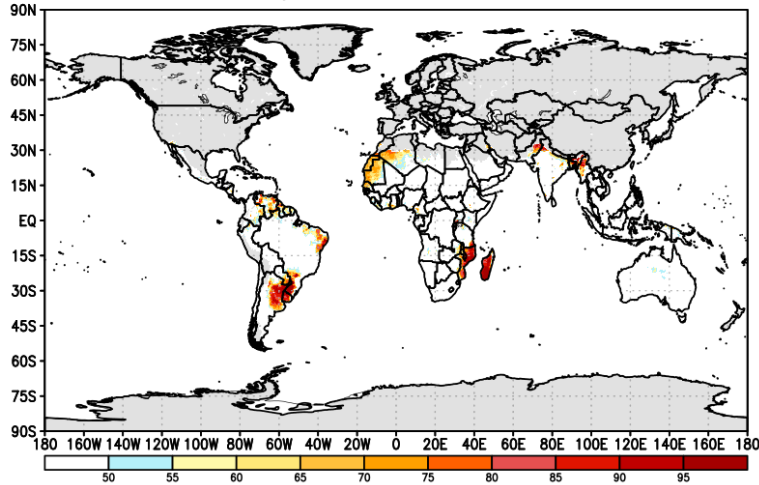


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GEFS Week-2 HI/Tmax Hybrid POE with Respect to Percentile Climo. Thresholds

>80th & > 3 Consc. Days

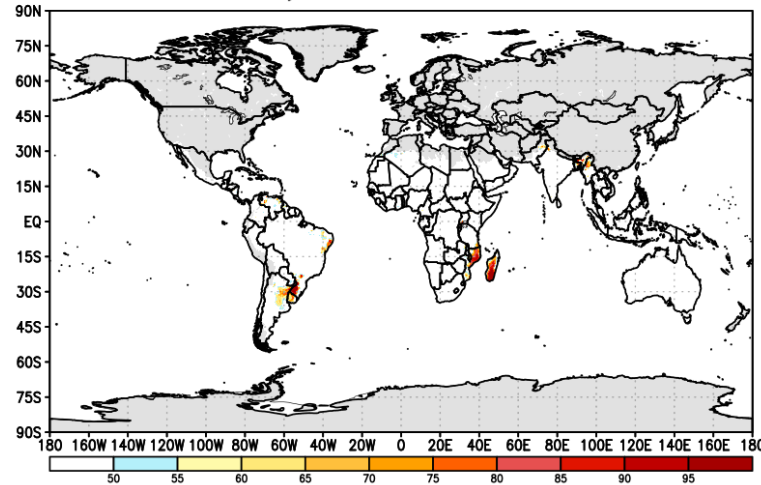
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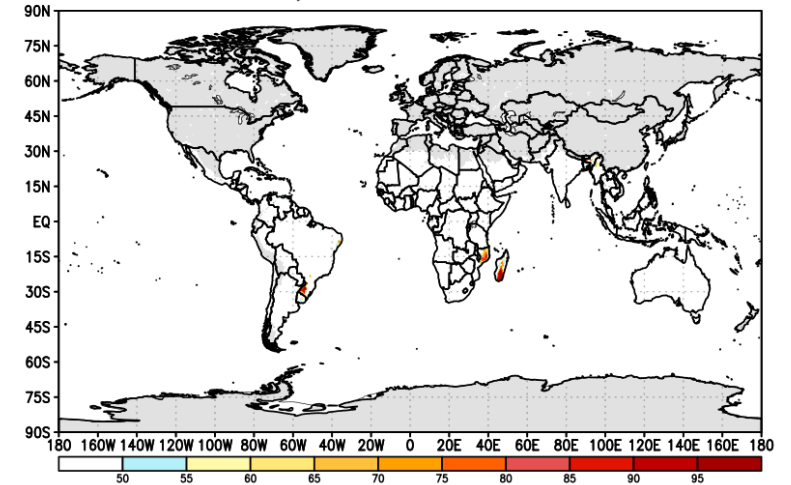
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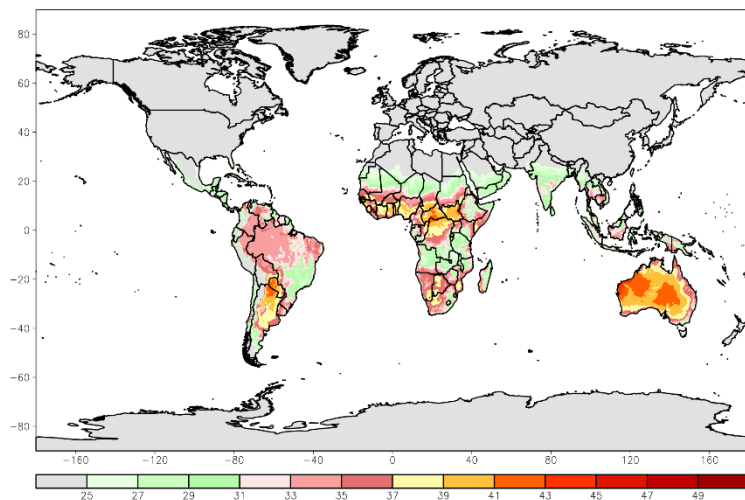


https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week2_prob_hybrid_3_glb_95.png

GEFS Week-2 Tmax Percentile Climatology (°C)

Tmax 80th Percentile

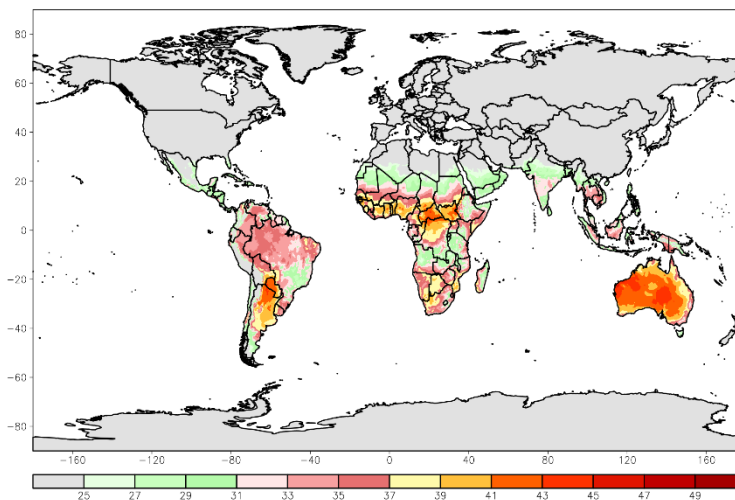
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Valid: 08Jan - 14Jan



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Tmax 90th Percentile

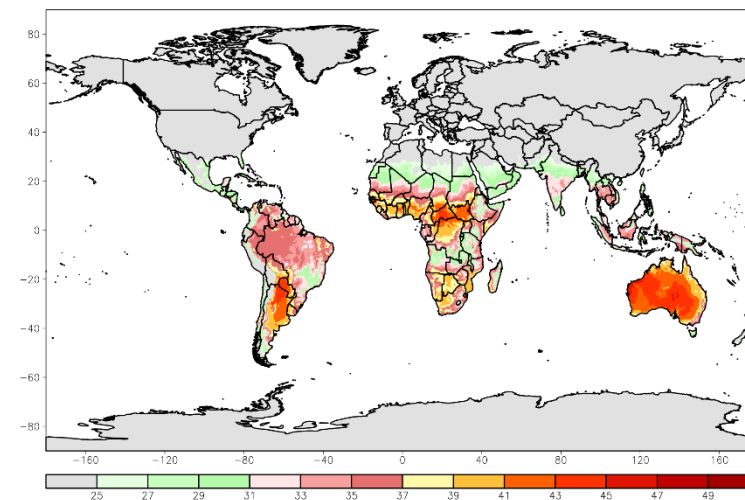
GEFS Week-2 Tmax Percentile Climo (Cels.), 90th Pctle.
Valid: 08Jan - 14Jan



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Tmax 95th Percentile

GEFS Week-2 Tmax Percentile Climo (Cels.), 95th Pctle.
Valid: 08Jan - 14Jan

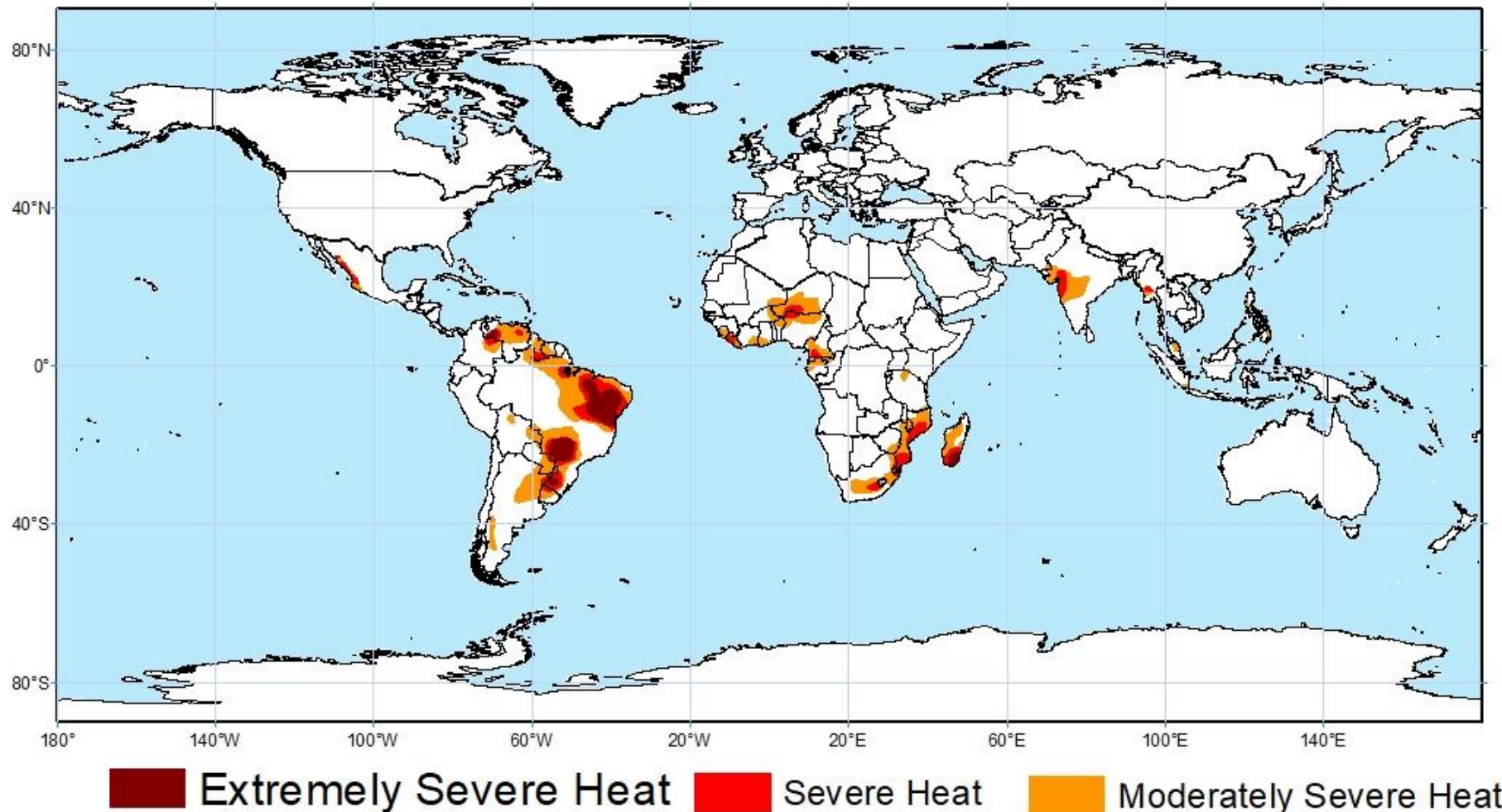


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Week-1 Experimental Global Heat Hazard Outlook

Issued: 31 Dec 2024

Valid: 01 - 07 Jan 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
High Heat: Tmax/HI are among the 20% highest values over the 30-year period 1991-2020

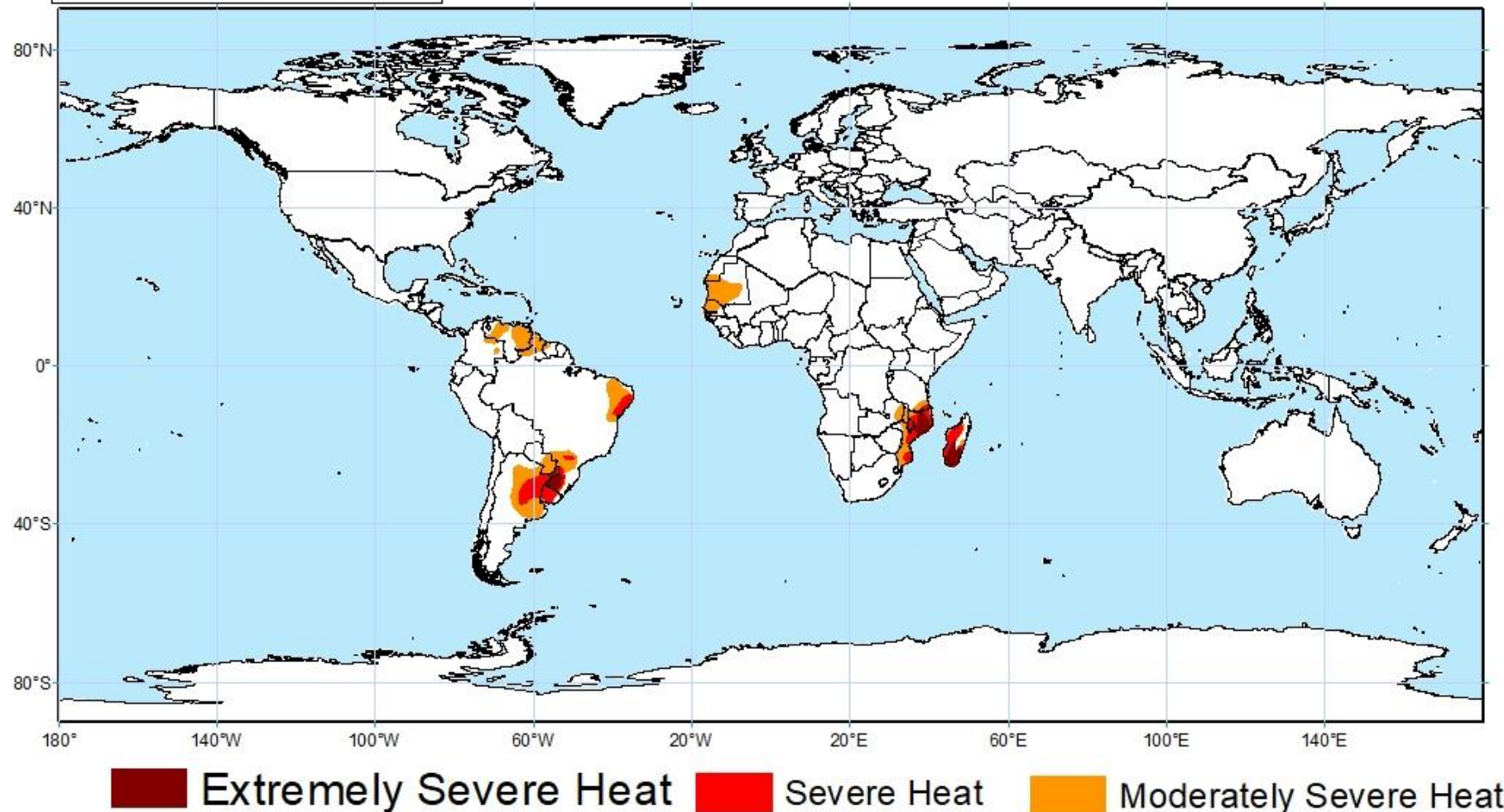
Note: For the Sahel region in Africa: Tmax/HI hybrid > 41°C for at least 3 consecutive days is also considered as High Heat

- There is an increased chance of heat across South America, including Brazil, Guyana, Venezuela, Eastern Colombia, and parts of Argentina; Southern Africa, including Mozambique, South Africa and Madagascar, as well as regions of South Asia.
- Additionally, there is an elevated likelihood of extreme heat in specific areas within eastern South America, and Southern Africa particularly in Mozambique and Madagascar

Week-2 Experimental Global Heat Hazard Outlook

Valid: 08 Jan - 14 Jan 2025

Issued 31 Dec 2024



- There is an increased chance for *Moderately Severe Heat* over South America including Brazil, Venezuela, Argentina and parts of Southern Africa including Mozambique, and, Madagascar.

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

High 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 High Heat