

Global Heat Hazards Outlooks

Date of Issuance: 25 Feb 2025

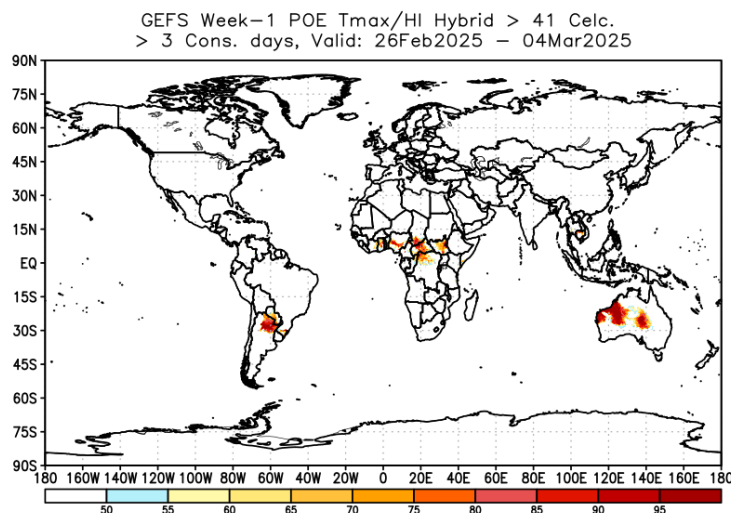
Week-1 Valid: 26 Feb 2025 – 04 Mar 2025

Week-2 Valid: 05 Mar 2025 – 11 Mar 2025

Numerical Weather Prediction Model: NCEP GEFS

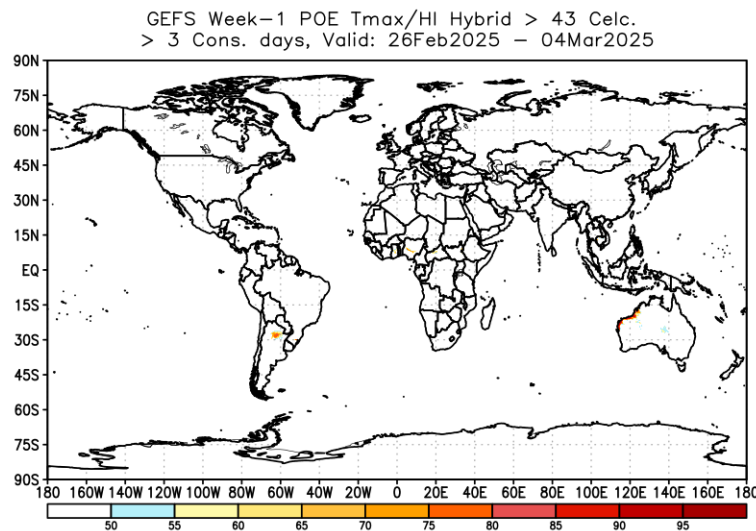
GEFS Week-1 HI/Tmax Hybrid POE with Respect to Fixed Thresholds

>41°C & > 3 Consc. Days



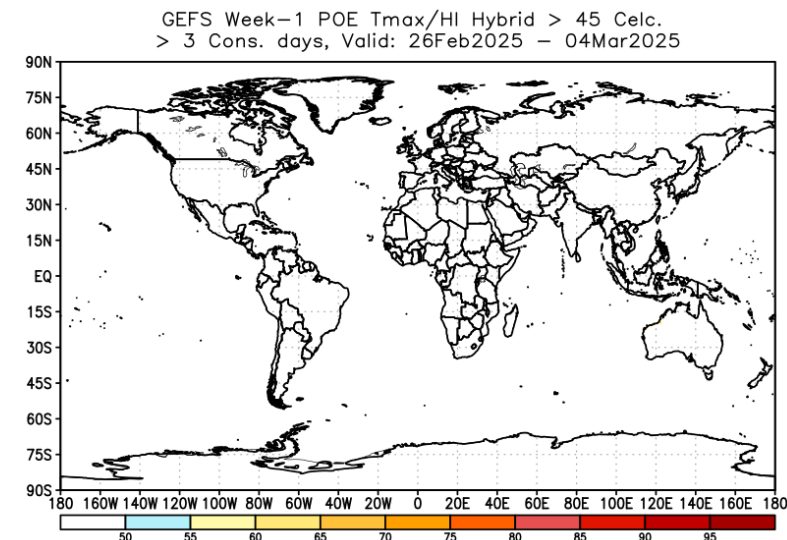
https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week1_prob_hybrid_3_glb_41.png

>43°C & > 3 Consc. Days



https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week1_prob_hybrid_3_glb_43.png

>45°C & > 3 Consc. Days



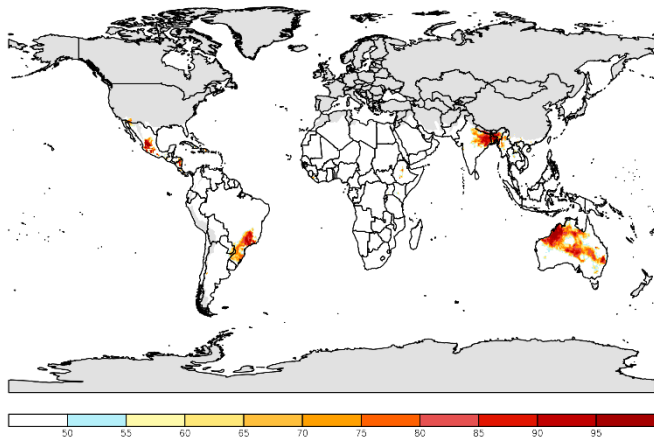
https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week1_prob_hybrid_3_glb_45.png

- Probabilities exceed 75% for the hybrid index to exceed 41°C for at least three consecutive days in southern Paraguay, northern Argentina, and central South Sudan, parts of Central African Republic, southern Chad, and northwestern Democratic Republic of Congo, and northwestern and central Australia. No significant signals at the 90th and 95th percentiles.

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

>80th & > 3 Consc. Days

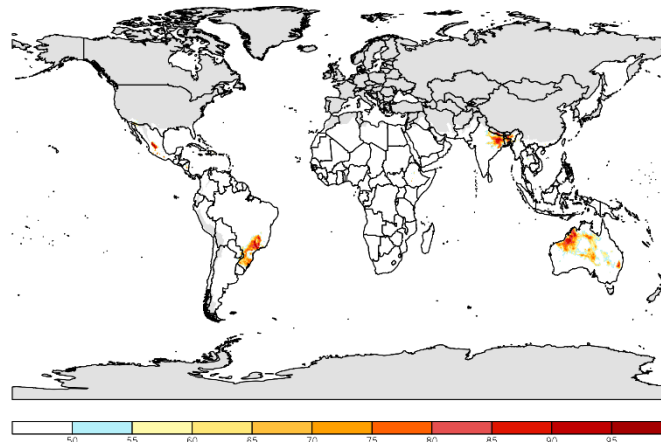
GEFS Week-1 POE Tmax/HI > 80th Pctle. with W. Speed < 5m/sec &
Cloud C. < 50%, > 3 Cons. days, Valid: 26Feb2025 - 04Mar2025



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

>90th & > 3 Consc. Days

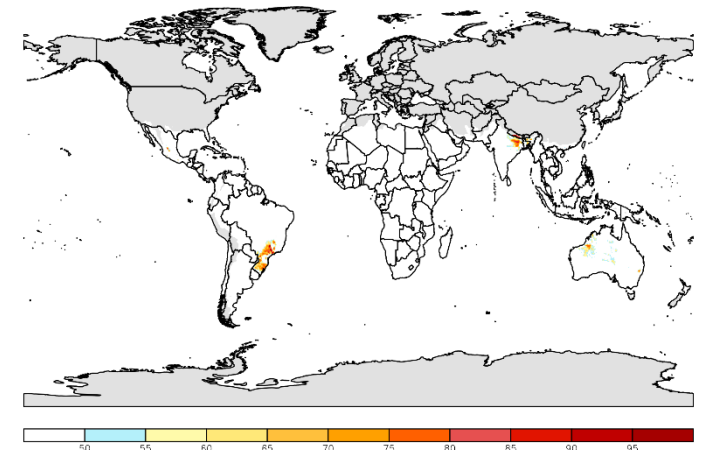
GEFS Week-1 POE Tmax/HI > 90th Pctle. with W. Speed < 5m/sec &
Cloud C. < 50%, > 3 Cons. days, Valid: 26Feb2025 - 04Mar2025



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>95th & > 3 Consc. Days

GEFS Week-1 POE Tmax/HI > 95th Pctle. with W. Speed < 5m/sec &
Cloud C. < 50%, > 3 Cons. days, Valid: 26Feb2025 - 04Mar2025

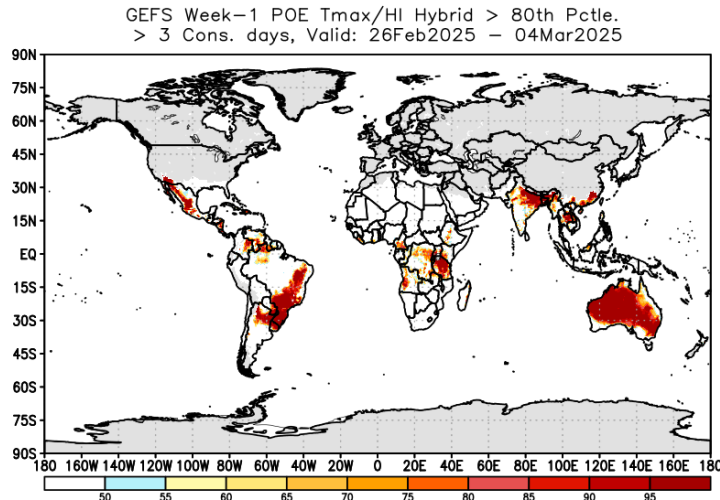


https://ftp.cpc.ncep.noaa.gov/International/extreme_fc/st/gefs_heat/gefs_comb3_week1_glb_prob_95.gif

- Probabilities exceed 70% for the hybrid index with calmer wind and less cloud cover to exceed the 90th percentile for at least three consecutive days in southern Brazil, northeastern India, and isolated places in northwestern Australia.

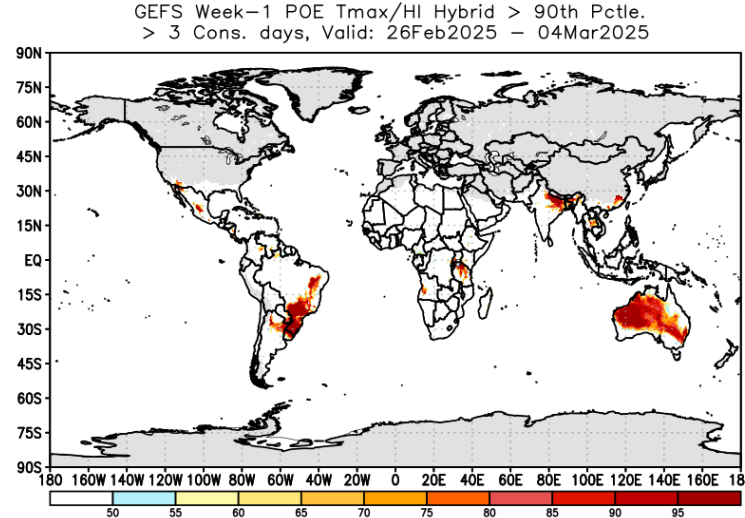
GEFS Week-1 HI/Tmax Hybrid POE with Respect to Percentile Climo. Thresholds

>80th & > 3 Consc. Days



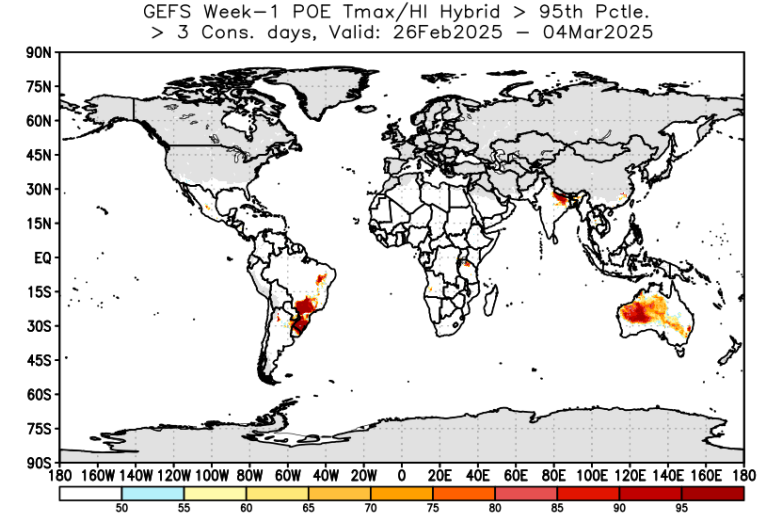
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>90th & > 3 Consc. Days



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>95th & > 3 Consc. Days



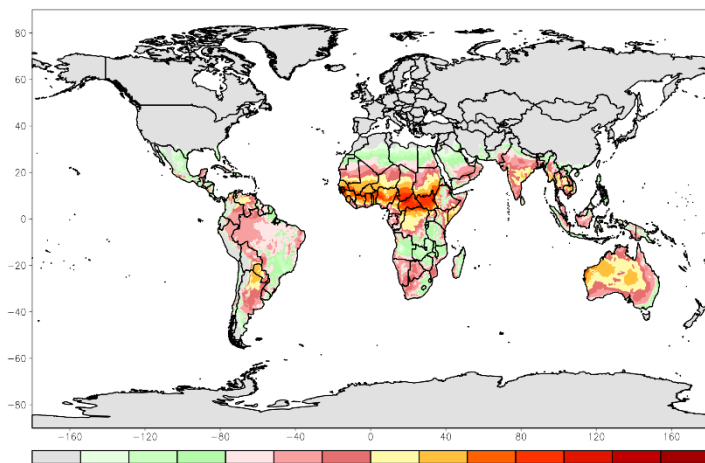
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- Probabilities exceed 90% for the hybrid index to exceed the 95th percentile for at least three consecutive days in southern and eastern Brazil, northern Tanzania, northeastern India, and western Australia.

GEFS Week-1 Tmax Percentile Climatology (°C)

Tmax 80th Percentile

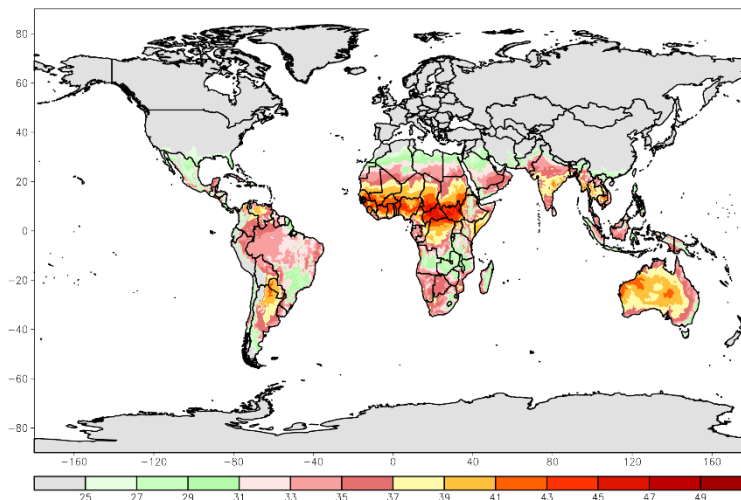
GEFS Week-1 Tmax Percentile Climo (Cels.), 80th Pctle.
Valid: 26Feb - 04Mar



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Tmax 90th Percentile

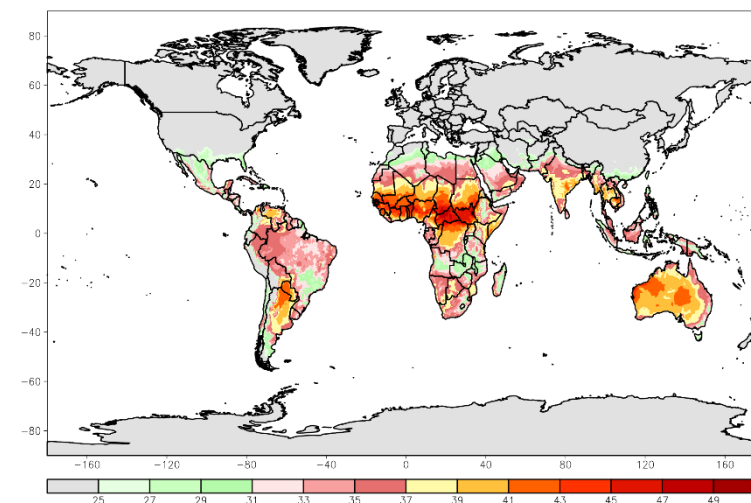
GEFS Week-1 Tmax Percentile Climo (Cels.), 90th Pctle.
Valid: 26Feb - 04Mar



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Tmax 95th Percentile

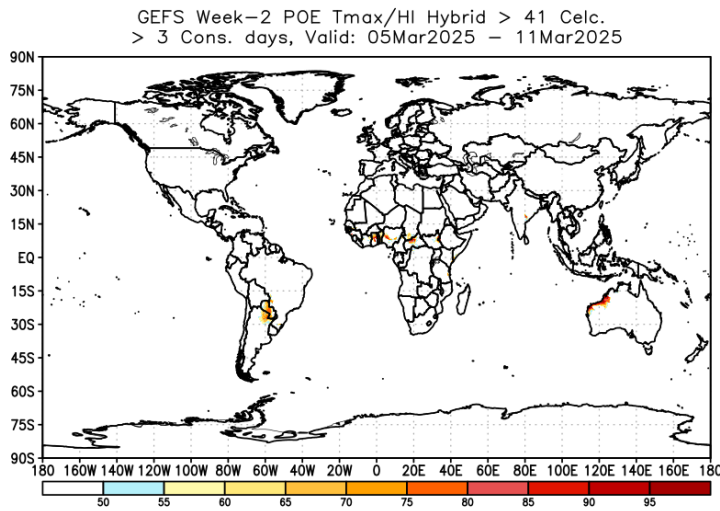
GEFS Week-1 Tmax Percentile Climo (Cels.), 95th Pctle.
Valid: 26Feb - 04Mar



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

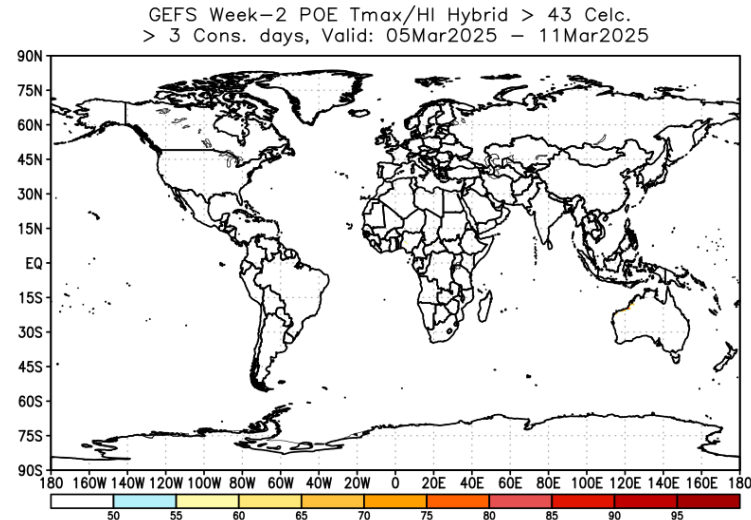
GEFS Week-2 HI/Tmax Hybrid POE with Respect to Fixed Thresholds

>41°C & > 3 Consc. Days



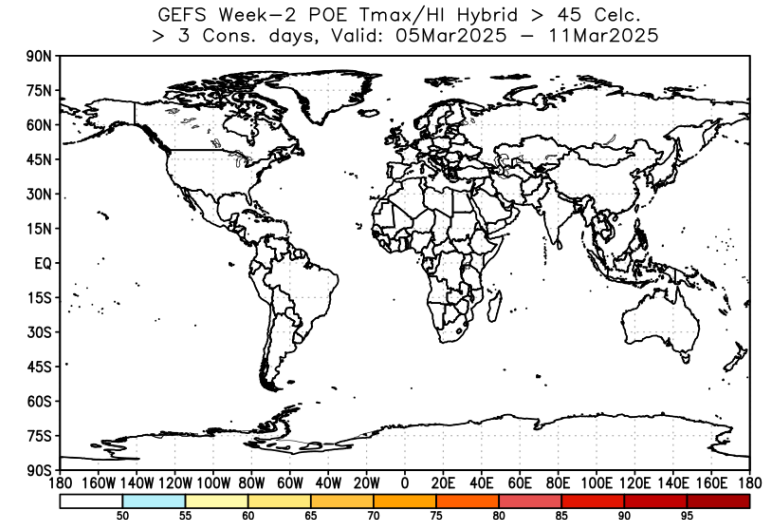
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>43°C & > 3 Consc. Days



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>45°C & > 3 Consc. Days



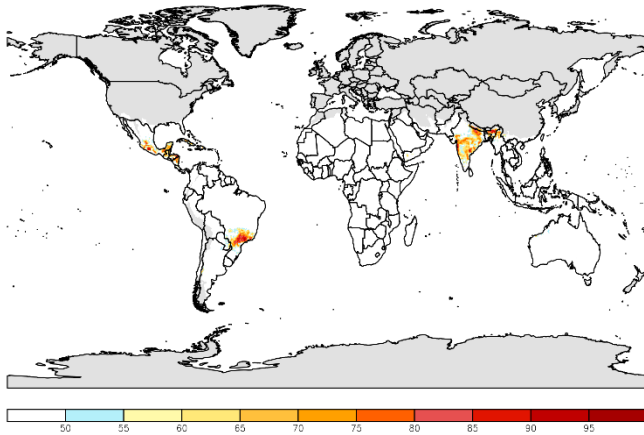
https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week2_prob_hybrid_3_glb_45.png

- Probabilities for hybrid index to exceed 41°C for at least three consecutive days are low.

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

>80th & > 3 Consc. Days

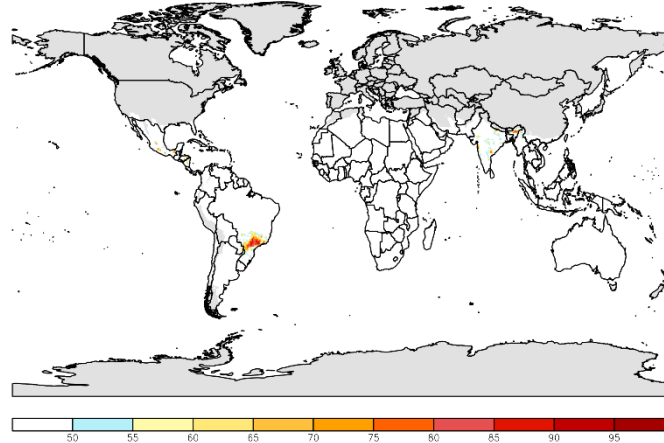
GEFS Week-2 POE Tmax/HI > 80th Pctle. with W. Speed < 5m/sec &
Cloud C. < 50%, > 3 Cons. days, Valid: 05Mar2025 - 11Mar2025



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>90th & > 3 Consc. Days

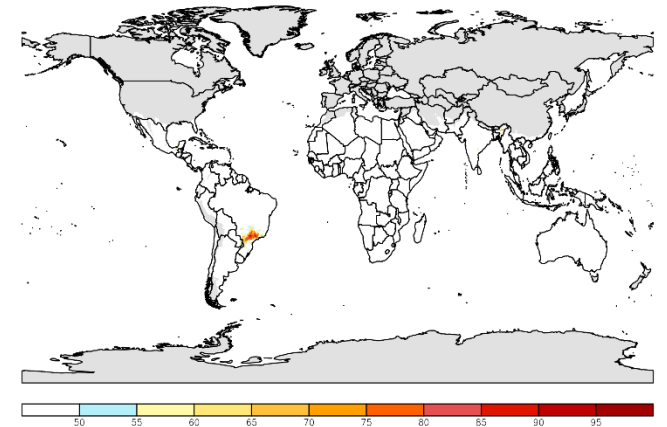
GEFS Week-2 POE Tmax/HI > 90th Pctle. with W. Speed < 5m/sec &
Cloud C. < 50%, > 3 Cons. days, Valid: 05Mar2025 - 11Mar2025



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>95th & > 3 Consc. Days

GEFS Week-2 POE Tmax/HI > 95th Pctle. with W. Speed < 5m/sec &
Cloud C. < 50%, > 3 Cons. days, Valid: 05Mar2025 - 11Mar2025



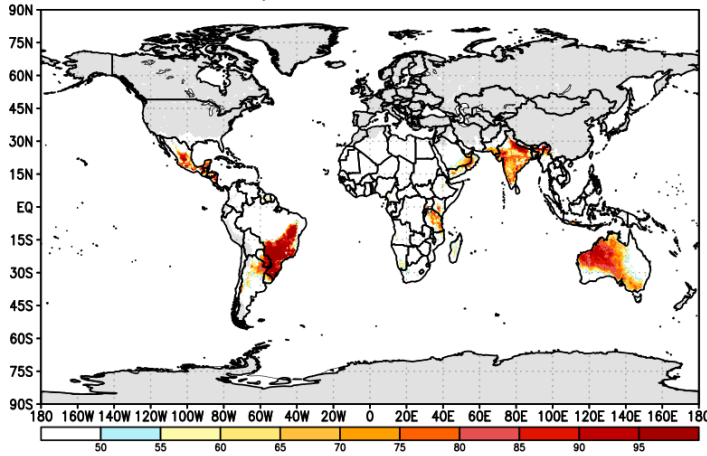
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- Probabilities are moderate (< 70%) for the hybrid index with calmer wind and less cloud cover to exceed the 80th percentile for at least three consecutive days in southeastern Brazil, northeastern India, and Bangladesh.

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

>80th & > 3 Consc. Days

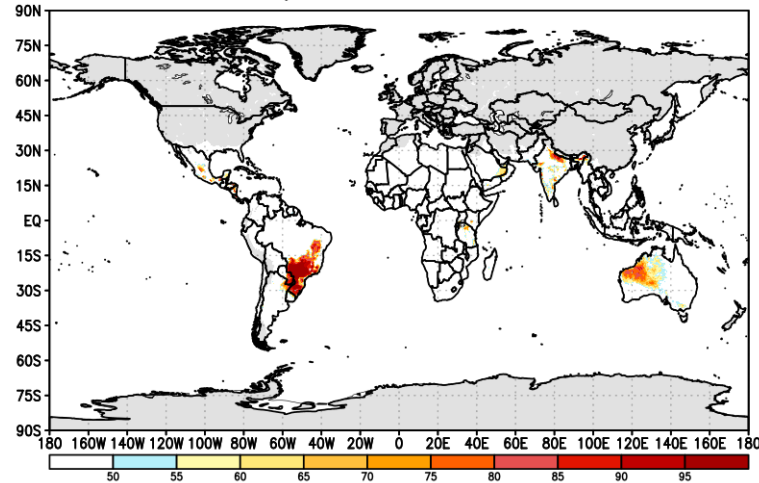
GEFS Week-2 POE Tmax/HI Hybrid > 80th Pctle.
> 3 Cons. days, Valid: 05Mar2025 - 11Mar2025



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>90th & > 3 Consc. Days

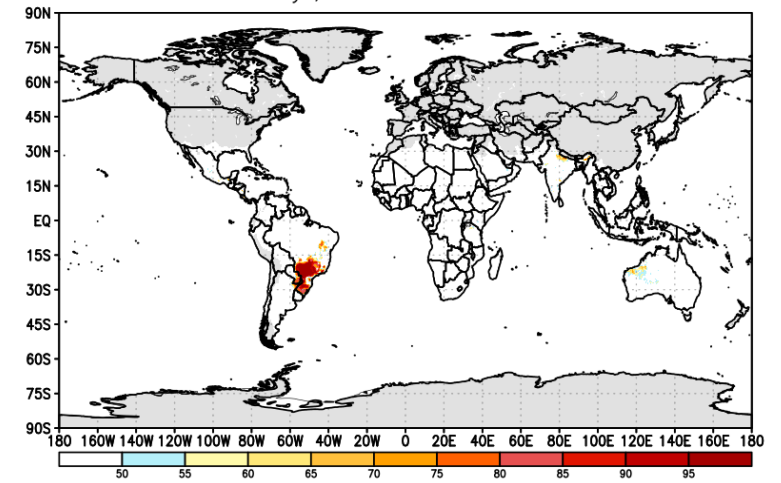
GEFS Week-2 POE Tmax/HI Hybrid > 90th Pctle.
> 3 Cons. days, Valid: 05Mar2025 - 11Mar2025



https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week2_prob_hybrid_3_glb_90.png

>95th & > 3 Consc. Days

GEFS Week-2 POE Tmax/HI Hybrid > 95th Pctle.
> 3 Cons. days, Valid: 05Mar2025 - 11Mar2025



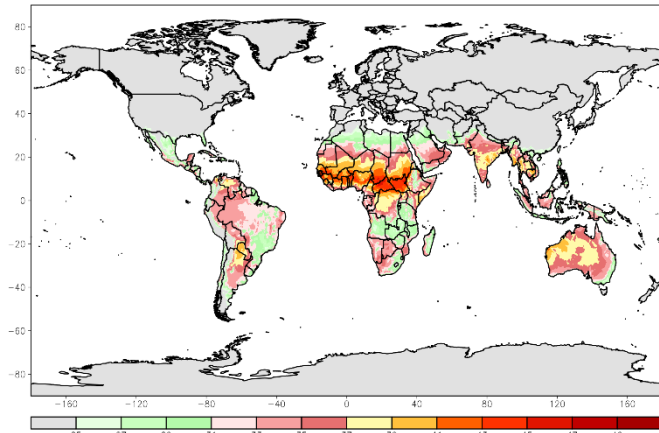
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- There is an increased chance (> 80%) for the hybrid index to exceed the 95th percentile for at least three consecutive days in southern Brazil.

GEFS Week-2 Tmax Percentile Climatology (°C)

Tmax 80th Percentile

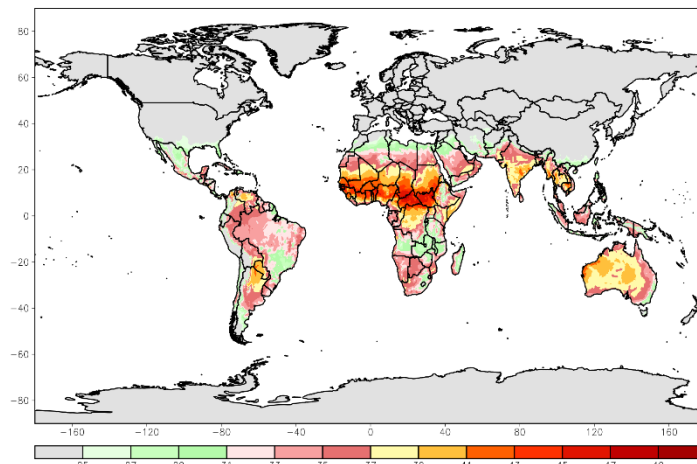
GEFS Week-2 Tmax Percentile Climo (Cels.), 80th Pctle.
Valid: 05Mar - 11Mar



https://ftp.cpc.ncep.noaa.gov/International/extreme_fc/st/gefs_heat/gefs_hybrid_week2_glb_clm_80.gif

Tmax 90th Percentile

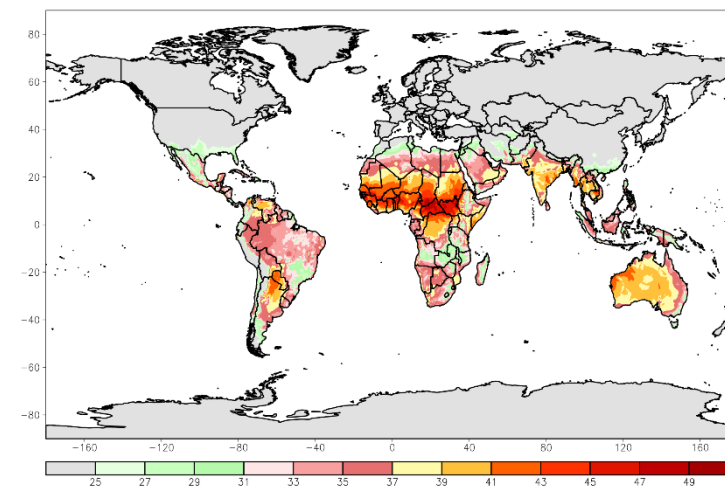
GEFS Week-2 Tmax Percentile Climo (Cels.), 90th Pctle.
Valid: 05Mar - 11Mar



https://ftp.cpc.ncep.noaa.gov/International/extreme_fc/st/gefs_heat/gefs_hybrid_week2_glb_clm_90.gif

Tmax 95th Percentile

GEFS Week-2 Tmax Percentile Climo (Cels.), 95th Pctle.
Valid: 05Mar - 11Mar

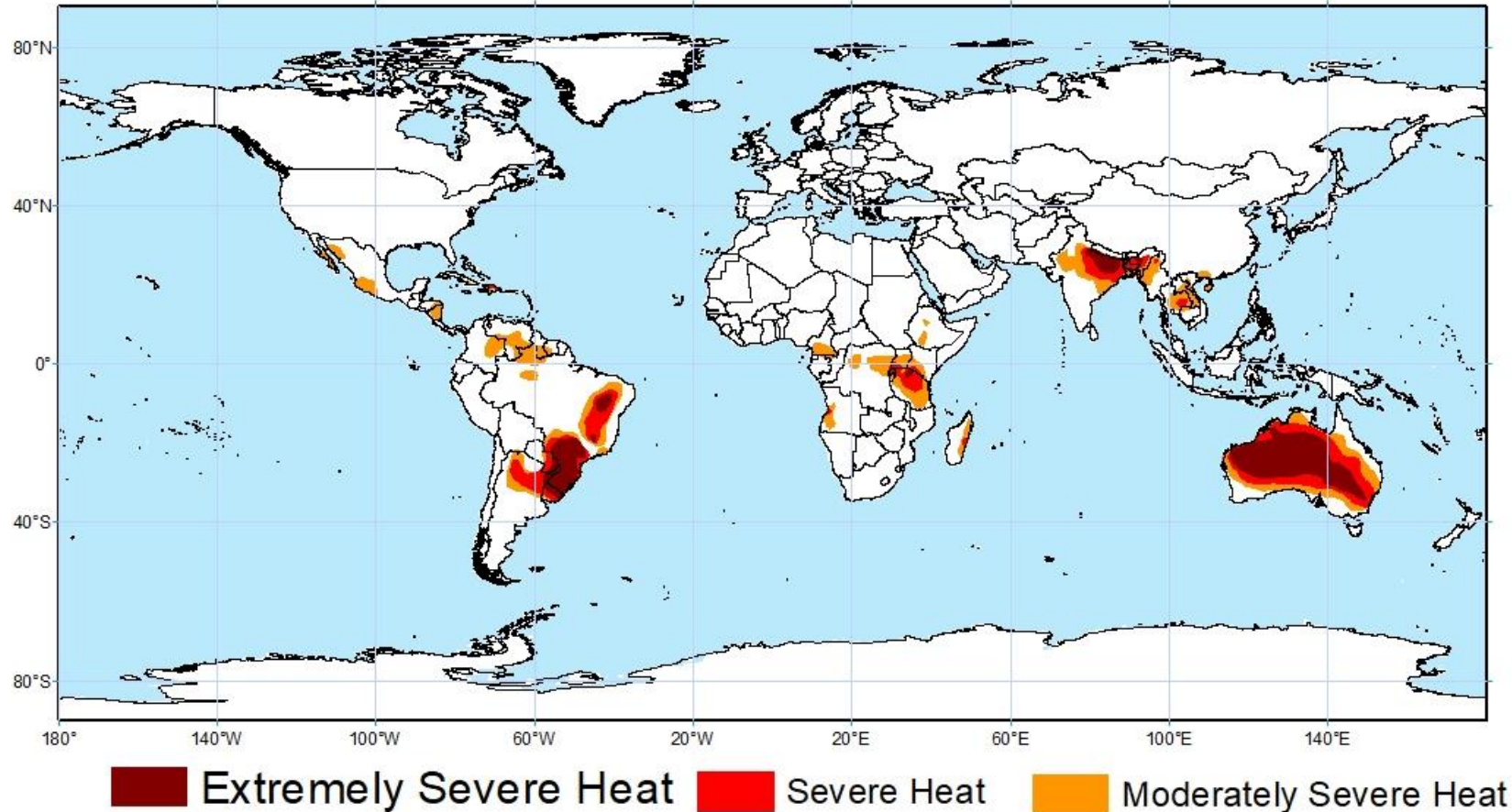


https://ftp.cpc.ncep.noaa.gov/International/extreme_fc/st/gefs_heat/gefs_hybrid_week2_glb_clm_95.gif

Week-1 Experimental Global Heat Hazard Outlook

Issued: 25 Feb 2025

Valid: 26 Feb 2025 - 04 Mar 2025



- There is an increased chance of *moderately severe heat* in far western and northeastern Mexico, southern Venezuela, eastern Colombia, northern Argentina, southern and eastern Brazil, Uruguay, and far southeastern Paraguay, Tanzania, Eastern DRC, Southern Uganda, and isolated areas in eastern Madagascar, eastern India, Bangladesh, Myanmar, and Australia.
- There is an increased chance of *extremely severe heat* in northeastern Uruguay, Southern and eastern Brazil and far eastern India, and Australia.

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

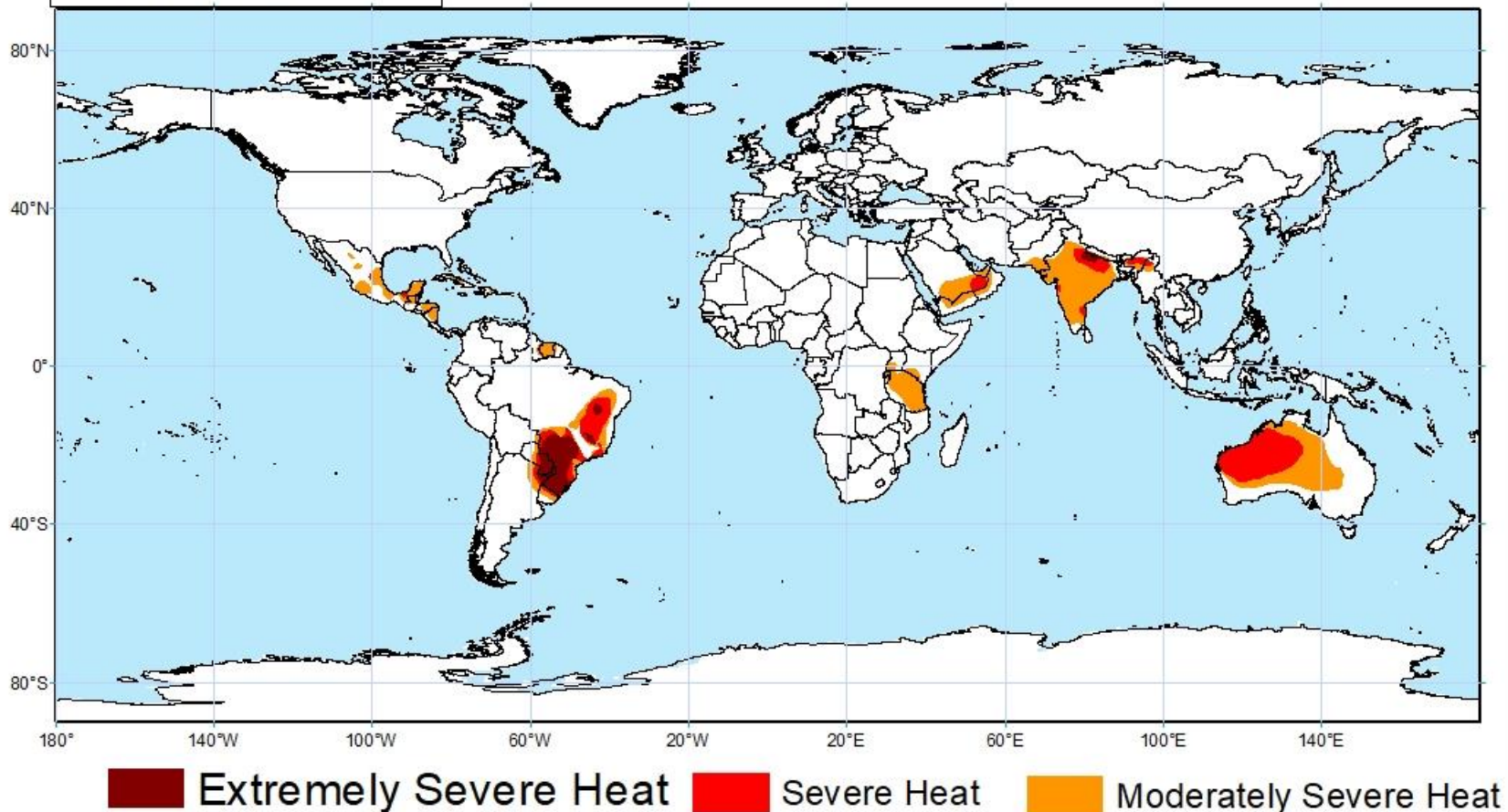
Moderately Severe Heat: Tmax/HI are among the 20% highest values over the 30-year period 1991-2020

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: 05 Mar 2025 - 11 Mar 2025

Issued 25 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 western and southeastern Mexico, northern Argentina, Paraguay, Uruguay, southern and northeastern Brazil, eastern Niger, isolated areas in southern Uganda and Kenya, Tanzania, Saudi Arabia, northwestern Yemen and northeastern India, Bangladesh, Myanmar, and Australia.
- There is an increased chance for *extremely severe heat* over Uruguay, isolated areas in southwestern 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**