

Global Heat Hazards Outlooks

Date of Issuance: 29 Apr 2025

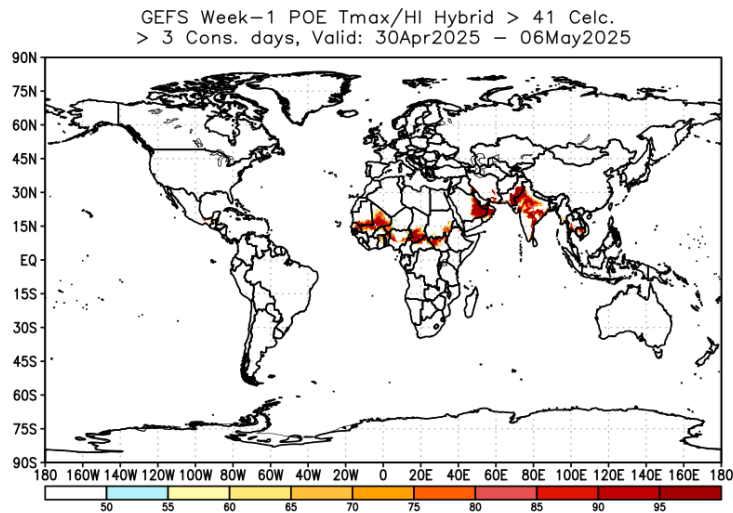
Week-1 Valid: 30 Apr 2025 – 06 May 2025

Week-2 Valid: 07 May 2025 – 13 May 2025

Numerical Weather Prediction Model: NCEP GEFS

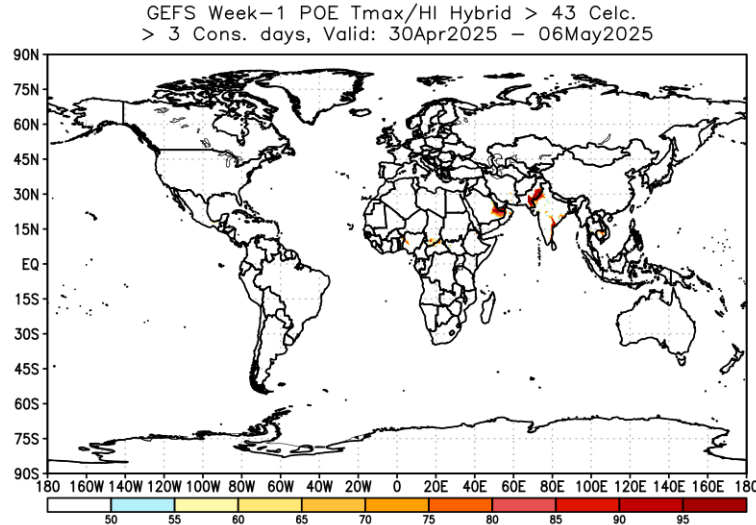
GEFS Week-1 HI/Tmax Hybrid POE with Respect to Fixed Thresholds

>41°C & > 3 Consc. Days



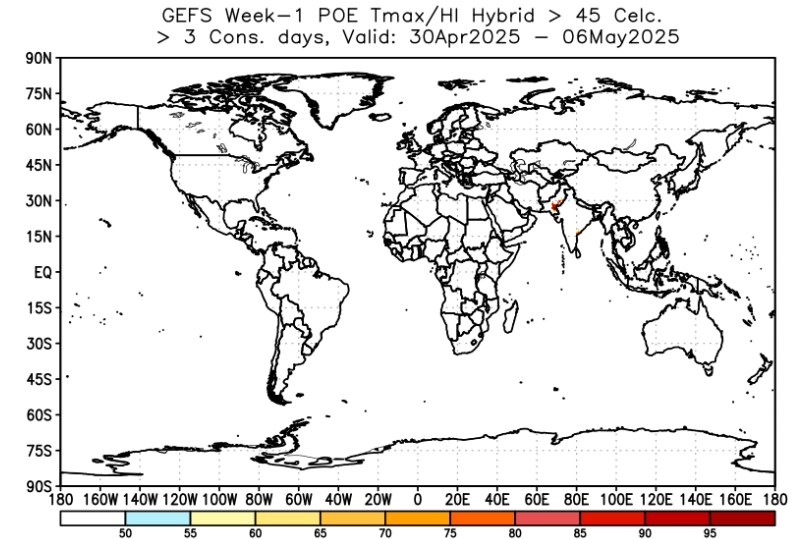
https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week1_prob_hybrid_3_glb_41.png

>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



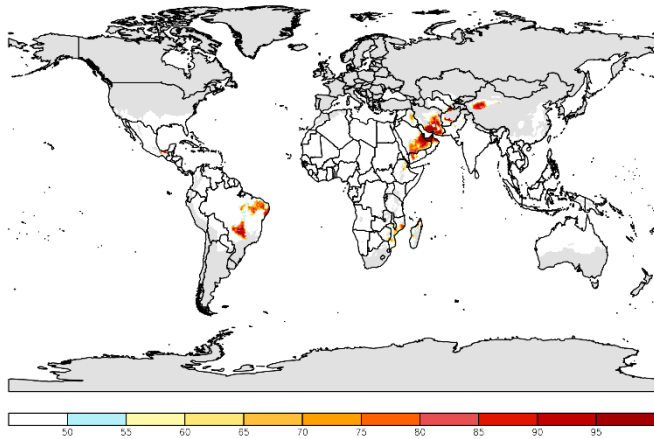
https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week1_prob_hybrid_3_glb_45.png

- Probabilities exceed 85% for the hybrid index to exceed 41°C for at least three consecutive days in Senegal, Mauritania, Mali, Nigeria, Southern Chad, Oman, Pakistan, Afghanistan and northeastern India.

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

>80th & > 3 Consc. Days

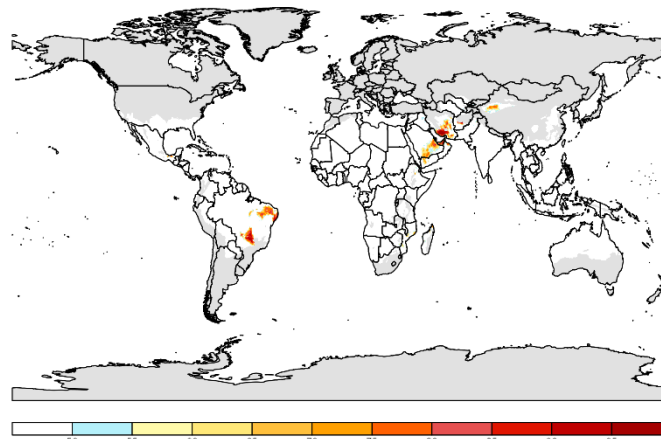
GEFS Week-1 POE Tmax/HI > 80th Pctle. with W. Speed < 5m/sec &
Cloud C. < 50%, > 3 Cons. days, Valid: 30Apr2025 - 06May2025



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

>90th & > 3 Consc. Days

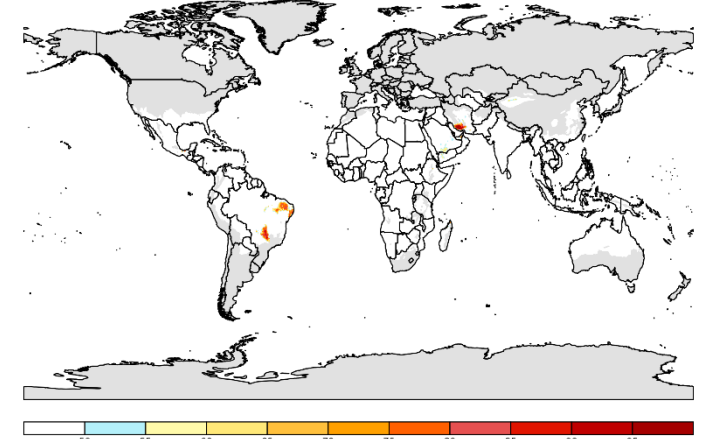
GEFS Week-1 POE Tmax/HI > 90th Pctle. with W. Speed < 5m/sec &
Cloud C. < 50%, > 3 Cons. days, Valid: 30Apr2025 - 06May2025



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: 30Apr2025 - 06May2025

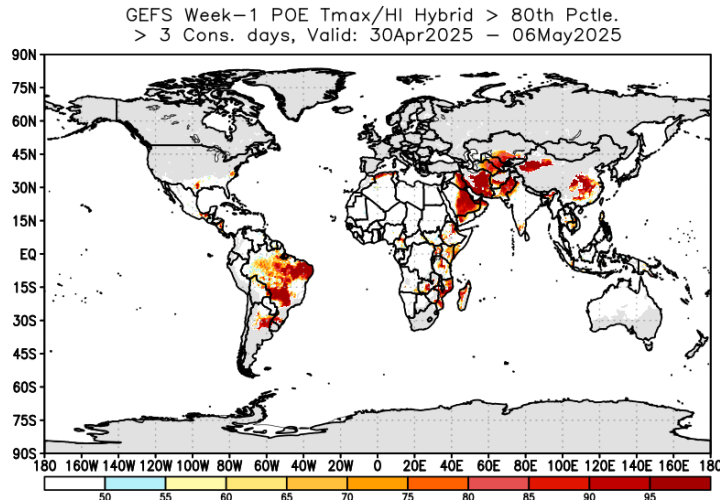


https://ftp.cpc.ncep.noaa.gov/International/extreme_fc/st/gefs_heat/gefs_comb3_week1_glb_prob_95.gif

- Probabilities exceed 70% for the hybrid index with calmer wind and less cloud cover to exceed the 80th percentile for at least three consecutive days isolated places of Brazil, Central Mozambique, Saudi Arabia, Yemen, Oman, and Iran.

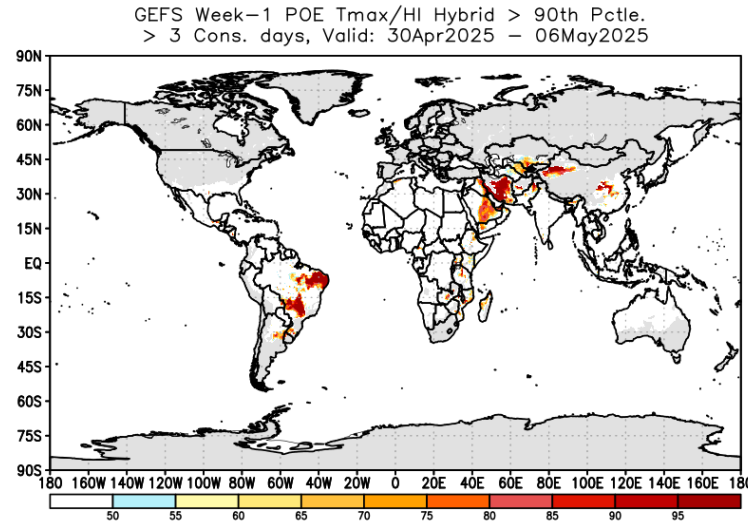
GEFS Week-1 HI/Tmax Hybrid POE with Respect to Percentile Climo. Thresholds

>80th & > 3 Consc. Days



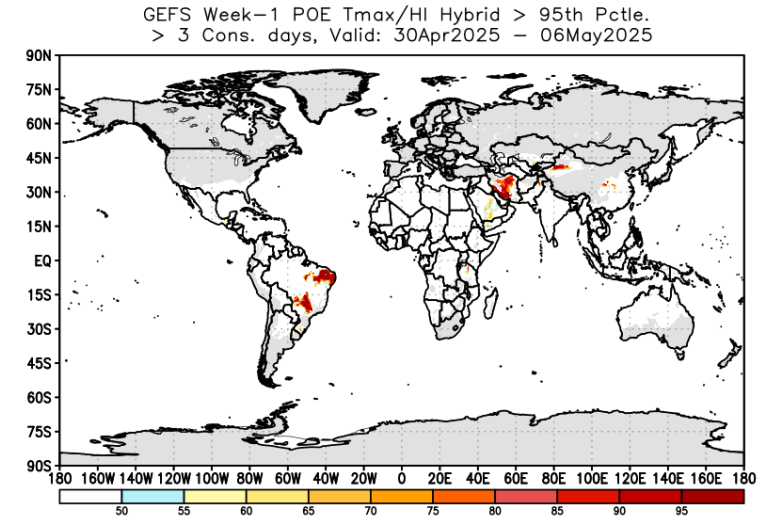
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>90th & > 3 Consc. Days



https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week1_prob_hybrid_3_glb_90.png

>95th & > 3 Consc. Days



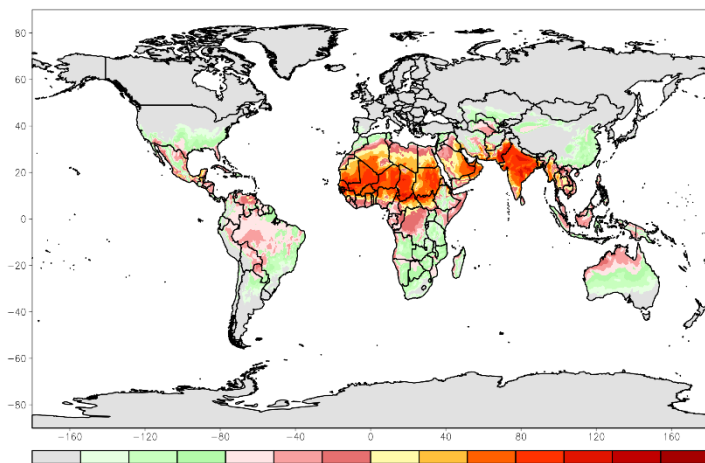
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- Probabilities exceed 90% for the hybrid index to exceed the 80th percentile for at least three consecutive days in in eastern and western part of Brazil, southern Mexico, Nicaragua, northeastern Bolivia, northern Argentina, northeastern Morocco, northern Algeria, central Cameroon, northern and central part of Ethiopia, Uganda, Kenya, southern Somalia, Tanzania, Zambia, western Madagascar, Mozambique, southern Malawi, Saudi Arabia, northern Yemen, Iran, Uzbekistan, Turkmenistan, southern Afghanistan, and Pakistan.

GEFS Week-1 Tmax Percentile Climatology (°C)

Tmax 80th Percentile

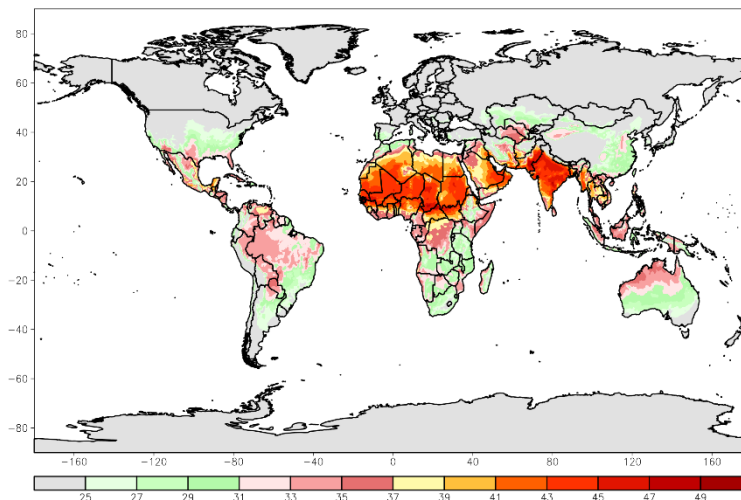
GEFS Week-1 Tmax Percentile Climo (Cels.), 80th Pctle.
Valid: 30Apr - 06May



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Tmax 90th Percentile

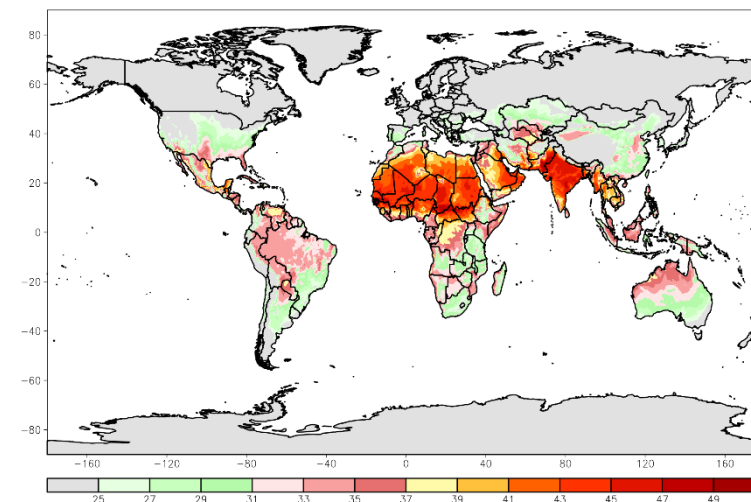
GEFS Week-1 Tmax Percentile Climo (Cels.), 90th Pctle.
Valid: 30Apr - 06May



https://ftp.cpc.ncep.noaa.gov/International/extreme_fc/st/gefs_heat/gefs_hybrid_week1_glb_clm_90.gif

Tmax 95th Percentile

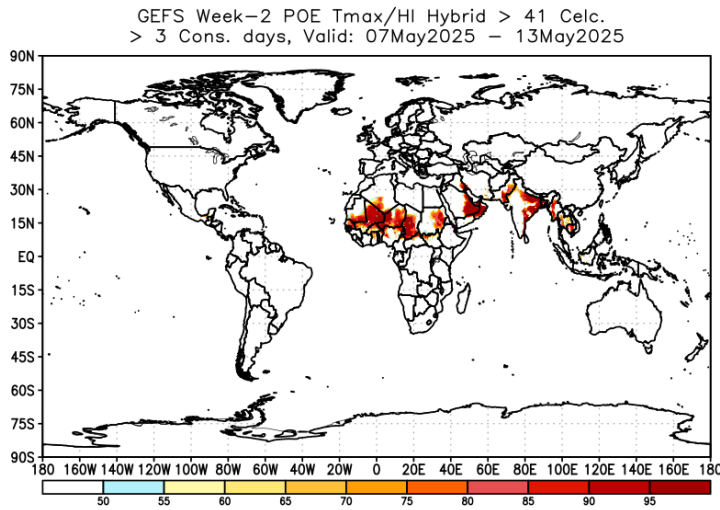
GEFS Week-1 Tmax Percentile Climo (Cels.), 95th Pctle.
Valid: 30Apr - 06May



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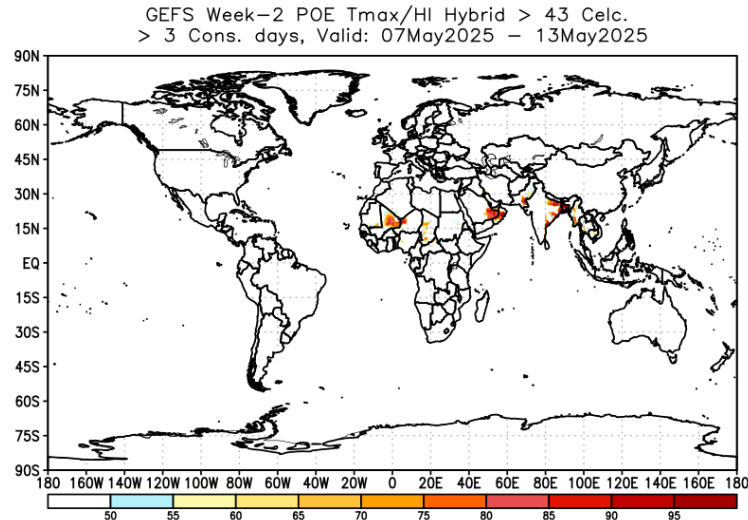
GEFS Week-2 HI/Tmax Hybrid POE with Respect to Fixed Thresholds

>41°C & > 3 Consc. Days



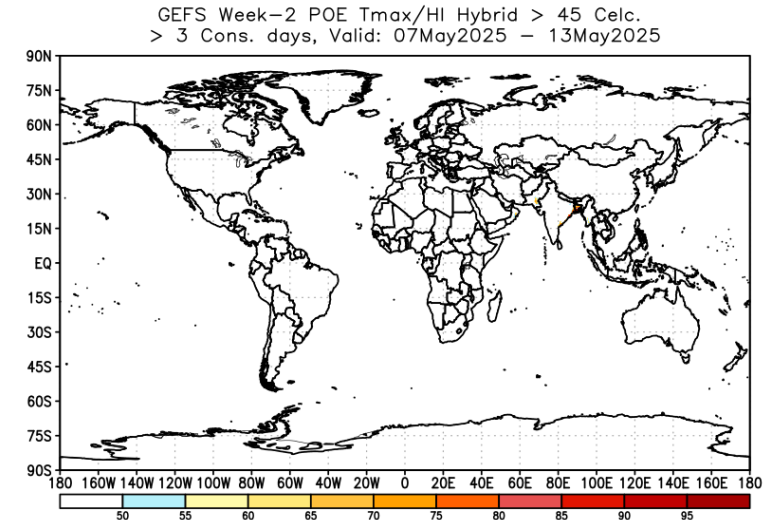
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>43°C & > 3 Consc. Days



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>45°C & > 3 Consc. Days



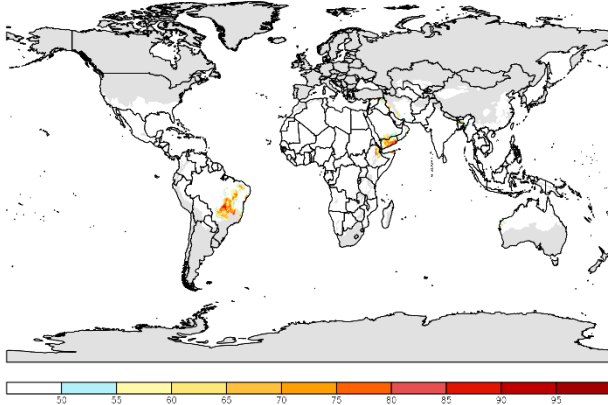
https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week2_prob_hybrid_3_glb_45.png

- There is an increased chance for the hybrid index to exceed 41°C for at least three consecutive days in Senegal, Mauritania, Mali, Burkina Faso, Ghana, Nigeria, Saudi Arabia, Oman, and northeastern India.

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

>80th & > 3 Consc. Days

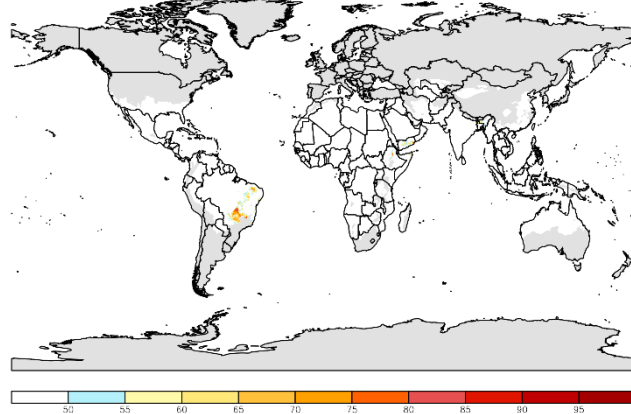
GEFS Week-2 POE Tmax/HI > 80th Pctle. with W. Speed < 5m/sec &
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https://ftp.cpc.ncep.noaa.gov/International/extreme_fcst/gefs_heat/gefs_comb3_week2_glb_prob_80.gif

>90th & > 3 Consc. Days

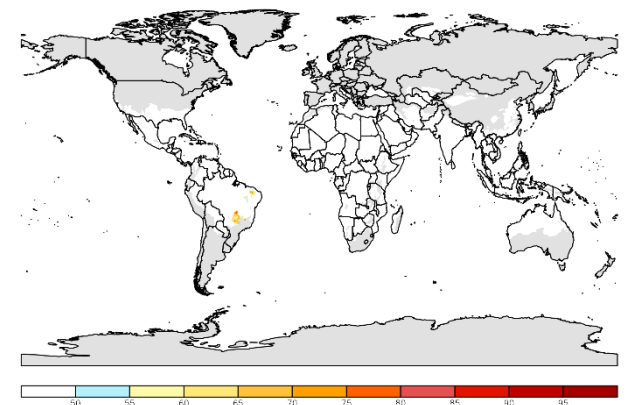
GEFS Week-2 POE Tmax/HI > 90th Pctle. with W. Speed < 5m/sec &
Cloud C. < 50%, > 3 Cons. days, Valid: 07May2025 - 13May2025



https://ftp.cpc.ncep.noaa.gov/International/extreme_fcst/gefs_heat/gefs_comb3_week2_glb_prob_90.gif

>95th & > 3 Consc. Days

GEFS Week-2 POE Tmax/HI > 95th Pctle. with W. Speed < 5m/sec &
Cloud C. < 50%, > 3 Cons. days, Valid: 07May2025 - 13May2025



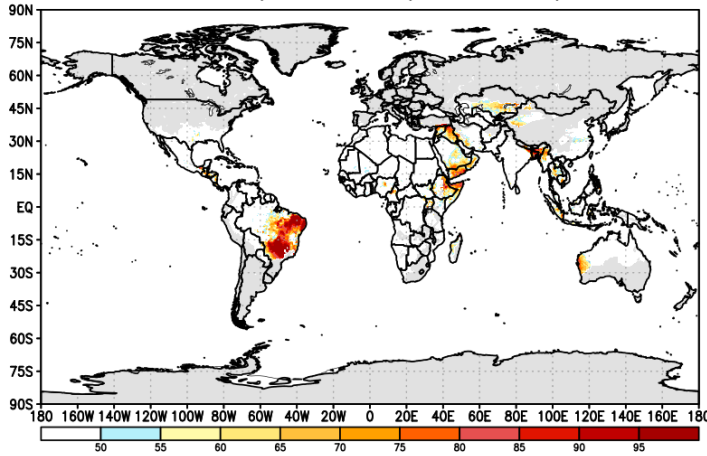
https://ftp.cpc.ncep.noaa.gov/International/extreme_fcst/gefs_heat/gefs_comb3_week2_glb_prob_95.gif

- 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 Brazil, central Ethiopia and Yemen.

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

>80th & > 3 Consc. Days

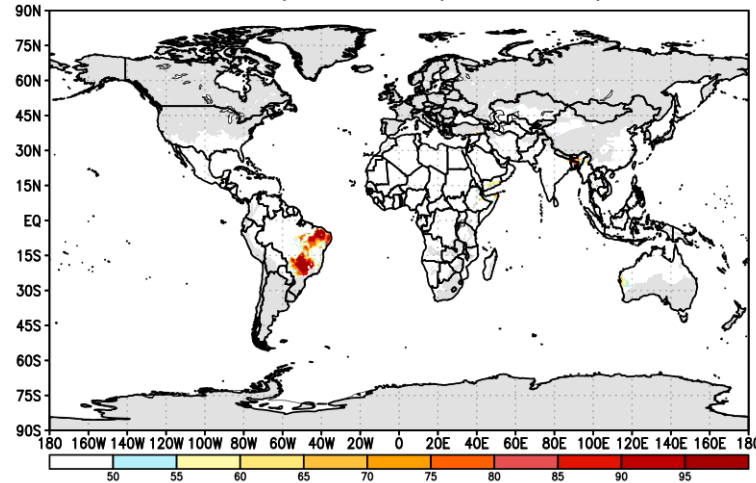
GEFS Week-2 POE Tmax/HI Hybrid > 80th Pctle.
> 3 Cons. days, Valid: 07May2025 - 13May2025



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>90th & > 3 Consc. Days

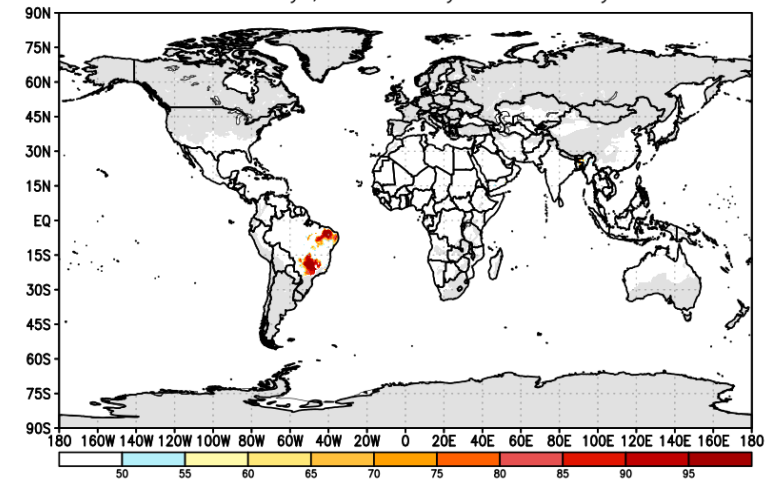
GEFS Week-2 POE Tmax/HI Hybrid > 90th Pctle.
> 3 Cons. days, Valid: 07May2025 - 13May2025



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: 07May2025 - 13May2025



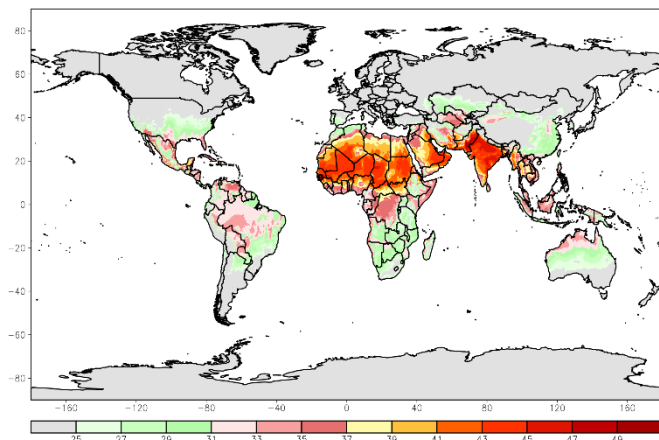
https://ftp.cpc.ncep.noaa.gov/International/global_hett/gefs_week2_prob_hybrid_3_glb_95.png

- There is an increased chance (> 80%) for the hybrid index to exceed the 80th percentile for at least three consecutive days in in eastern part of northern part of Nicaragua, and Honduras, eastern and western part Brazil, northeastern Ethiopia, Djibouti and Somalia, southern Saudi Arabia, Yemen, part of Oman, Iraq, Syria, southern Kazakhstan, western Tajikistan, Iran, southern Afghanistan, Pakistan, northeastern India, Bangladesh, Nepal, northwestern Myanmar, Thailand and western Australia.

GEFS Week-2 Tmax Percentile Climatology (°C)

Tmax 80th Percentile

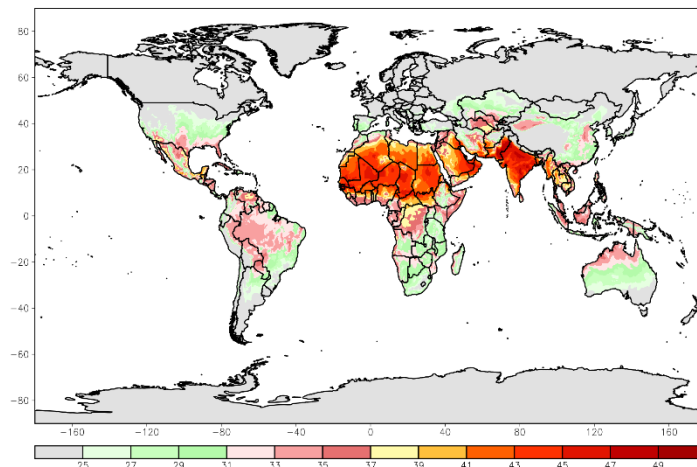
GEFS Week-2 Tmax Percentile Climo (Cels.), 80th Pctle.
Valid: 07May - 13May



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

Tmax 90th Percentile

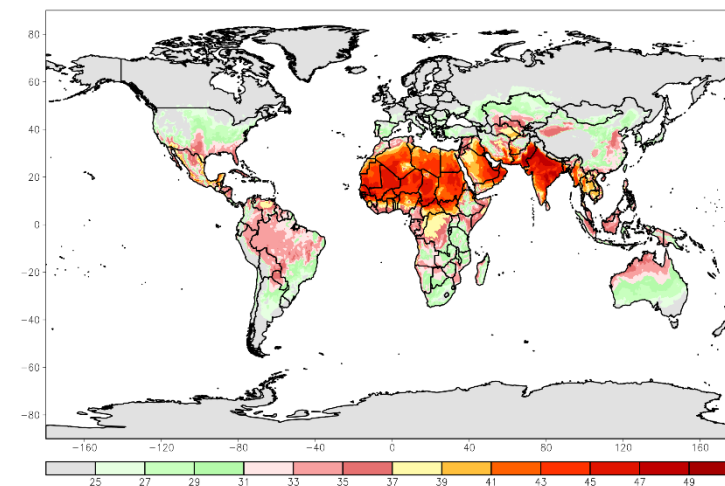
GEFS Week-2 Tmax Percentile Climo (Cels.), 90th Pctle.
Valid: 07May - 13May



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: 07May - 13May

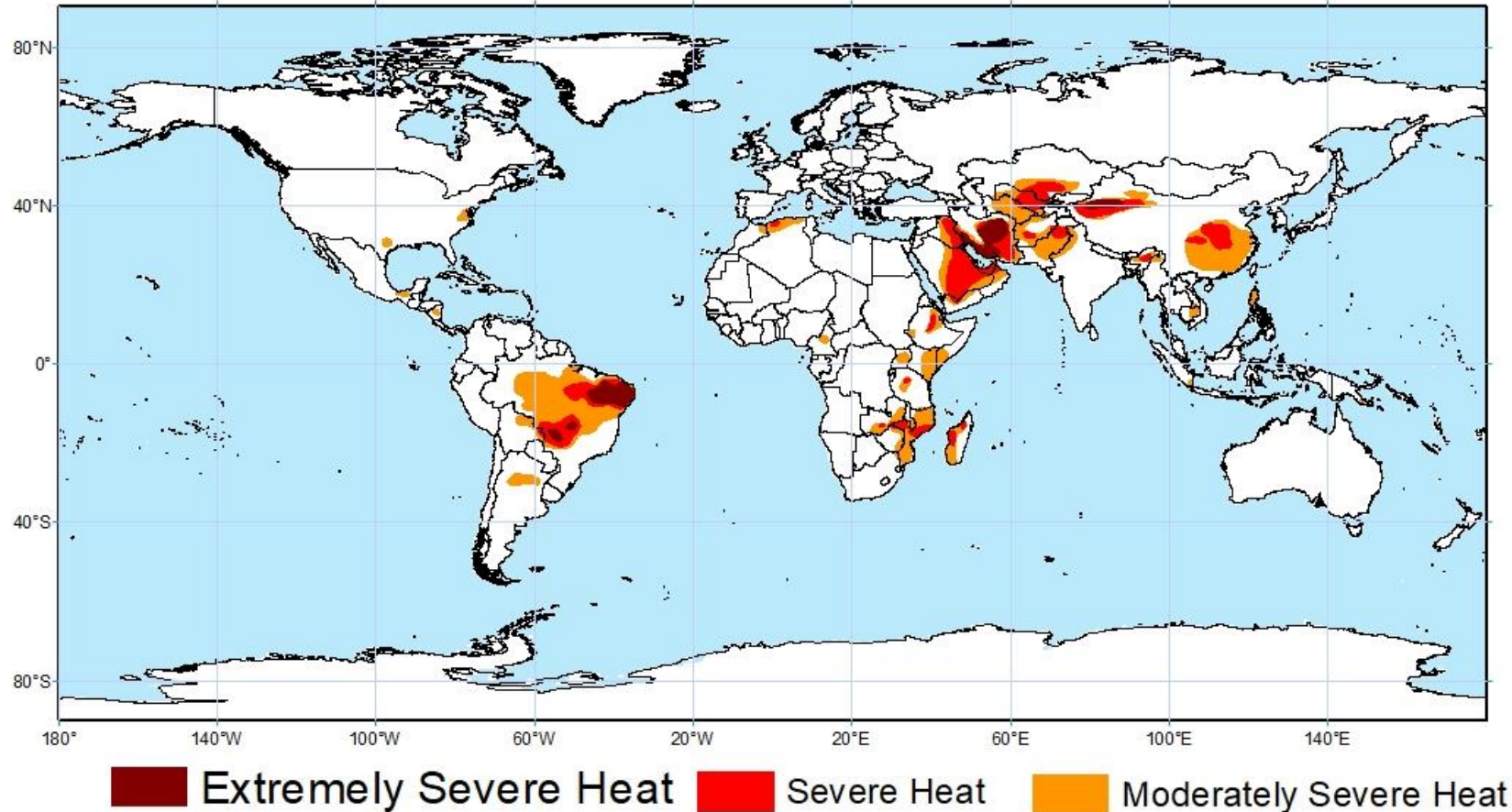


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Week-1 Experimental Global Heat Hazard Outlook

Issued: 29 Apr 2025

Valid: 30 Apr 2025 - 06 May 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

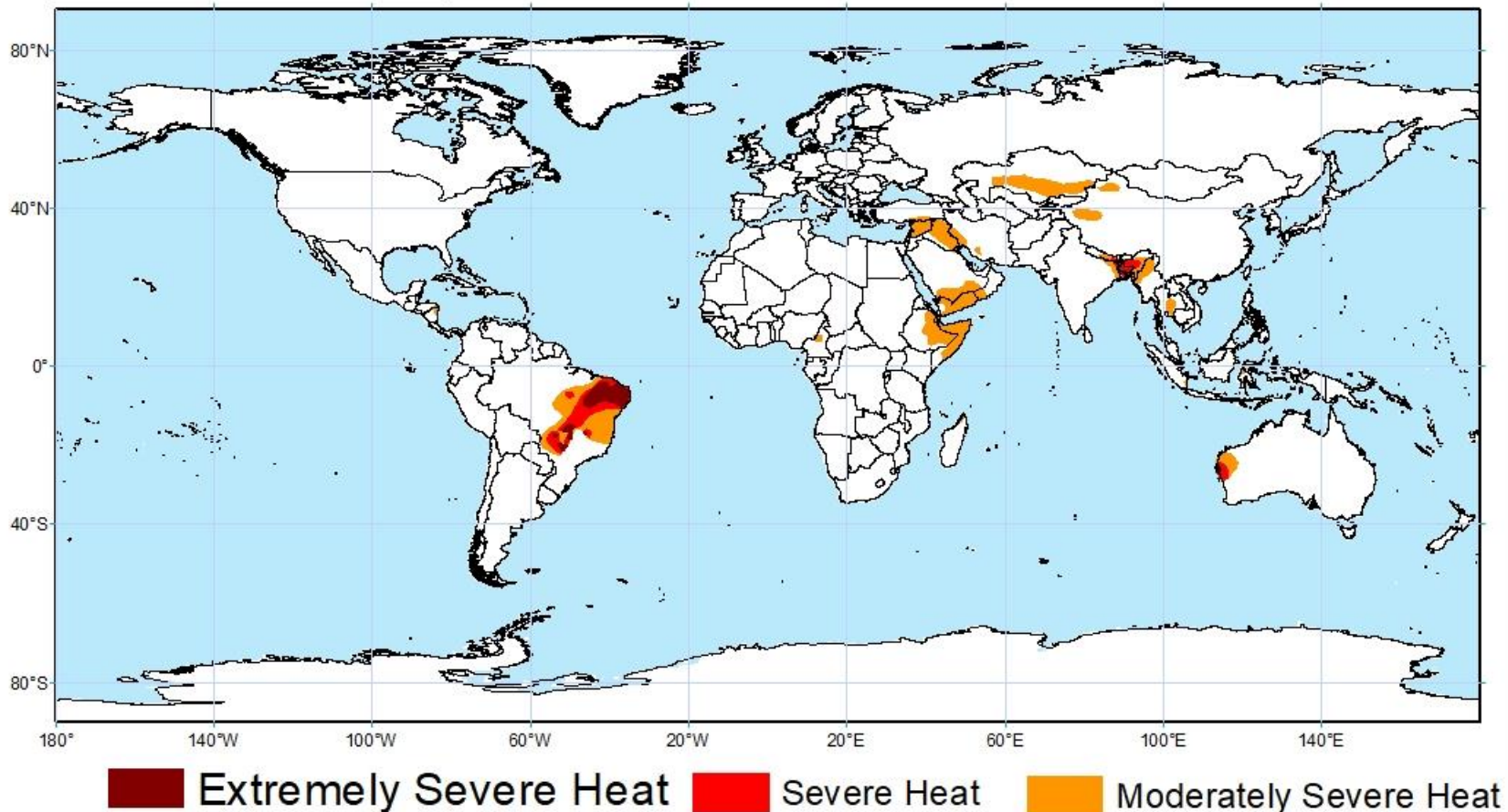
- There is an increased chance of *moderately severe heat* in eastern and western part of Brazil, southern Mexico, Nicaragua, northeastern Bolivia, northern Argentina, northeastern Morocco, northern Algeria, central Cameroon, northern and central part of Ethiopia, Uganda, Kenya, southern Somalia, Tanzania, Zambia, western Madagascar, Mozambique, southern Malawi, Saudi Arabia, northern Yemen, Iran, Uzbekistan, Turkmenistan, southern Afghanistan, and Pakistan.
- There is an increased chance for *extremely severe heat* in northeastern Brazil, Iran, and northern China.

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

Issued: 29 Apr 2025

Valid: 07 May 2025 - 13 May 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 eastern part of northern part of Nicaragua, and Honduras, eastern and western part Brazil, northeastern Ethiopia, Djibouti and Somalia, southern Saudi Arabia, Yemen, part of Oman, Iraq, Syria, southern Kazakhstan, western Tajikistan, Iran, southern Afghanistan, Pakistan, northeastern India, Bangladesh, Nepal, northwestern Myanmar, Thailand and western Australia.
- There is an increased chance for *severe heat* in northeastern Brazil, and Bangladesh.

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**