Global Heat Hazards Outlooks

Date of Issuance: 28 Jan 2025

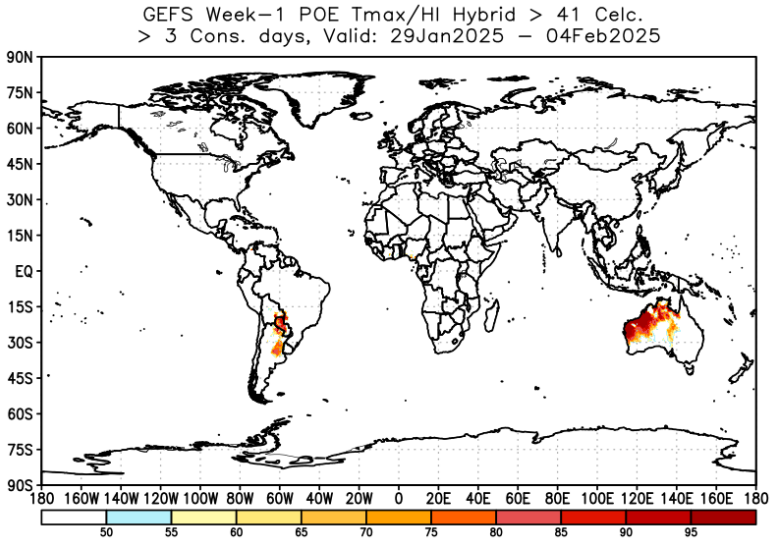
Week-1 Valid: 29 Jan 2025 – 04 Feb 2025

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

Numerical Weather Prediction Model: NCEP GEFS

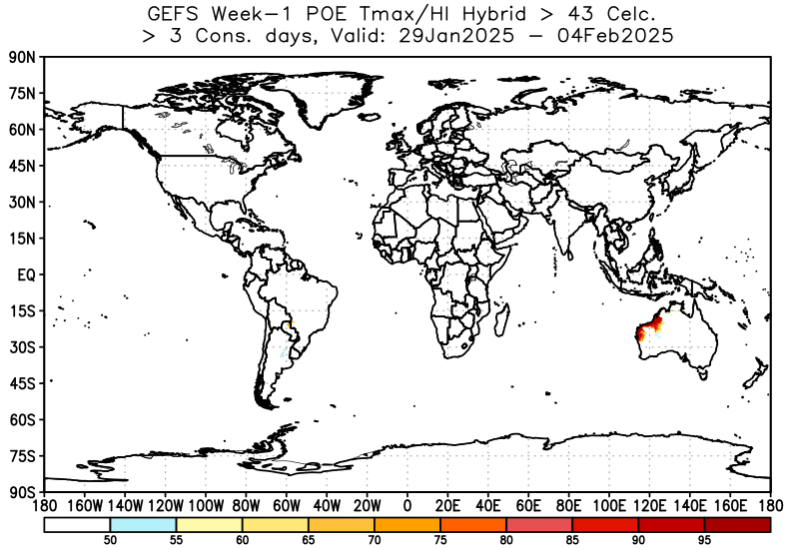
GEFS Week-1 HI/Tmax Hybrid POE with Respect to Fixed Thresholds

>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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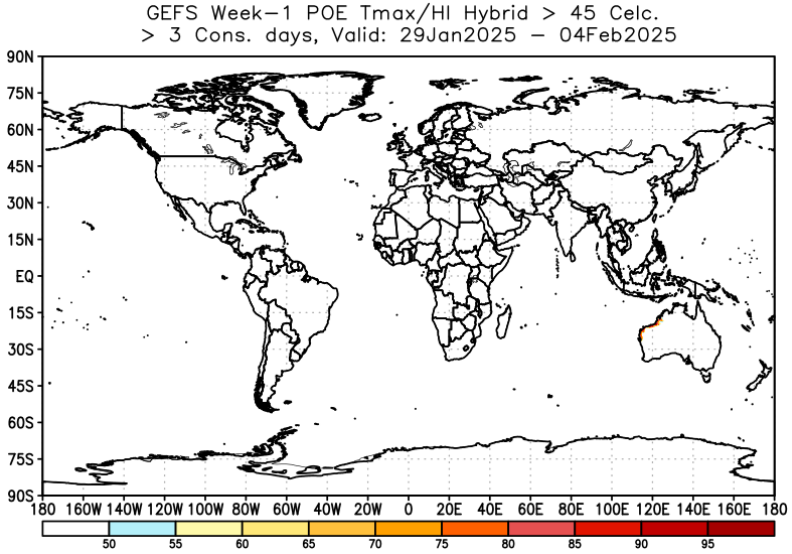
>45ºC & > 3 Consc. Days

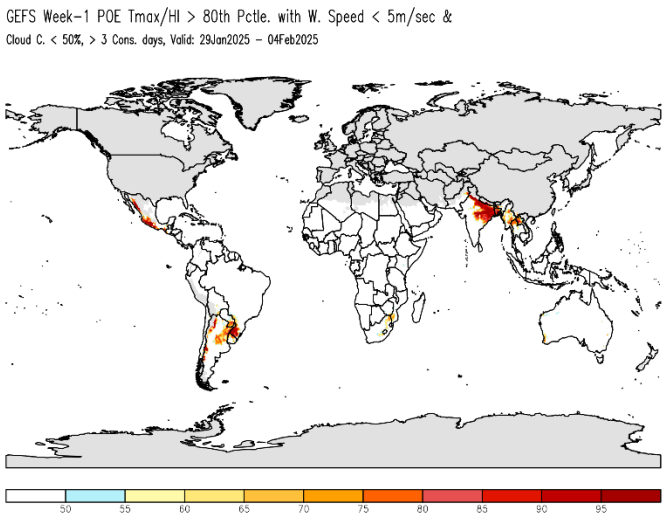


https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week1_prob_hybrid_3_glb_45.png

- There is an increased chance for the hybrid index to exceed 41ºC for at least three consecutive days in northern, central and western Paraguay, some parts of northeastern Argentina, and parts of western, northern and central Australia. There is an increased chance for the hybrid index to exceed 45ºC for at least three consecutive days in some localized pockets of region in western Australia.

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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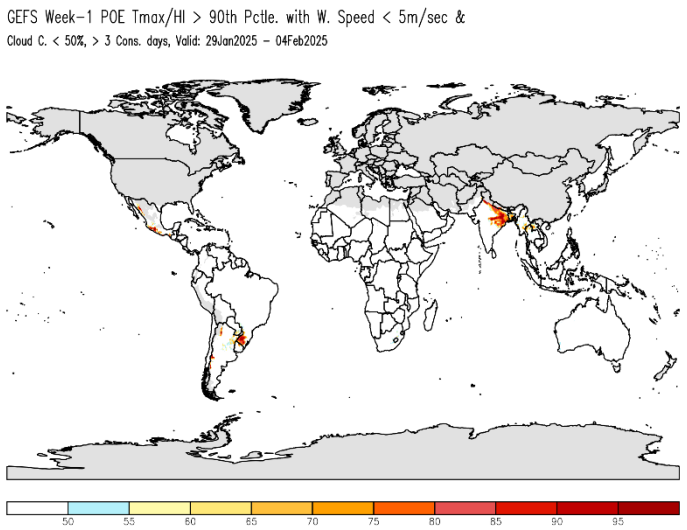
>90th & > 3 Consc. Days



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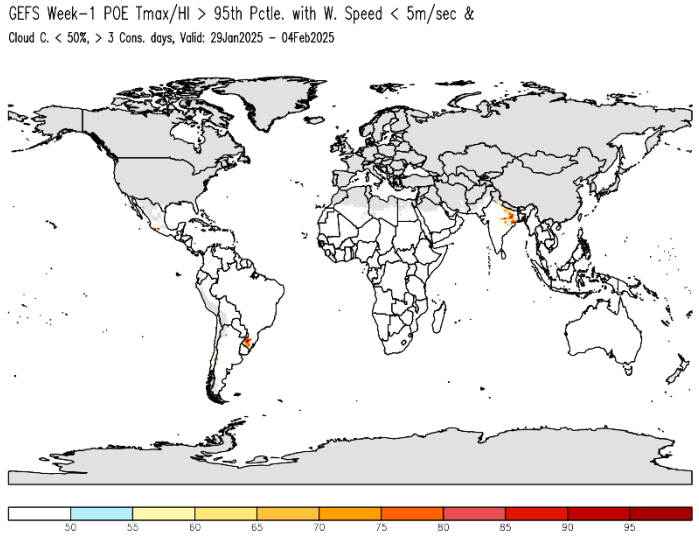
>95th & > 3 Consc. Days

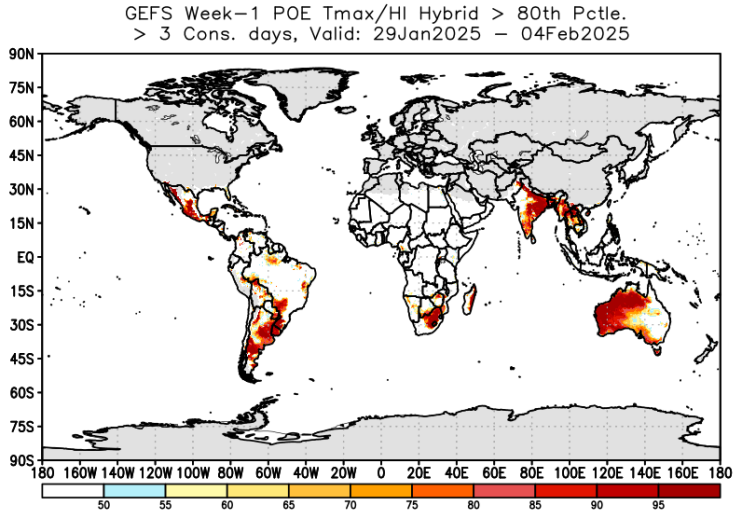


https://ftp.cpc.ncep.noaa.gov/International/extreme_fcst/gefs_heat/gefs_comb3_week1_glb_prob_95.gif

- There is an increased chance for the hybrid index with calmer wind and less cloud cover to exceed the 80th percentile for at least three consecutive days in some parts of western and southwestern Mexico, some parts of southern Brazil and southern Paraguay, northeastern and western Argentina, some parts of southern Mozambique and northern South Africa, parts of central and eastern India, Bangladesh, central and eastern Myanmar, northern Thailand, and northern Laos. There is an increased chance for the index to exceed the 95th percentile for at least three consecutive days in some localized regions in western Mexico, some parts of Brazil and parts of central India.

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

>80th & > 3 Consc. Days



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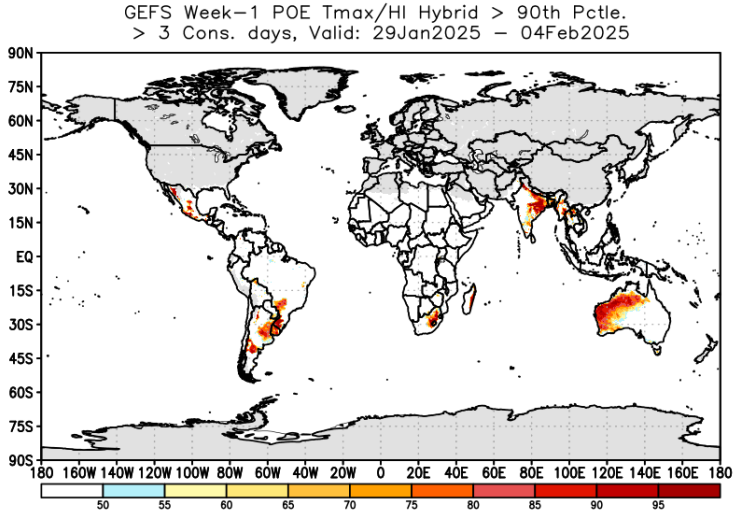
>90th & > 3 Consc. Days



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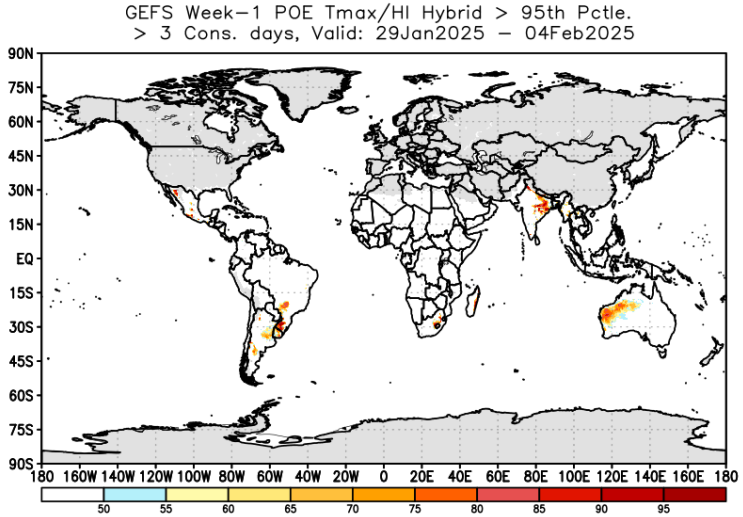
>95th & > 3 Consc. Days

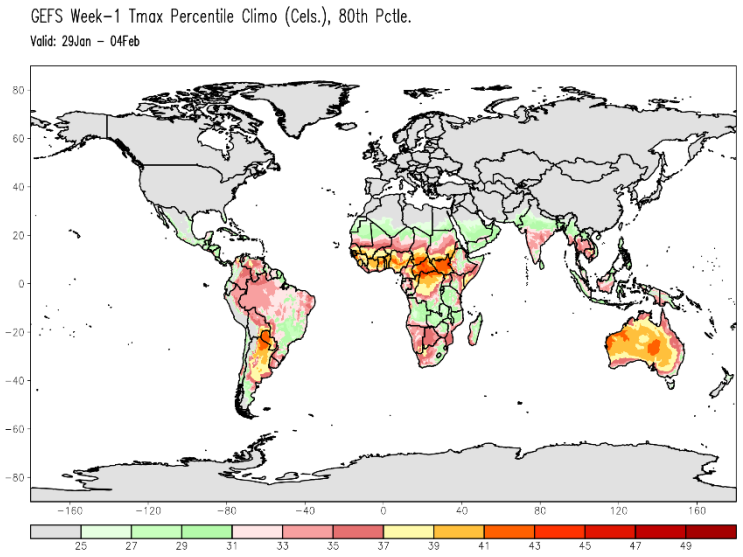


https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week1_prob_hybrid_3_glb_95.png

- There is an increased chance for the hybrid index to exceed the 80th percentile for at least three consecutive days in western, central and southern Mexico, western, southwestern and some parts of northeastern and eastern Brazil, northern and eastern Bolivia, parts of eastern, central and western Argentina, southern Paraguay, Uruguay, wester, central and northern South Africa, Lesotho, northern Zimbabwe, southwestern Mozambique, eastern Madagascar, parts of northern, central, southern and eastern India, Bangladesh, Myanmar, Thailand, Laos, and western, southwestern, southern, northern and parts of central Australia. There is also an increased chance for the index to exceed the 95th percentile in some localized region central and western Mexico, some parts of southwestern Brazil, Uruguay, parts of northeastern and central Argentina, some parts central South Africa and eastern Madagascar, parts of central India, and some parts of western-central Australia.

GEFS Week-1 Tmax Percentile Climatology (°C)

Tmax 80th Percentile



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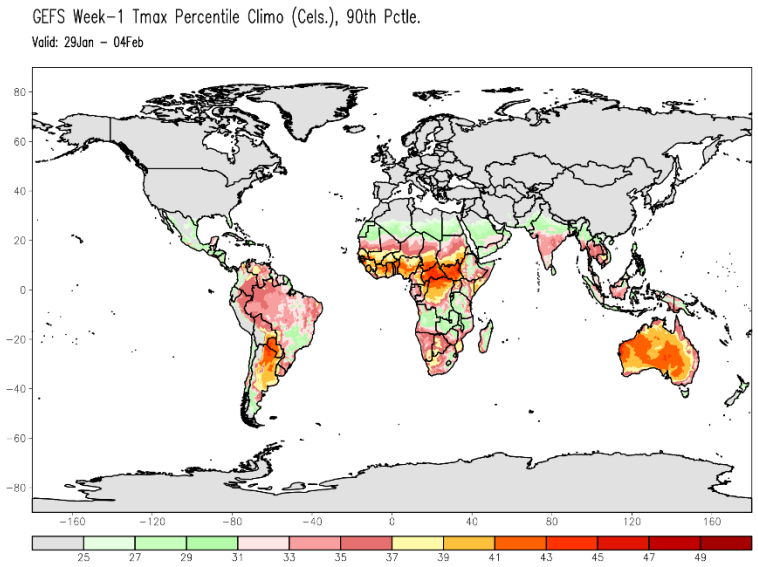
Tmax 90th Percentile



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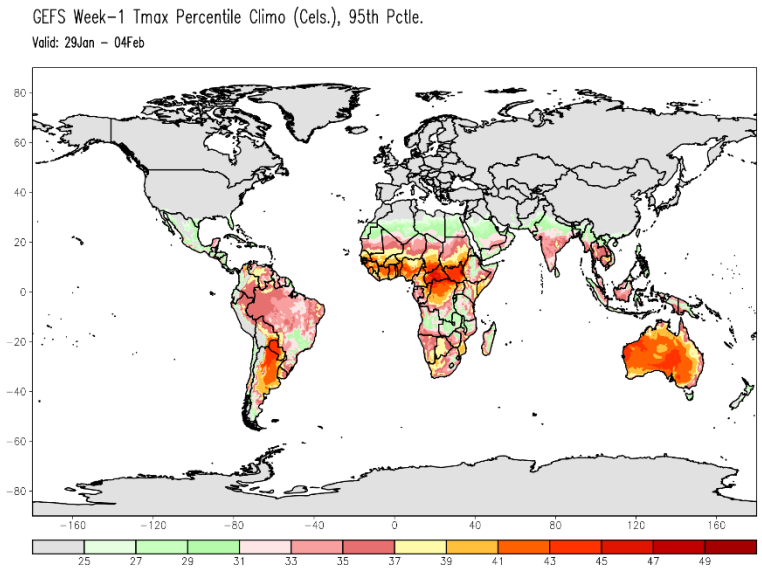
Tmax 95th Percentile



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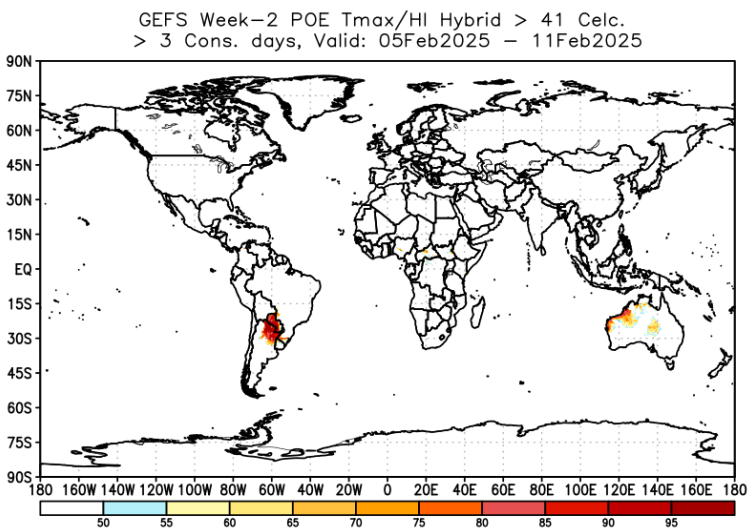
GEFS Week-2 HI/Tmax Hybrid POE with Respect to Fixed Thresholds

>41ºC & > 3 Consc. Days



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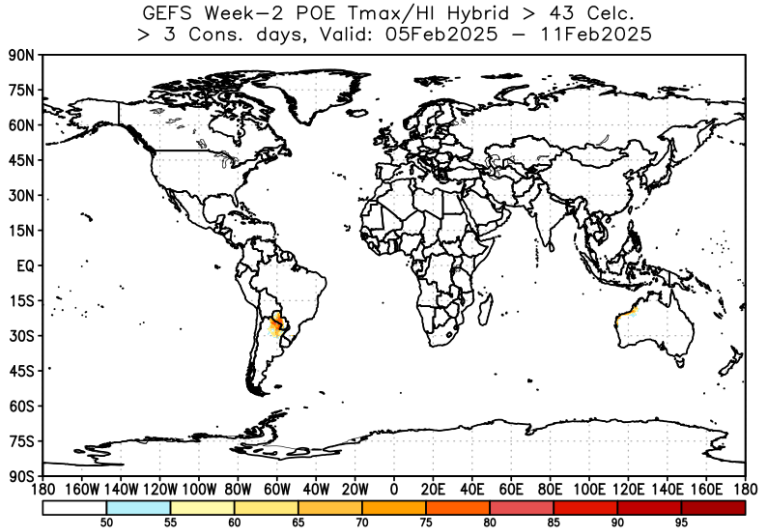
>43ºC & > 3 Consc. Days



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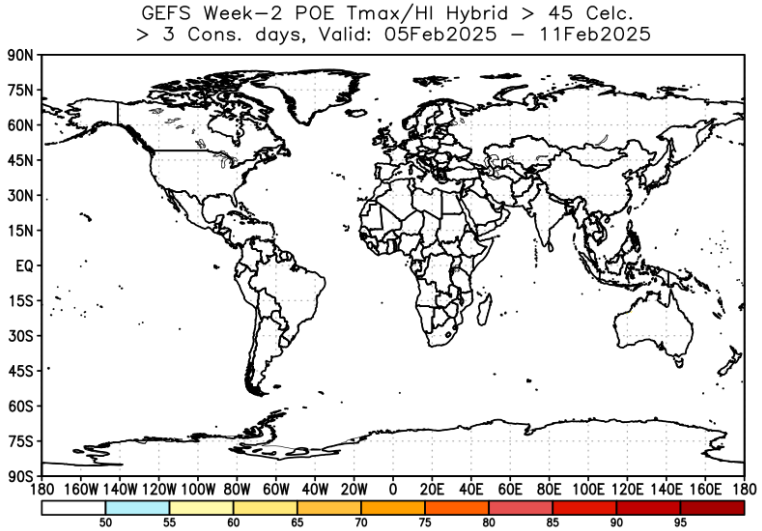
>45ºC & > 3 Consc. Days

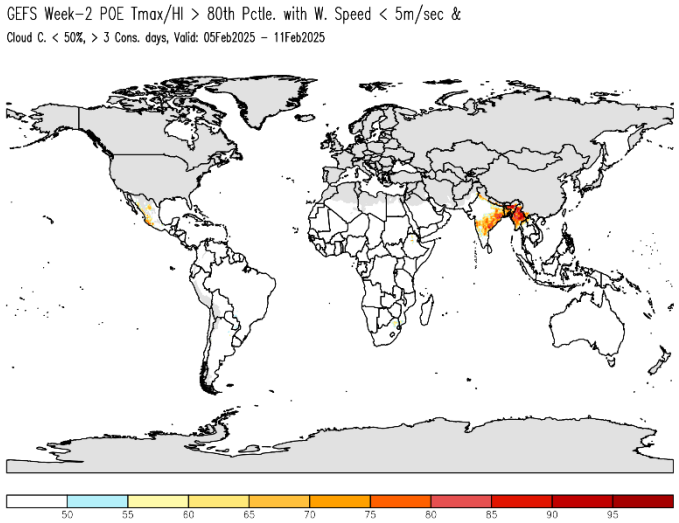


https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week2_prob_hybrid_3_glb_45.png

- There is an increased chance for the hybrid index to exceed 41ºC for at least three consecutive days in Paraguay, some parts of northeastern Argentina, and western and some parts of central Australia.

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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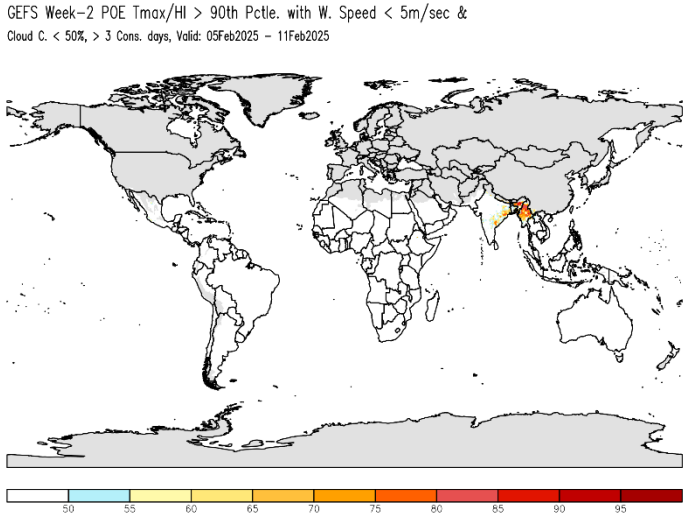

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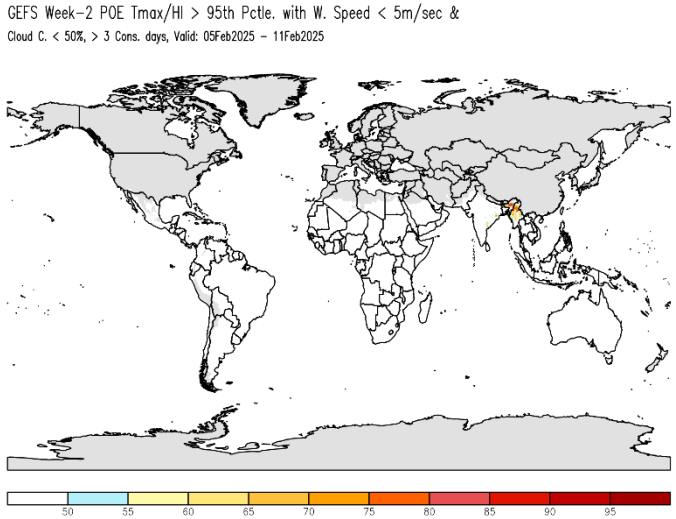
>95th & > 3 Consc. Days



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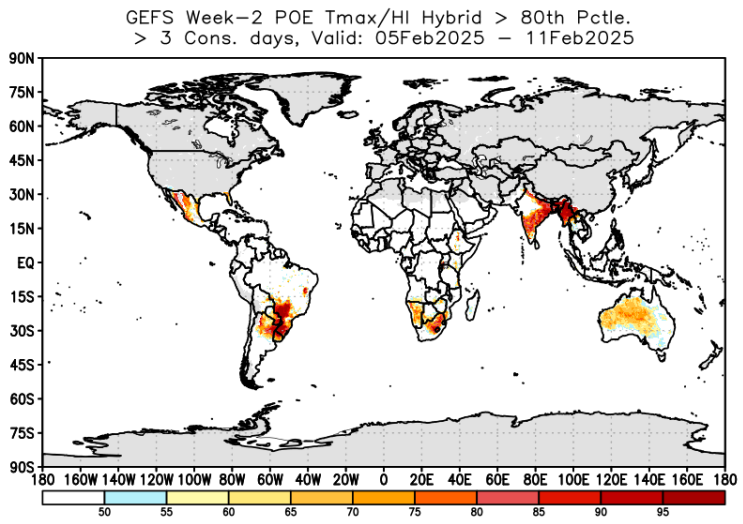
- There is an increased chance for the hybrid index with calmer wind and less cloud cover to exceed the 80th percentile for at least three consecutive days in some parts of western Mexico, parts of central and eastern India, Bangladesh, and Myanmar. There is an increased chance for the index to exceed the 95th percentile for at least three consecutive days in some parts of eastern India and parts of central and eastern Myanmar.

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

>80th & > 3 Consc. Days



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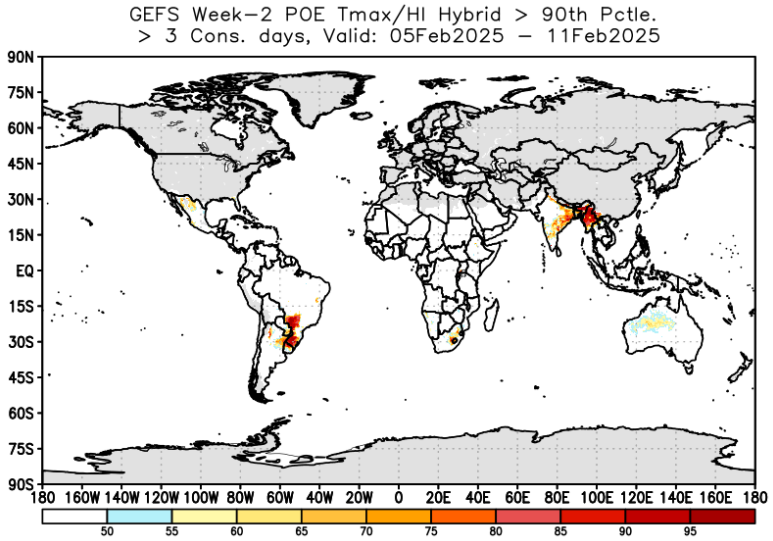
>90th & > 3 Consc. Days



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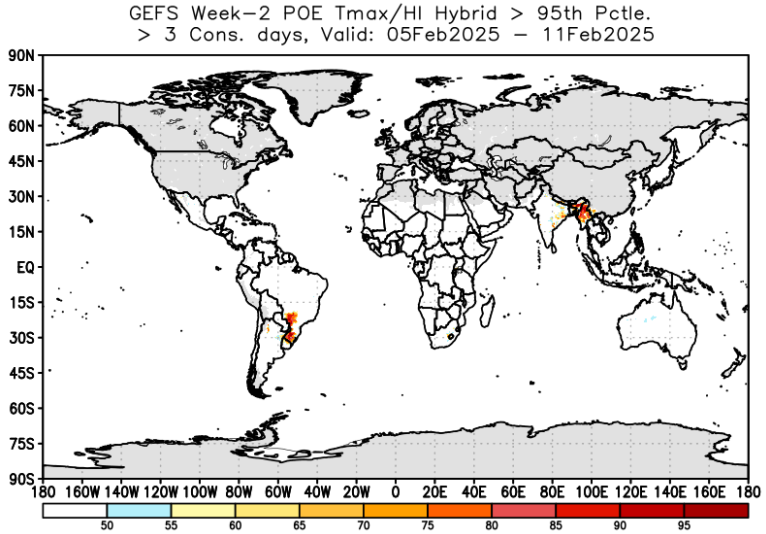
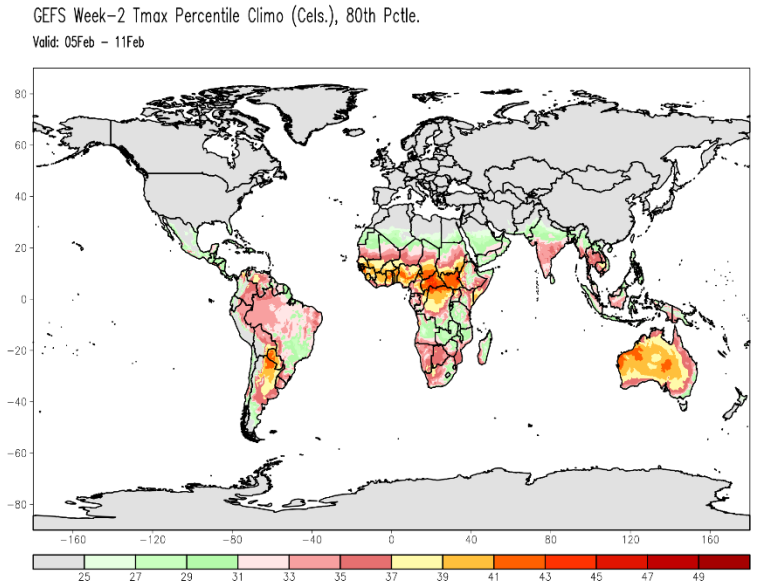


https://ftp.cpc.ncep.noaa.gov/International/global_heat/gefs_week2_prob_hybrid_3_glb_95.png

- There is an increased chance for the hybrid index to exceed the 80th percentile for at least three consecutive days in parts of northern, central and western Mexico, southwestern and some parts of northeastern and eastern Brazil, central and southern Paraguay, parts of northern and northeastern Argentina, Uruguay, much of Namibia, western, central and northern South Africa, Lesotho, parts of central Ethiopia, parts of northern, central, southern and eastern India, Bangladesh, Myanmar, northern Laos, northern Thailand, and parts of western, northern and central Australia. There is also an increased chance for the index to exceed the 95th percentile over some parts of southwestern Brazil, parts of central India, and Myanmar.

GEFS Week-2 Tmax Percentile Climatology (°C)

Tmax 80th Percentile



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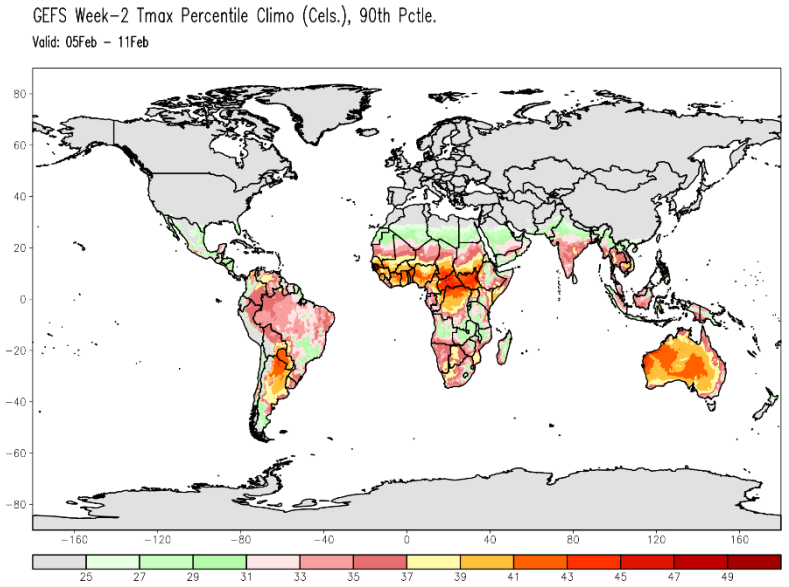
Tmax 90th Percentile



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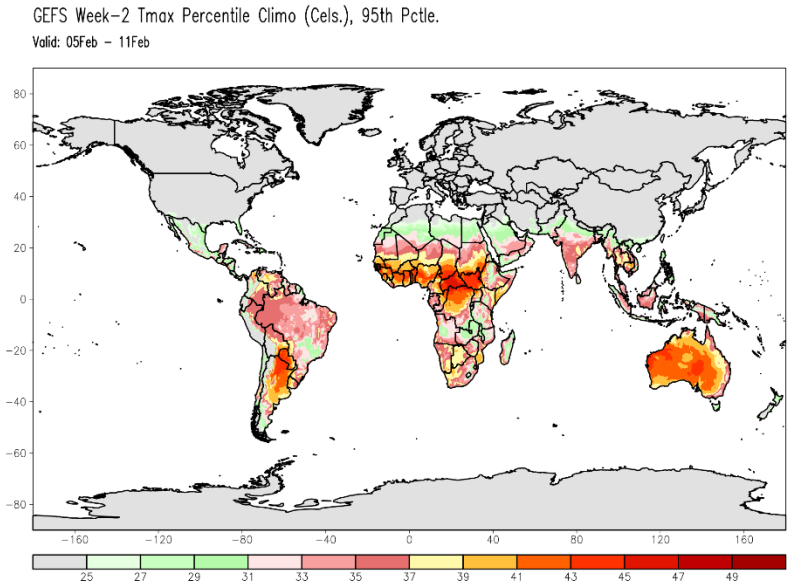
Tmax 95th Percentile



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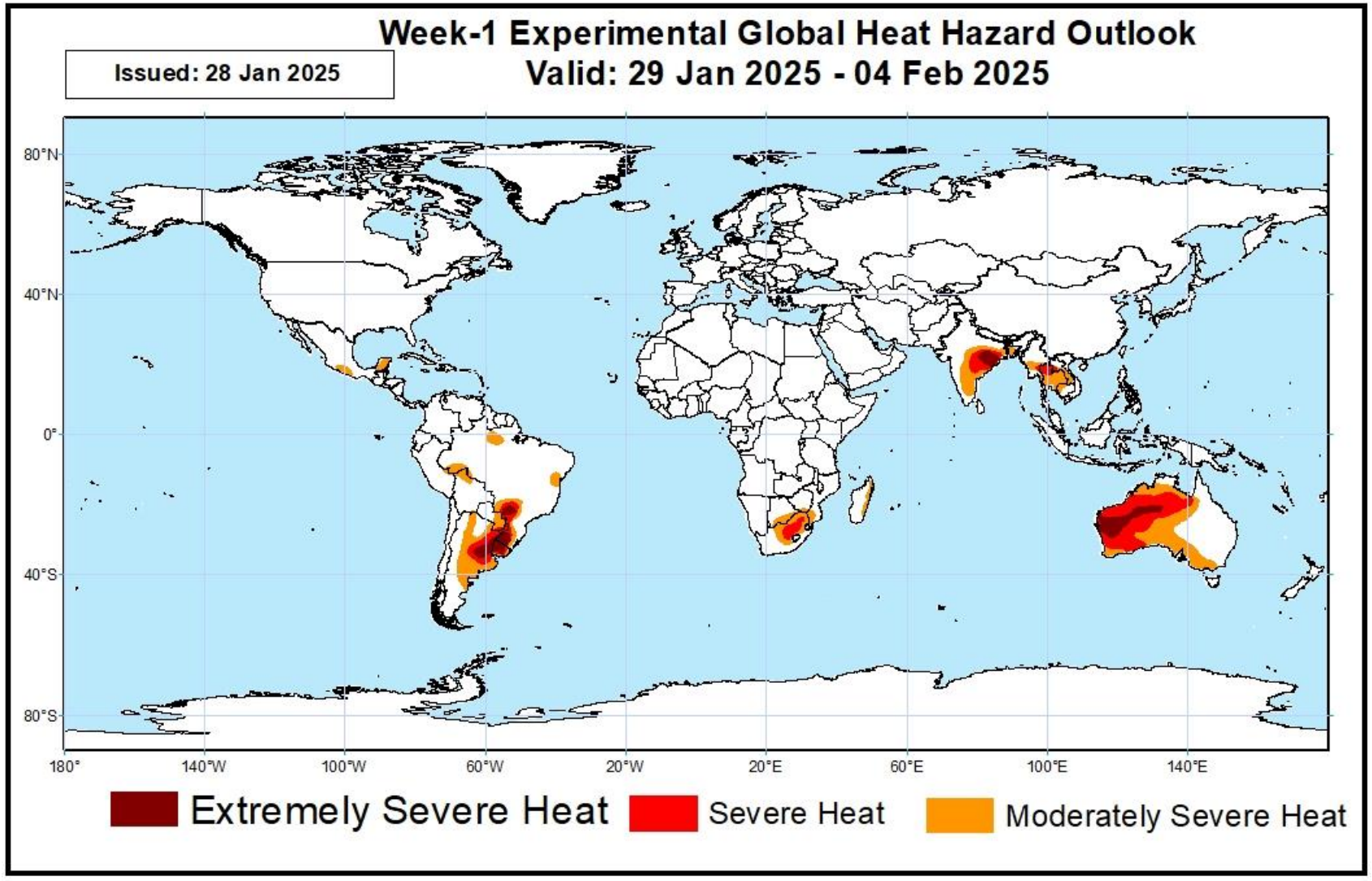
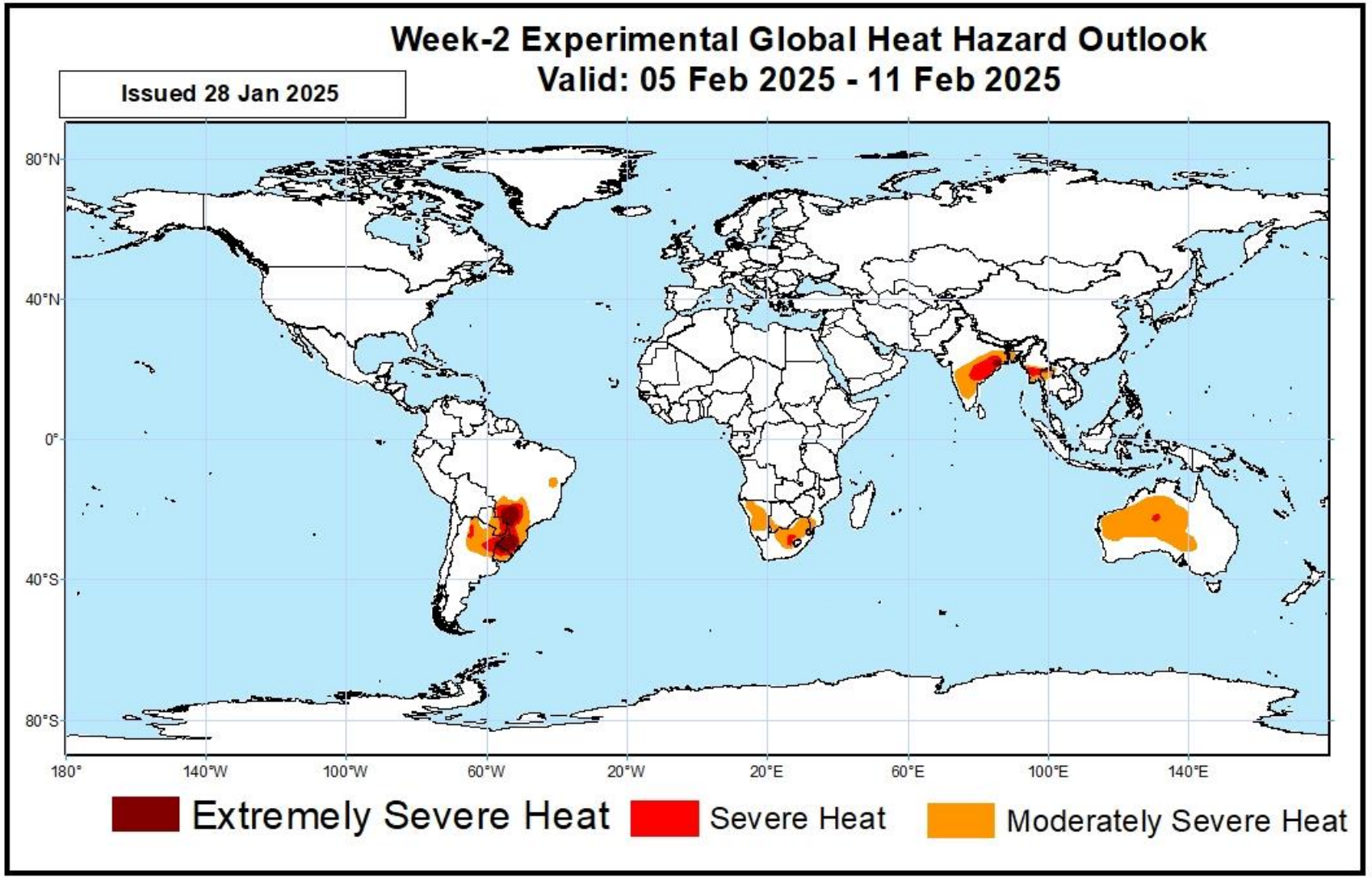


- There is an increased chance of *moderately severe heat* in some parts of southern Mexico, northern Bolivia, southwestern and some localized regions in northeastern and eastern Brazil, parts of central and eastern Argentina, southern Paraguay, Uruguay, wester, central and northern South Africa, some parts of southern Mozambique, southeastern Botswana and eastern Madagascar, parts of central and eastern India, southern Myanmar, Thailand, and many parts of western, southwestern, southern, northern and central Australia.
- There is an increased chance of *extremely severe heat* in some parts of southwestern Brazil, Uruguay, northeastern Argentina, some parts of central India, and western 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 > 41ºC for at least 3 consecutive days** is also considered as **Moderately Severe Heat**



- **There is an increased chance for *moderately severe heat* in southwestern and southern Brazil, southern Paraguay, some parts of northeastern Argentina, Uruguay, western, central and northern South Africa, western and central Namibia, parts of southern and central India, Bangladesh, southern Myanmar, northern Thailand, and many parts of western and central Australia.**
- **There is an increased chance for extremely *severe heat* in some parts of southwestern Brazil and some localized region in central 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 > 41°C for at least 3 consecutive days** is also considered as **Moderately Severe Heat**