



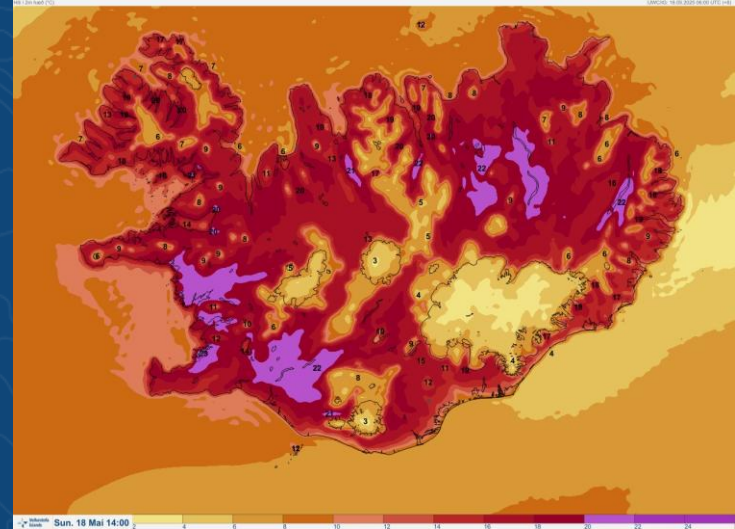
The May 2025 Iceland Heatwave

An unprecedented early-season extreme event

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Icelandic Meteorological Office

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2025: The warmest year ever recorded in Iceland

Iceland is warming rapidly

- +1°C warming since 1900
- Rapid warming since the 1990s
- 2025: warmest year on record

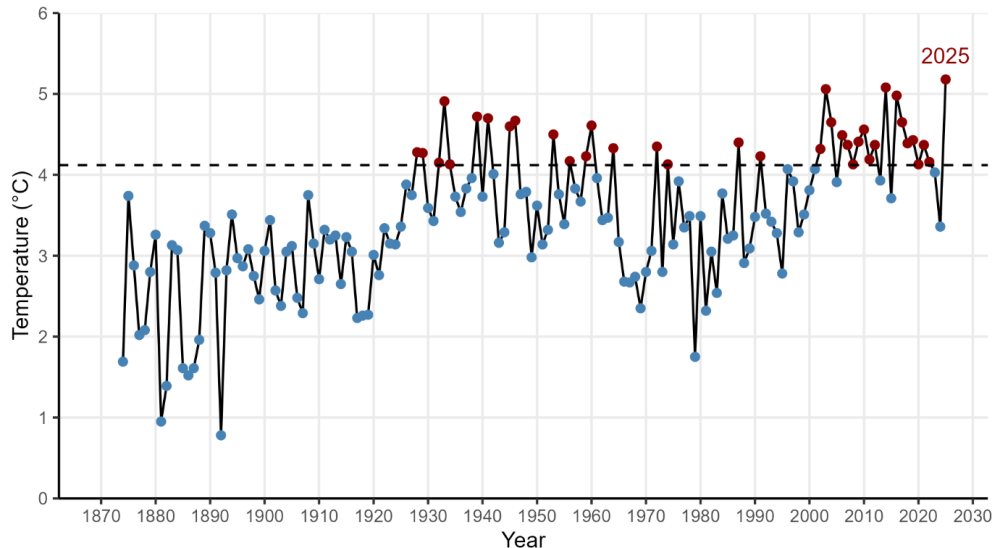


Figure 1. National average temperature in Iceland since 1870

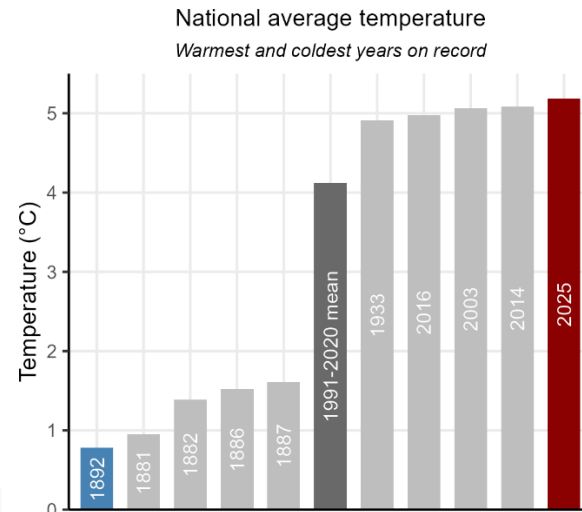


Figure 2. Warmest and coldest years on record in Iceland

- 4 of the 5 warmest years have occurred since 2000

2025 was exceptionally warm throughout the year

Daily national average temperature in Iceland 2025

Temperature anomalies relative to the past ten-year average

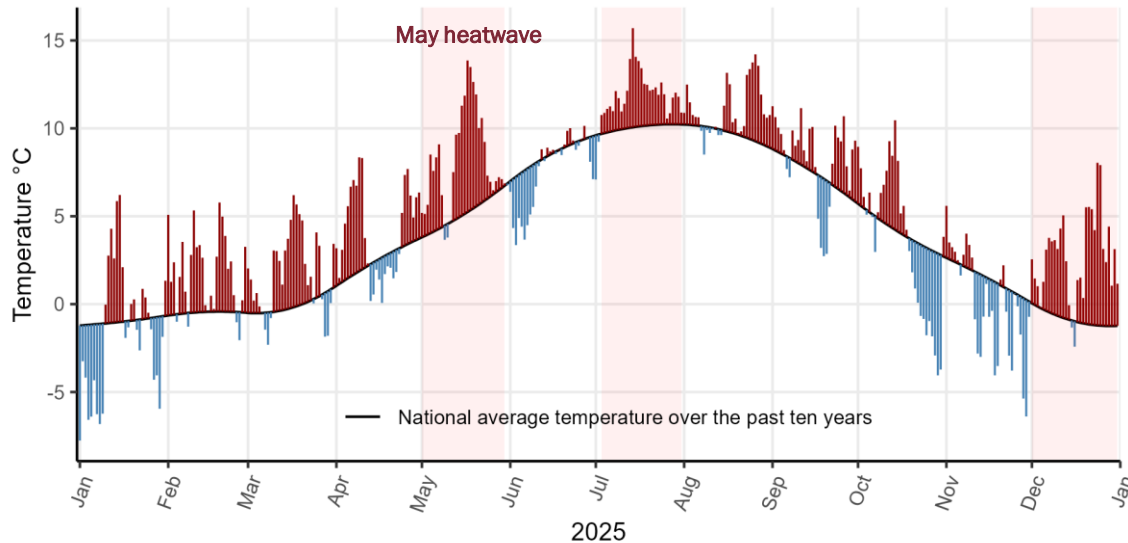


Figure 1. Daily mean temperature (nationwide) in Iceland 2025 shown as an anomaly from the 10-year smoothed average temperature (2015–2024). Temperature variability is greatest during winter.

Most months were warmer than average.
Exceptionally warm months:

- **May:** warmest on record — including an exceptional heatwave
- **July:** tied for warmest
- **December:** 3rd warmest on record

New national maximum temperature records :

- **May:** 26.6°C at Egilsstaðir
- **August:** 29.8°C at Egilsstaðir
- **December:** 19.8°C at Seyðisfjörður

Exceptional heatwave: 13–22 May 2025

Most significant May heatwave in Iceland's observational record

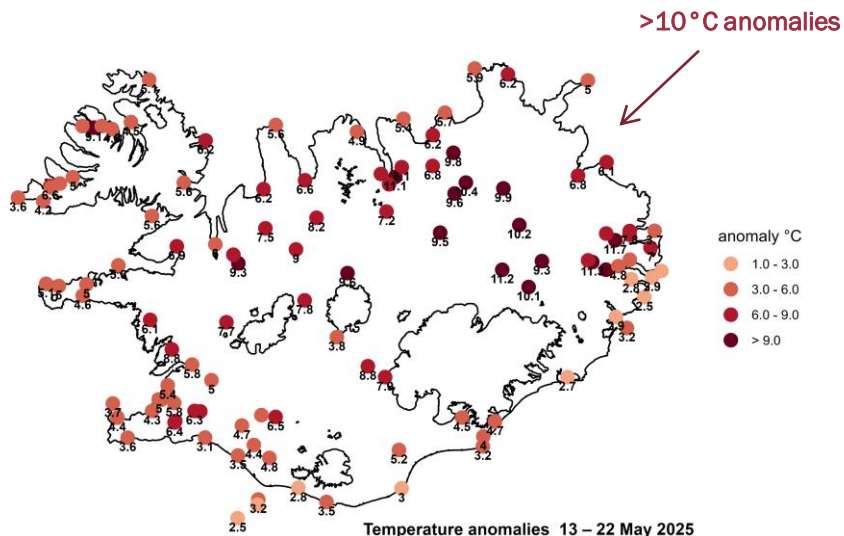


Figure 1: Temperature anomalies during 13–22 May 2025 relative to the 2015–2024 average.

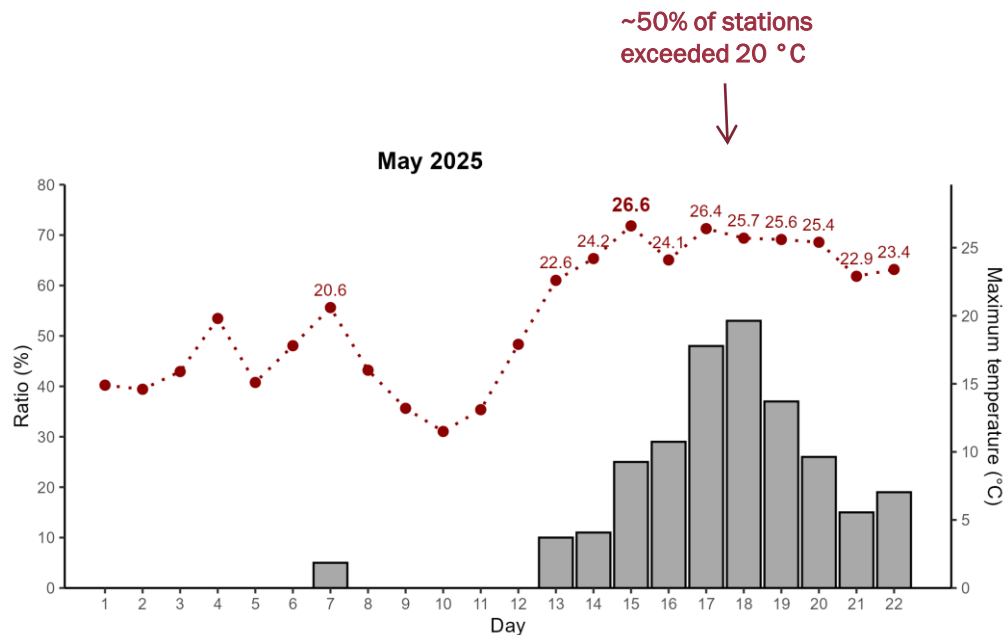


Figure 2: Percentage of stations exceeding 20 °C during May 2025. Red line indicates the national maximum temperature.

New May temperature records across Iceland

Records were broken at nearly every long-term station

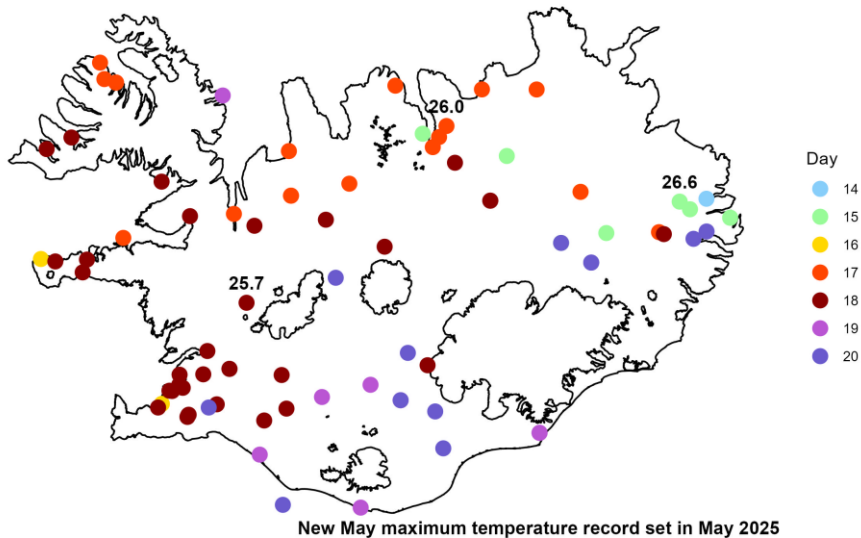


Figure 1: Location of stations with new temperature records. Automatic weather stations where new May maximum temperature records were set during the May 2025 heatwave. Only stations with at least 20 years of data are included.

- National May record broken **4 times**
- Peak temperature:
26.6°C at Egilsstaðir Airport (15 May)
- New May records at:
94% of long-term automatic stations



Figure 2: Calm conditions in Eyjafjörður during the heatwave (17 May 2025) Photo: IMO

May 2025: Warmest May on record

National mean temperature exceeded the previous record by 0.8 °C

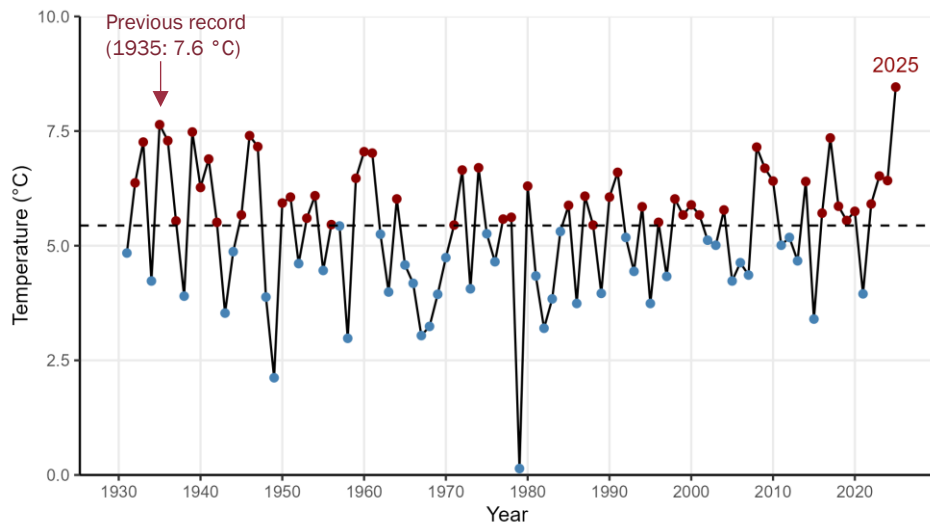


Figure 1: National mean temperature in May from 1929 to 2025. The dashed line indicates the long-term average.

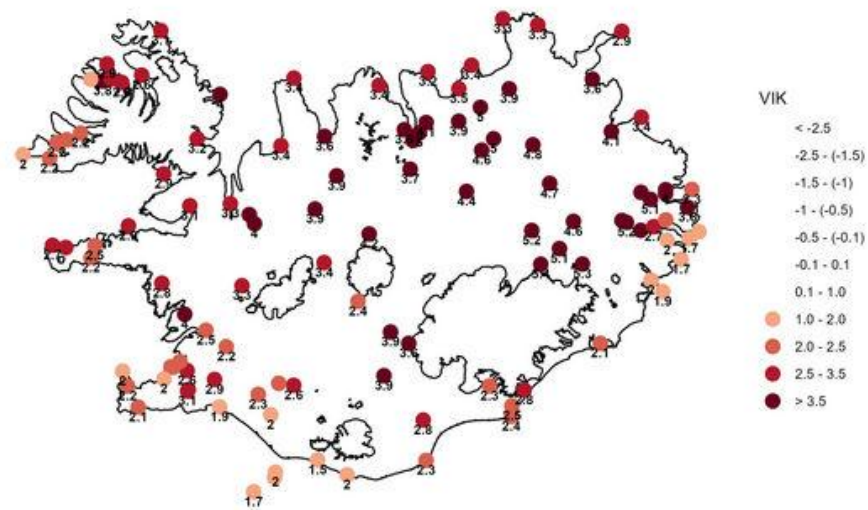


Figure 2: May 2025 temperature anomalies relative to the 2015-2024 mean.

Persistent blocking pattern behind the exceptional warmth

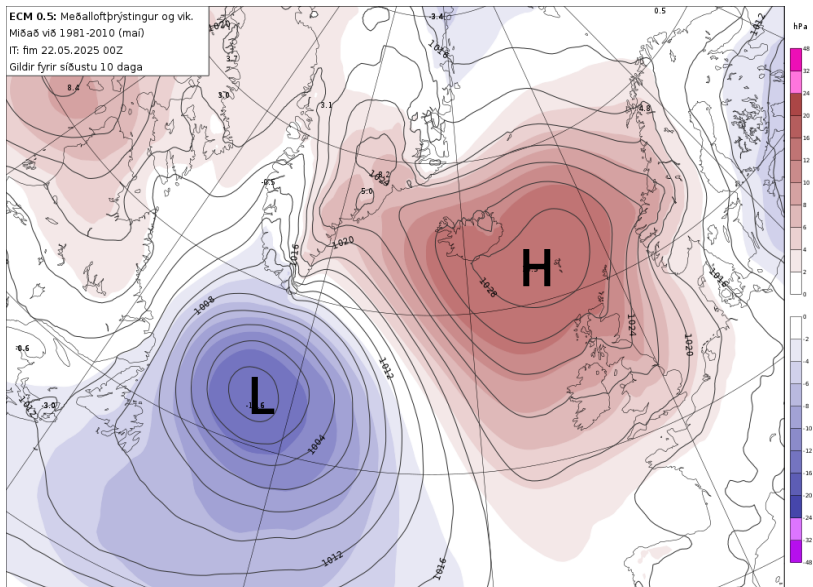


Figure 1: Mean-Sea level pressure and anomaly during the warm period in May 2025

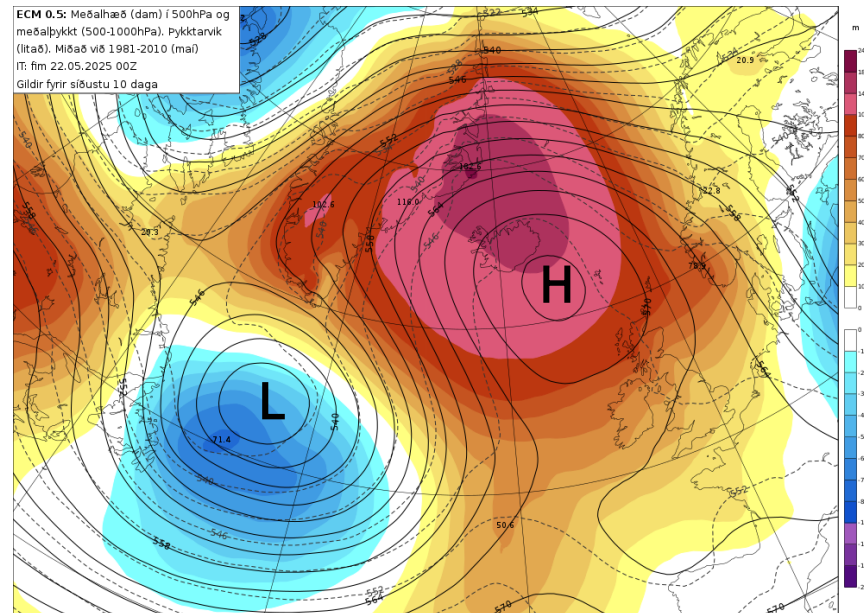


Figure 2: 500 hPa geopotential height, thickness and thickness anomaly during the warm period.

- The closest comparable May heatwave occurred in 1987 (20 – 26 May) , under very similar weather conditions.
- However, the 2025 event was exceptional because of its early timing, long duration, and widespread spatial extent.
- The May 2025 heatwave is stronger than any known June heat event in Iceland.

Warm background conditions amplified the heatwave

- Long-term climate warming
- Minimal snow cover
- Unusually warm surrounding seas

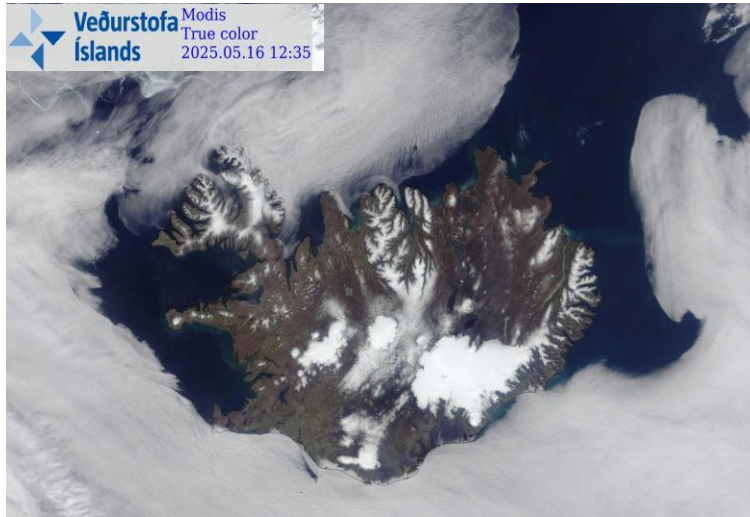


Figure 1: MODIS image from 16 May 2025 showing exceptionally low snow cover for this time of year.

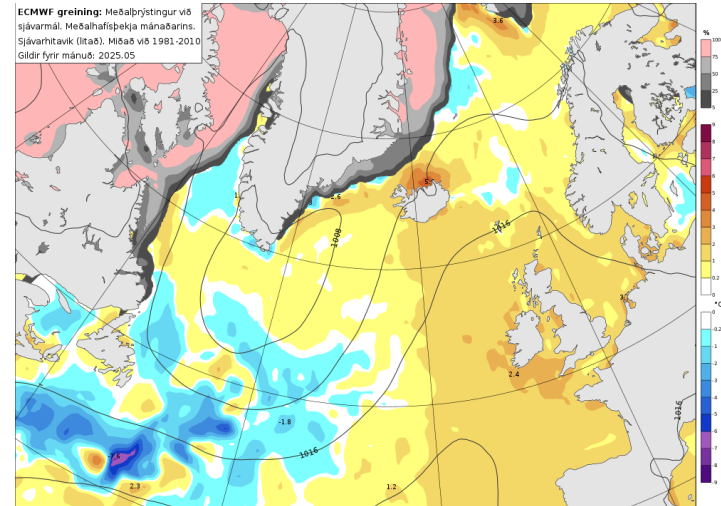
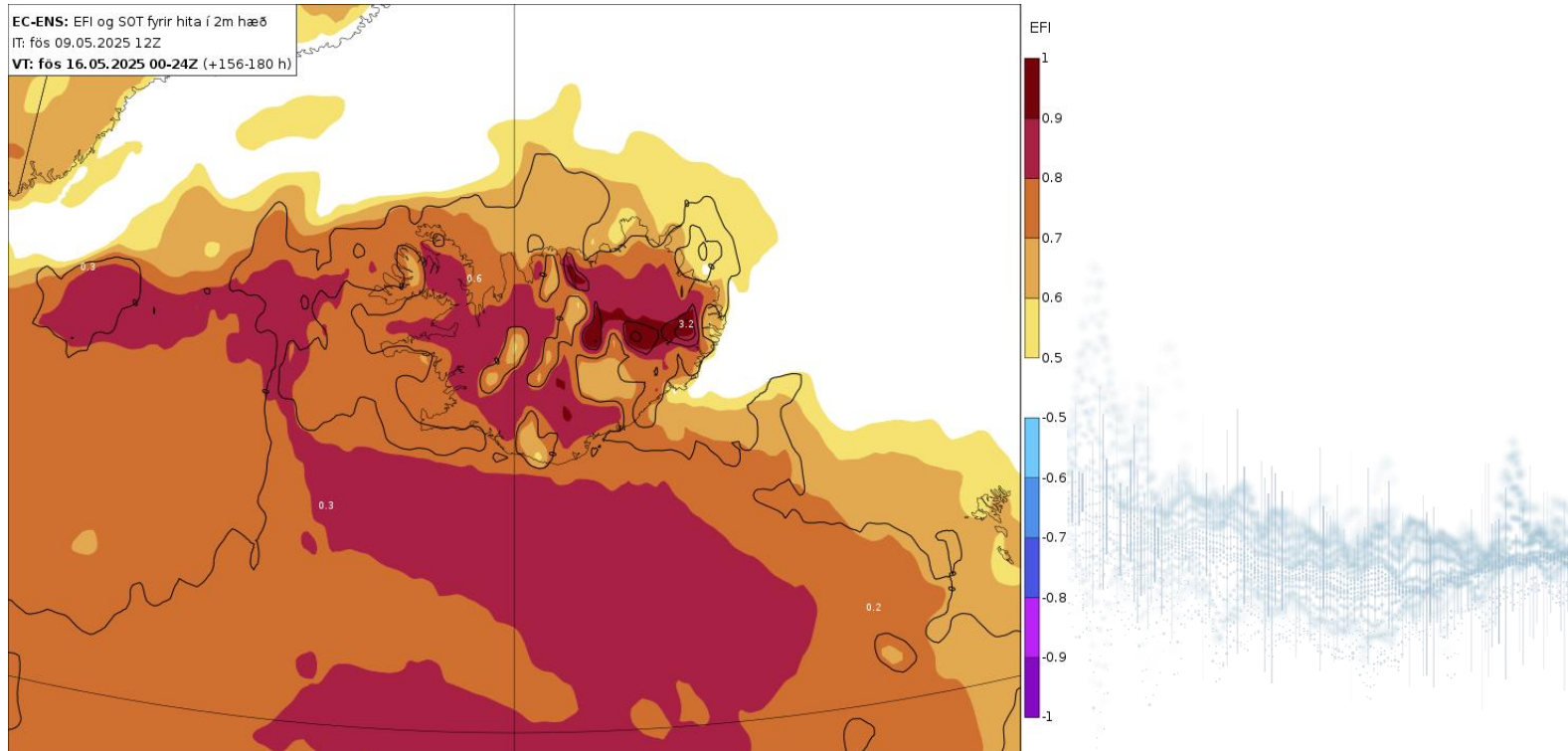


Figure 2: Sea surface temperature (SST) anomalies in May 2025. SSTs were remarkably high, especially north of Iceland.

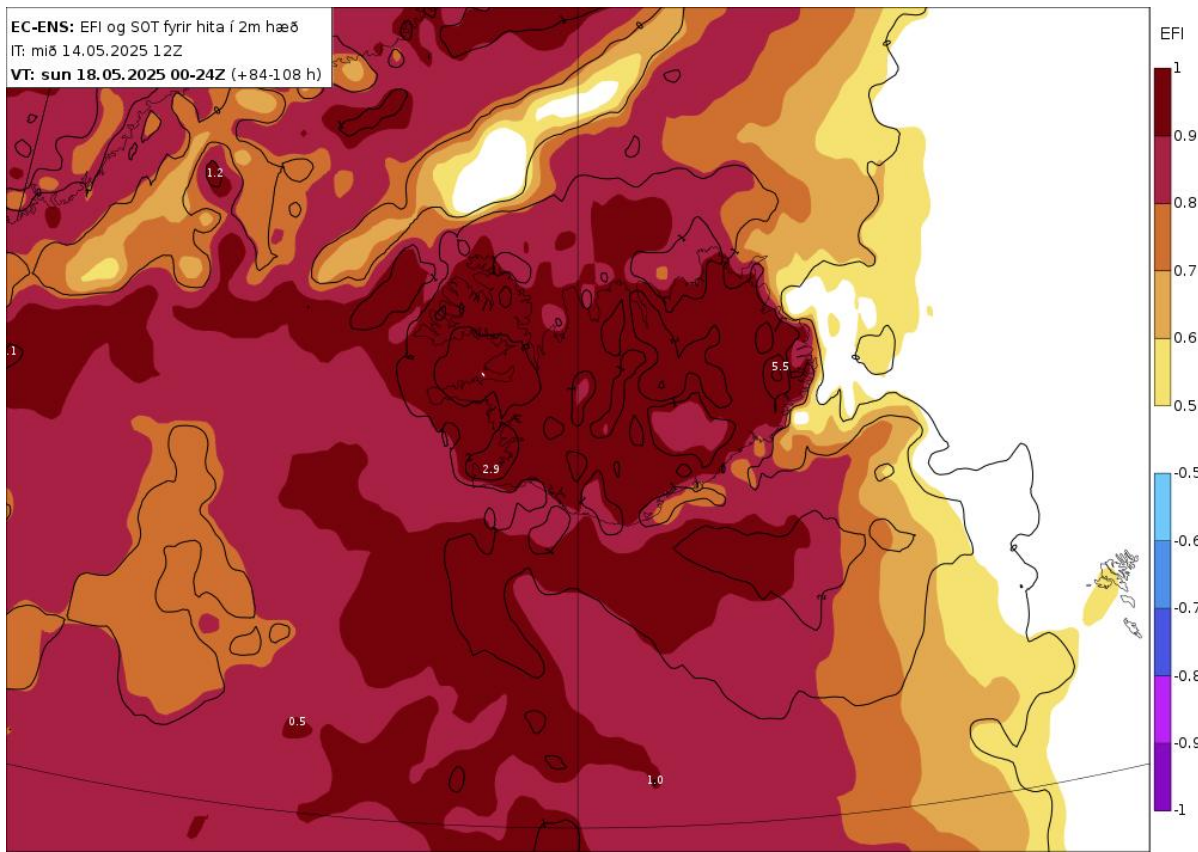
EFI and SOT

Forecast on the 9th of May for Friday the 16th of May

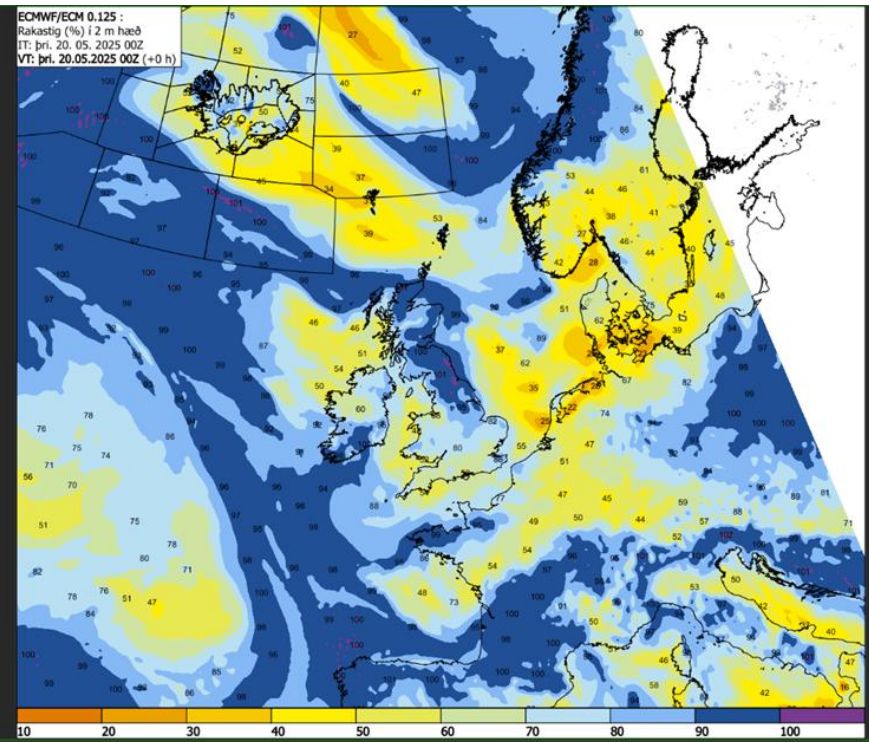
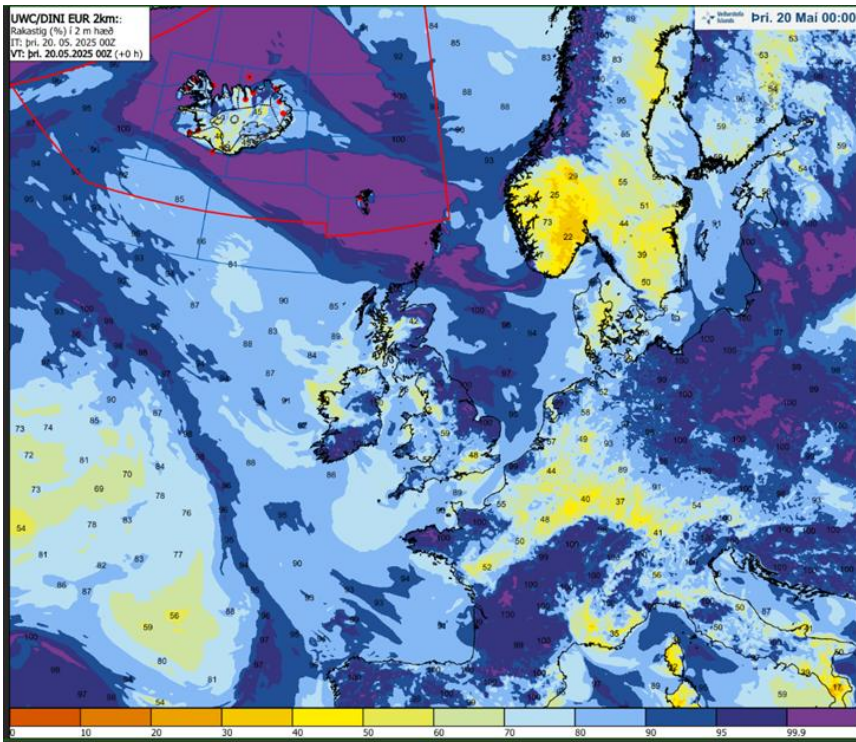


EFI and SOT

Forecast on the 4th of May for Sunday the 18th of May

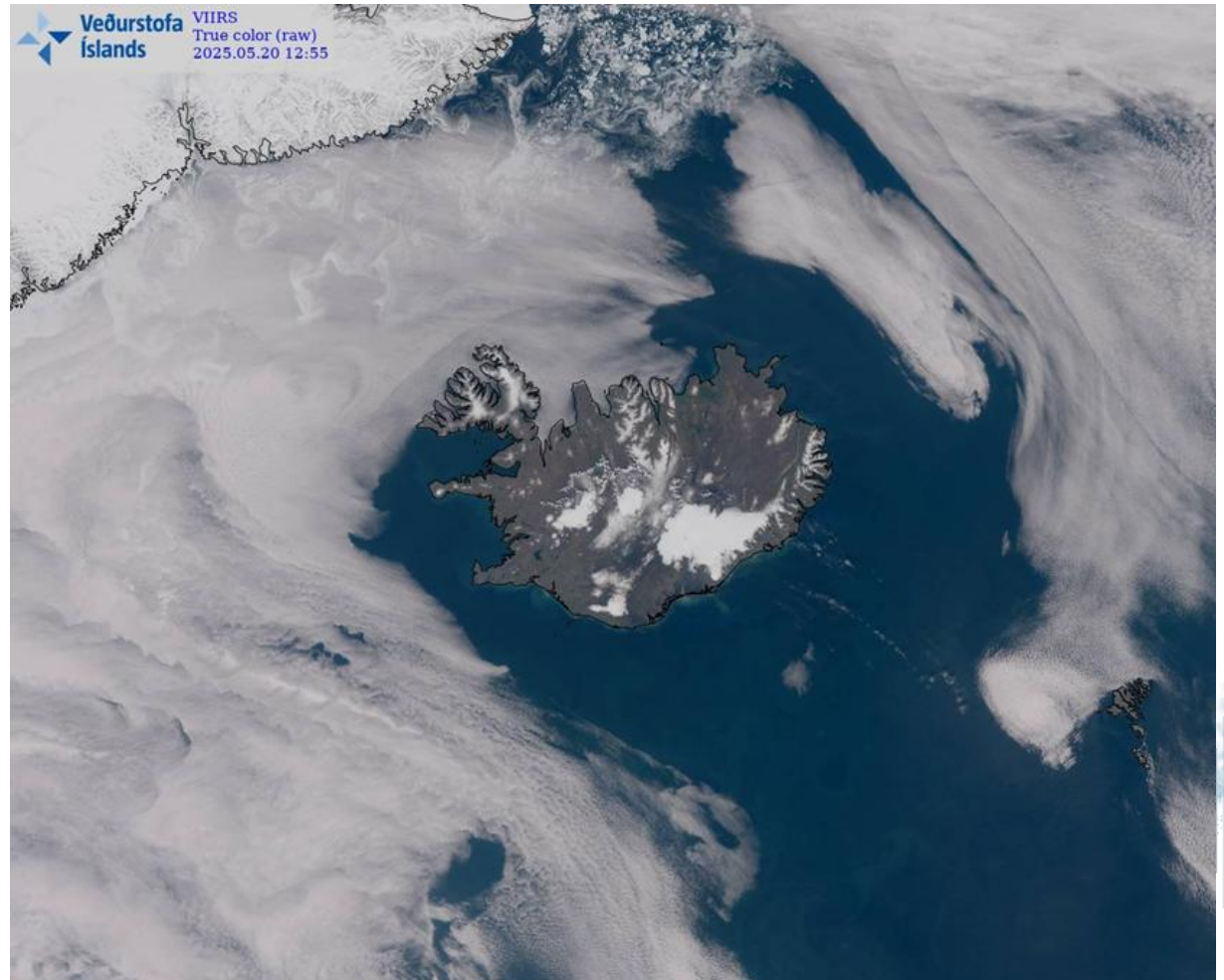


Difference between DINI and ECMWF forecast



Satellite

VIIRS satellite image at
13z 20.05



Climate change made the May 2025 heatwave far more likely and intense

According to World Weather Attribution

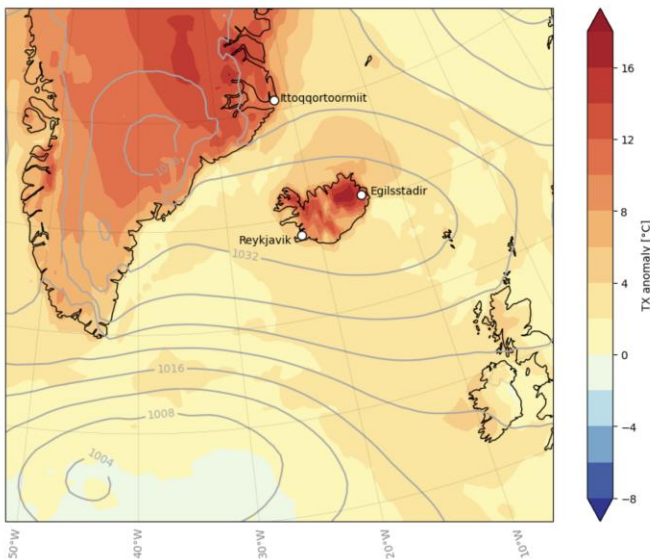


Figure 1: Anomaly in daily maximum temperature (TX) on 19 May 2025, with respect to the May mean TX 1991-2020 climatology [$^{\circ}\text{C}$] (shading) and mean sea level pressure [hPa] (grey contours), Figure from World Weather Attribution.

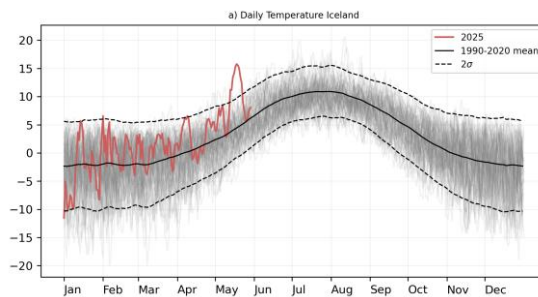
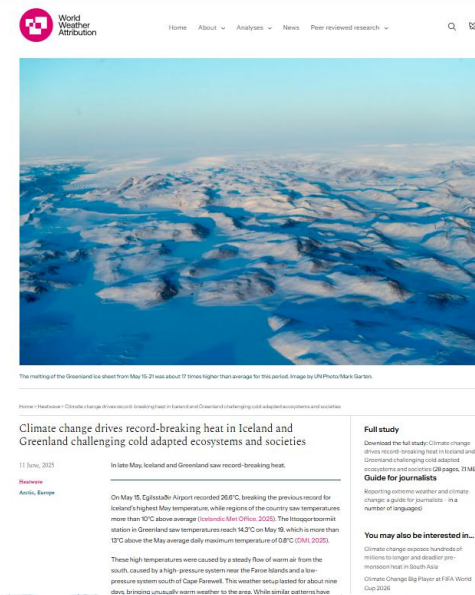


Figure 2: Seven day average maximum temperature (TX7x) in Iceland for the period of 15 of May to 21 May. Figure from World Weather Attribution.

- ~40× more likely due to human-induced climate change
- ~3°C hotter than in a pre-industrial climate
- Could become even more frequent and intense in a warmer future climate



- Overall, the May 2025 event illustrates how climate change is already reshaping the frequency and intensity of extreme events in Iceland

Thank you