Meteorologisk institutt

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# The weather in Norway

## Climatological monthly overview
## October 2024

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Extreme weather Jakob also caused flooding in Bergen. Photo: Kristin Hatlen

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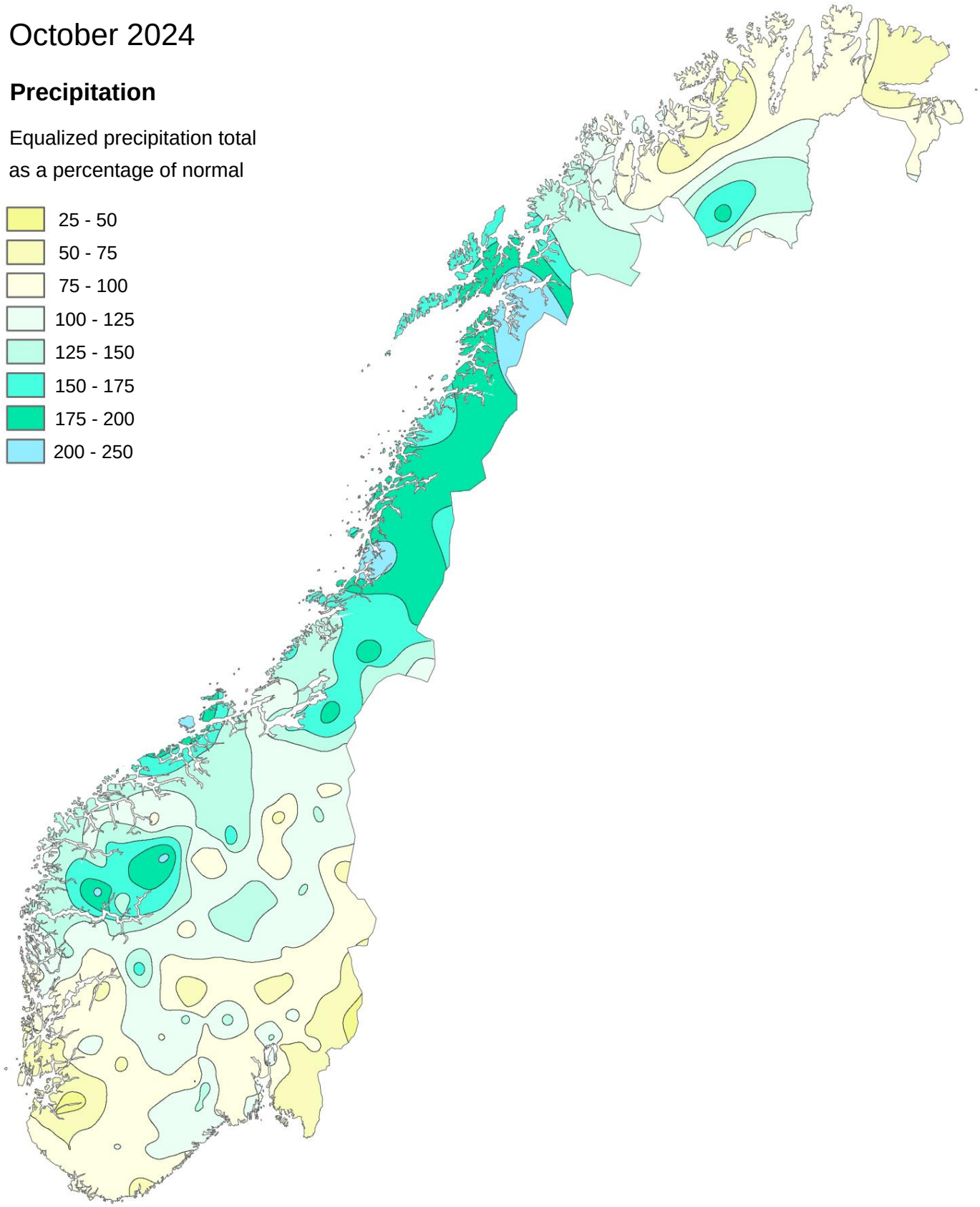
# Climatological monthly overview

## October 2024

### Precipitation

Equalized precipitation total
as a percentage of normal

- 25 - 50
- 50 - 75
- 75 - 100
- 100 - 125
- 125 - 150
- 150 - 175
- 175 - 200
- 200 - 250



The normal period is 1991 - 2020

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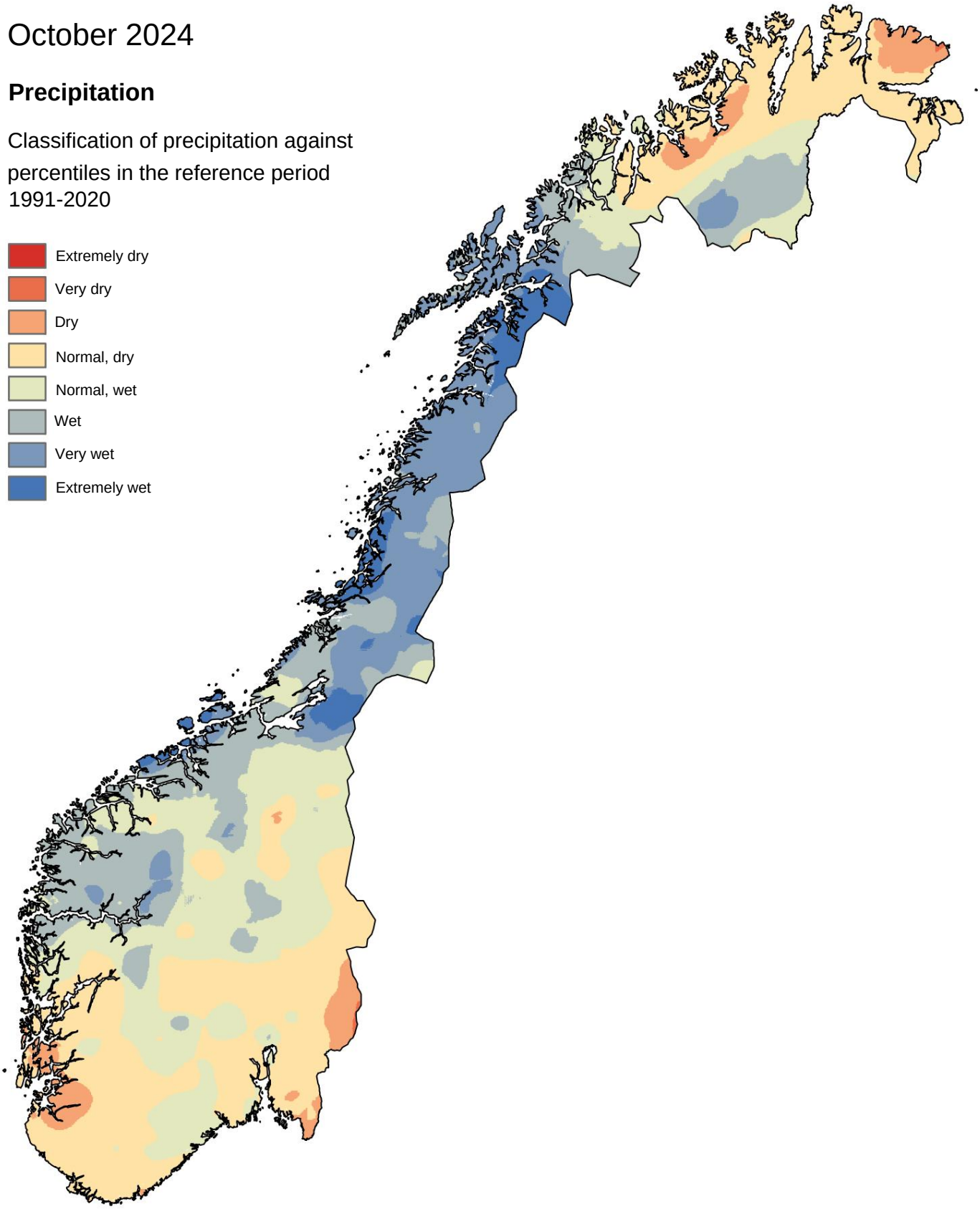
### Precipitation

Classification of precipitation against percentiles in the reference period 1991-2020

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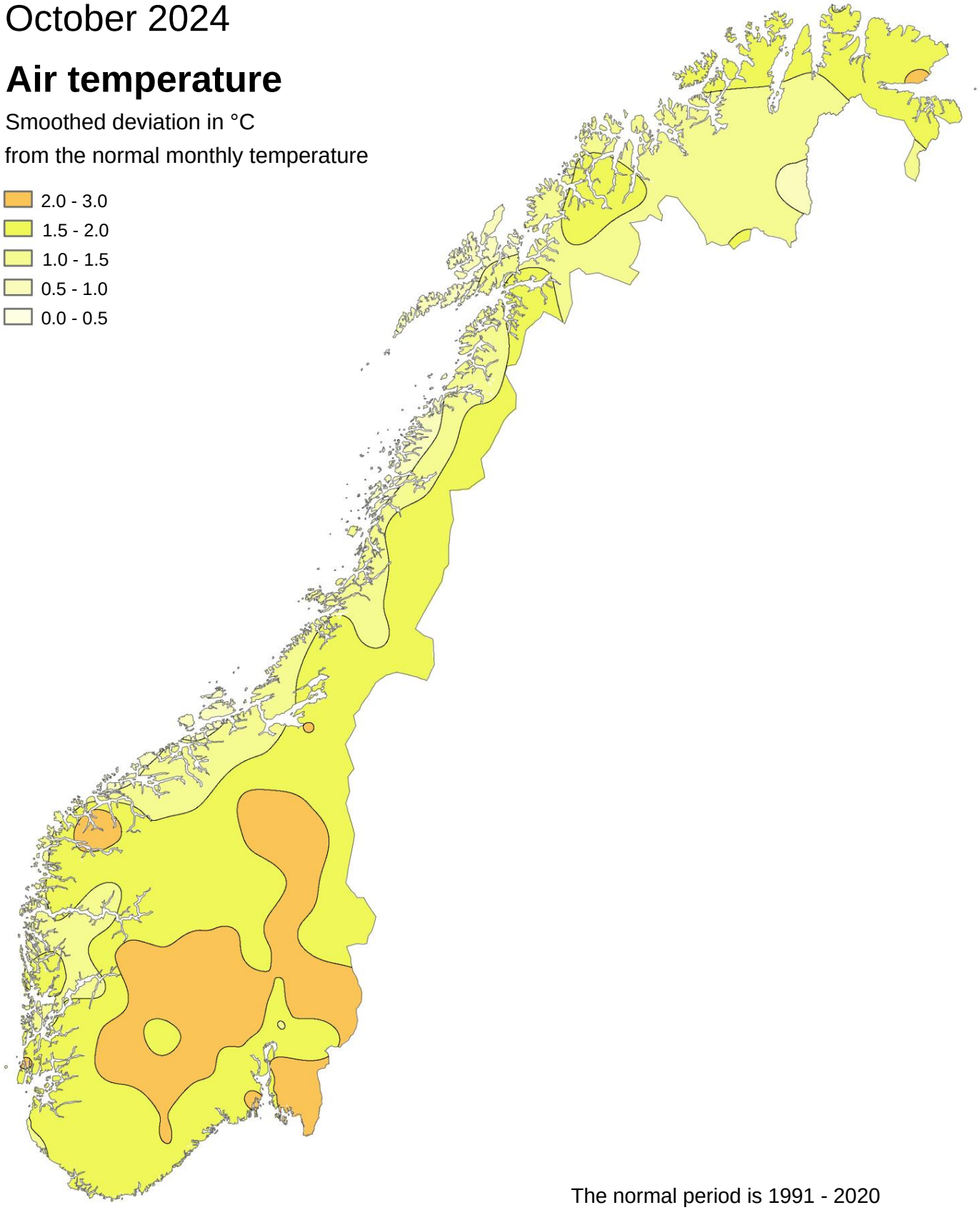
## Air temperature

Smoothed deviation in °C
from the normal monthly temperature

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## October 2024

## Air temperature

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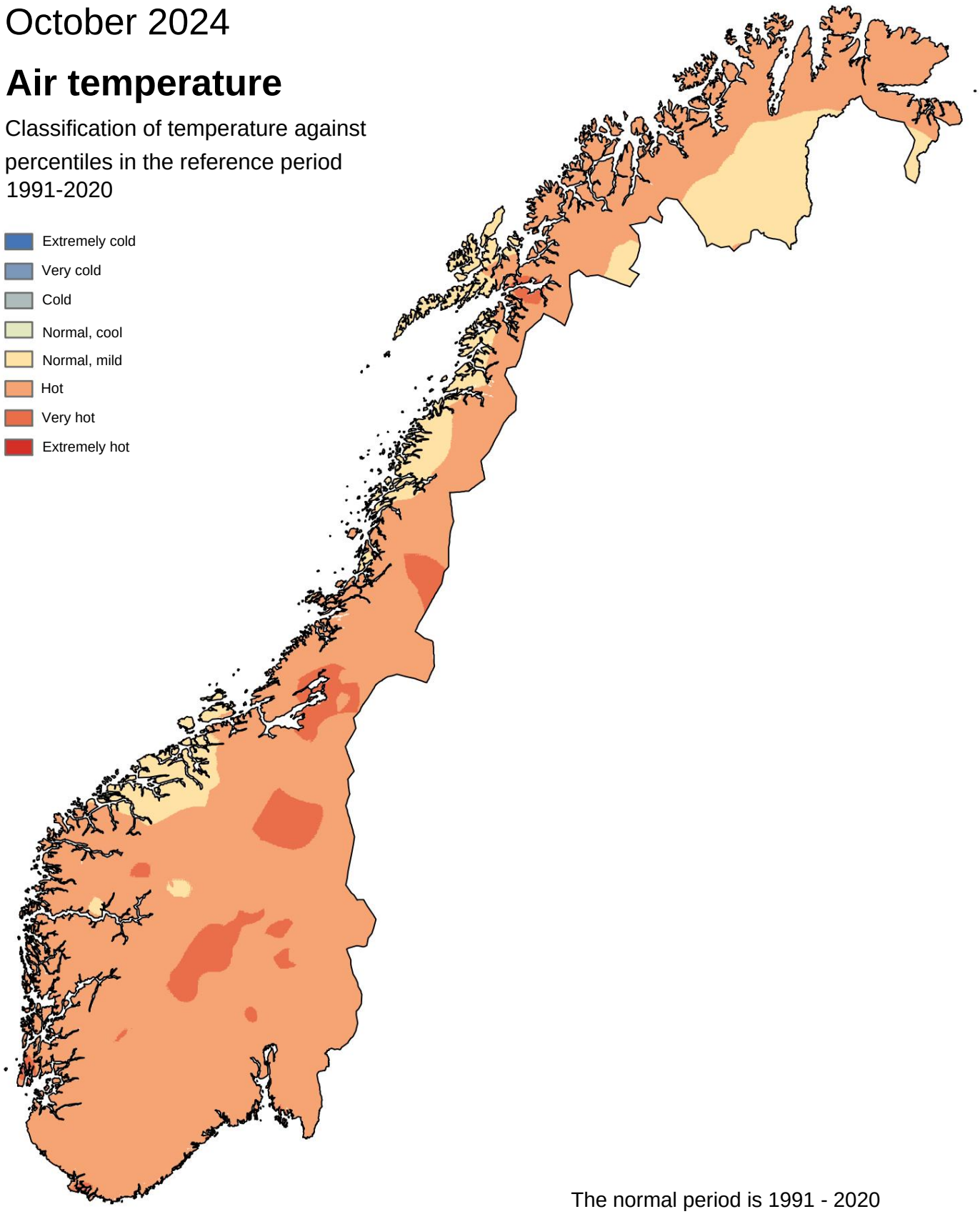


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# October 2024: 14th warmest

*The classification of temperature shows that October was "Warm" in most of the country, but with some minor elements of "Very hot" and "Normal - mild" areas as well. The national temperature was 1.7 °C above normal. The classification of rainfall shows that in southern Norway the rainfall varied from "Extremely wet" in the inner parts of Trøndelag, to "Dry" in some smaller areas in Rogaland and the East Afjelske. In northern Norway, the month was "Extremely wet" in northern areas of Nordland and "Dry" in parts of Finnmark. Nationwide, 20% more precipitation fell than normal.*

**Extreme weather *Jakob***

On 30 October, an extreme weather warning was issued for heavy rainfall in Møre and Romsdal, Vestland and Rogaland. In the official statistics, the rainfall between October 30 at 07:00 and October 31 at 07:00 is recorded on the date 31. October, while the rainfall between 31 October at 07 and 1 November at 07 is entered on the date 1 November.
The largest two-day rainfall in the period 31 October to 1 November was 51250 Øvstedal (Voss, Vestland) with 263.0 mm. Gullfjellet (Bergen, Vestland) had the highest total for 24 consecutive hours with 203.1 mm between 31.10 at 01 and 01.11 at 01.

**Air temperature**

The classification shows that October was "Warm" in most of the country, but with some minor elements of "Very hot" and "Normal - mild" areas as well. See map page 5. The national temperature was 1.7 °C above normal, and the month is the 14th warmest in a series of measurements going back to 1901. In this series of measurements, 1961 is the warmest at 3.5 °C above normal, while 1992 is the coolest with 4.6 °C below normal. The biggest deviations were around 2.5 °C above normal at a couple of stations in Innlandet and Buskerud. Certain stations in Nordland and Troms had deviations of a couple of tenths above normal.

The hottest stations were

- 41770 Lindesnes lighthouse (Agder) 11.4 °C (1.6 °C above normal)
- 27500 Færder lighthouse (Vestfold) 11.3 °C (1.9 °C above normal)
- 39100 Oksøy lighthouse (Kristiansand, Agder), 44610 Kvitsøy – Nordbø (Rogaland) and 47350 Røvær (Haugesund, Rogaland) 11.2 °C (respectively 1.8 °C, 1.4 °C and 1.4 °C above normal)

The coldest stations were

- 89985 Sjufjellet (Balsfjord, Troms, 1074 m) -2.0 °C (0.3 °C above normal)
- 15270 Juvvasshøe (Lom, Innlandet, 1894 m above sea level) -1.8 °C (1.8 °C above normal)
- 89010 Kistefjell (Senja, Troms, 982 m) -1.7 °C (0.5 °C above normal)

The highest maximum temperature was 20.9 °C, and was recorded on the 17th at 59680 Ørsta – Volda airport (Ørsta, Møre and Romsdal). The average of the highest maximum temperature in October in the normal period 1991-2020 is 20.1 °C. The lowest minimum temperature was -15.4 °C, and was already recorded on the 8th at 97350 Cuovddatmohkki (Karasjok, Finnmark). We have to go back to 1978 to find an earlier date for the month's lowest temperature in October. Then 93710 Kautokeino II (Finnmark) was the coldest with -18.0 °C on 7 October.
The average of the lowest minimum temperature in October in the normal period 1991-2020 is -21.0 °C.

**Precipitation**

The classification shows that in southern Norway the rainfall varied from "Extremely wet" in the interior of Trøndelag, to "Dry" in some smaller areas in Rogaland and the East Afjelske. In northern Norway, the month varied from "Extremely wet" in northern areas of Nordland to "Dry" in parts of Finnmark. See the map on page 3. On a national basis, 20% more precipitation fell than normal. In the measurement series that goes back to 1901, October 1983 is the wettest with 65% more precipitation than normal, while 1915 is the driest with 70% less precipitation than normal. The biggest deviations this year were from 100% to up to 150% more rainfall than normal at several stations in Nordland and Møre og Romsdal.
Some stations in Eastern Norway and in Rogaland received around 50% less rainfall than normal.

The wettest stations were

- 85440 Kvitfossen in Vågan (Vågan, Nordland) 647.8 mm (90% more precipitation than normal)
- 80200 Lurøy (Lurøy, Nordland) 636.8 mm (83% more precipitation than normal)
- 57660 Eimhjellen (Gloppen, Vestland) 519.8 mm (74% more precipitation than normal)

The average of the highest monthly rainfall in October in the normal period 1991-2020 is 508 mm.

The driest stations were

- 15480 Skjåk II (Skjåk, Inlandet) 22.3 mm (3% less precipitation than normal)
- 9870 Blanktjernmoen in Kvikne (Tynset, Inlandet) 24.0 mm (33% less precipitation than normal)
- 9160 Folldal - Fredheim (Folldal, Innlandet) 25.4 mm (12% less precipitation than normal)

The highest daily rainfall was 94.3 mm, and was recorded on the 24th at 57660 Eimhjellen (Gloppen, Vestland).
The average of the highest daily rainfall in October in the normal period 1991-2020 is 114 mm.

**Snow conditions**

The snow conditions at the end of the month show more snow than normal in the mountains north of Dovre and little or no snow in the mountains elsewhere in southern Norway. In Northern Norway, there are large areas with more snow than normal in Nordland, Troms and Vest-Finnmark, and little snow otherwise. See the map page 6.

# Arctic

## Air temperature

Bjørnøya was the warmest weather station with an average of 3.0 °C (2.3 °C above normal). The hoof was coldest at -4.1°C on average (no normal yet).

Ny-Ålesund had an average temperature of -0.8 °C, which is 3.4 °C above normal. At Hopen, the monthly temperature was 1.5 °C. This is 3.0 °C above normal and the 3rd warmest October recorded on the island. The record is from 2016 with a deviation of +3.8 °C. Svalbard Airport had an average temperature of -0.6 °C, which is 3.2 °C above normal. Jan Mayen had a monthly temperature of 0.4 °C, which is 0.9 °C below normal.

The month's highest maximum temperature was 9.3 °C, and was measured on 20 October on Bjørnøya. The lowest minimum temperature was measured at Reindal Pass on 31 October with -15.6 °C.

### Precipitation

Jan Mayen recorded the most precipitation of the Arctic stations with 146.4 mm (103% more precipitation than normal). Hornsund got the second most with 141.0 mm (no normal yet). Adventdalen was the driest with 18.1 mm (no normal yet). Jan Mayen measured the greatest daily precipitation of the arctic stations with 34.5 mm on 17 October.

**Sea ice** In October, the extent of sea ice in the Arctic (figure 1) was measured at 6.24 million km2 for October recorded with satellite measurements1 (figure 2a). Compared to the reference period, this is defined as a very low prevalence. Around Svalbard, the ice extent is now 0.19 million km2 extent in this area for October (figure 2b). , which is the 3rd lowest prevalence , which is a record low

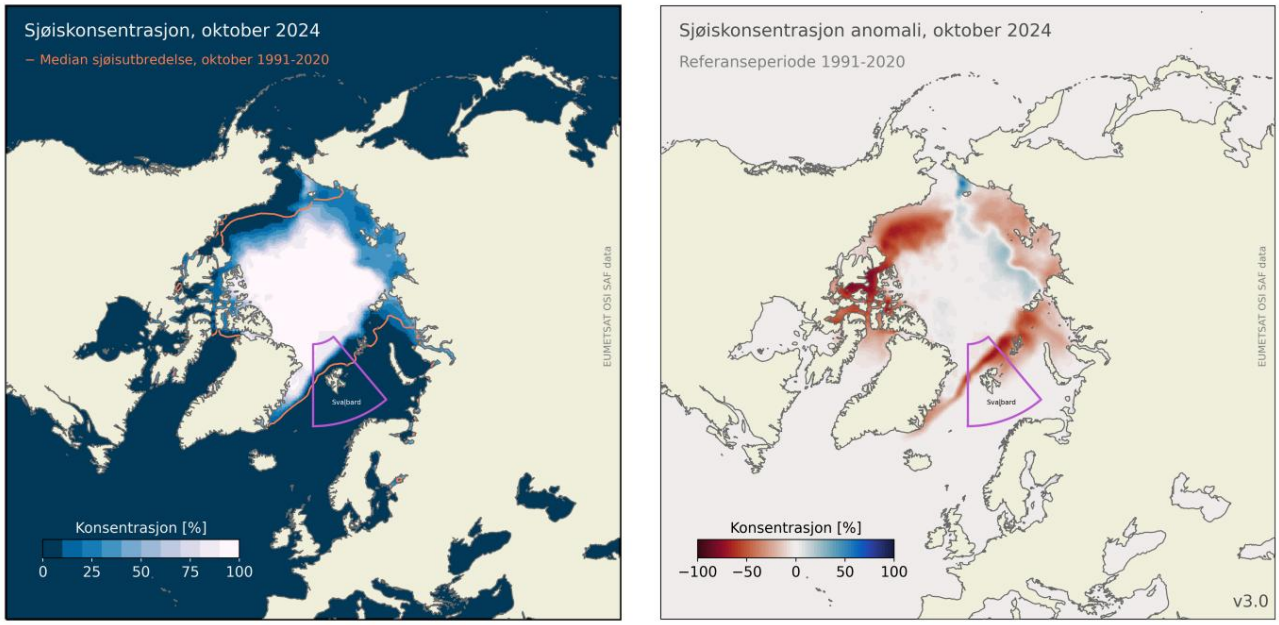
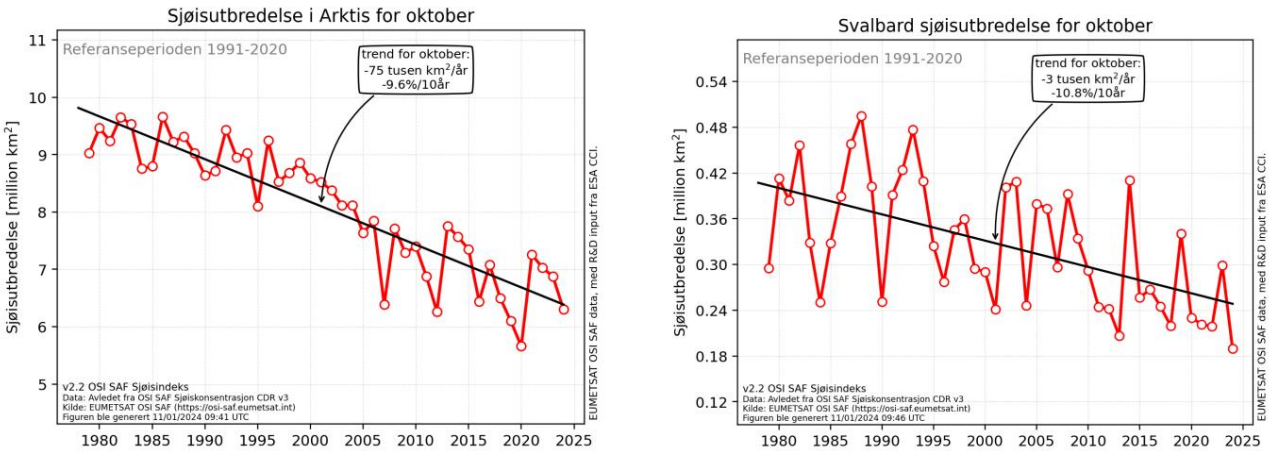



**Figure** 1: Left: The sea ice concentration in the Arctic for October 2024, where blue represents open sea and white represents 100% ice cover. The orange contour marks the middle ice extent (median) for the period 1991–2020. Right: Deviation in percentage of the ice concentration from the reference period 1991–2020. Red areas have less ice than normal while blue have more. The purple box indicates the Svalbard region shown in Figure 2b.




(a) Arctic (b) the Svalbard area

**Figure** 2: Sea ice extent (a) in the Arctic and (b) for the Svalbard area for October in the period 1979–2024. The trend is calculated in relation to the reference period 1991–2020. The Svalbard area is marked on the map in Figure 1.

1We have satellite observations of sea ice back to October 1978.

# Antarctica

**Sea**

**ice** In the southern hemisphere (figure 3), sea ice extent for October was measured at 17.08 million km2, which is the second lowest extent that has been recorded for October, and defined as extremely low compared to the reference period (figure 4a). In the sea area outside Dronning Maud Land, the ice extent is 3.72 million km2

, which is a record low prevalence in this area for October (figure 4b).

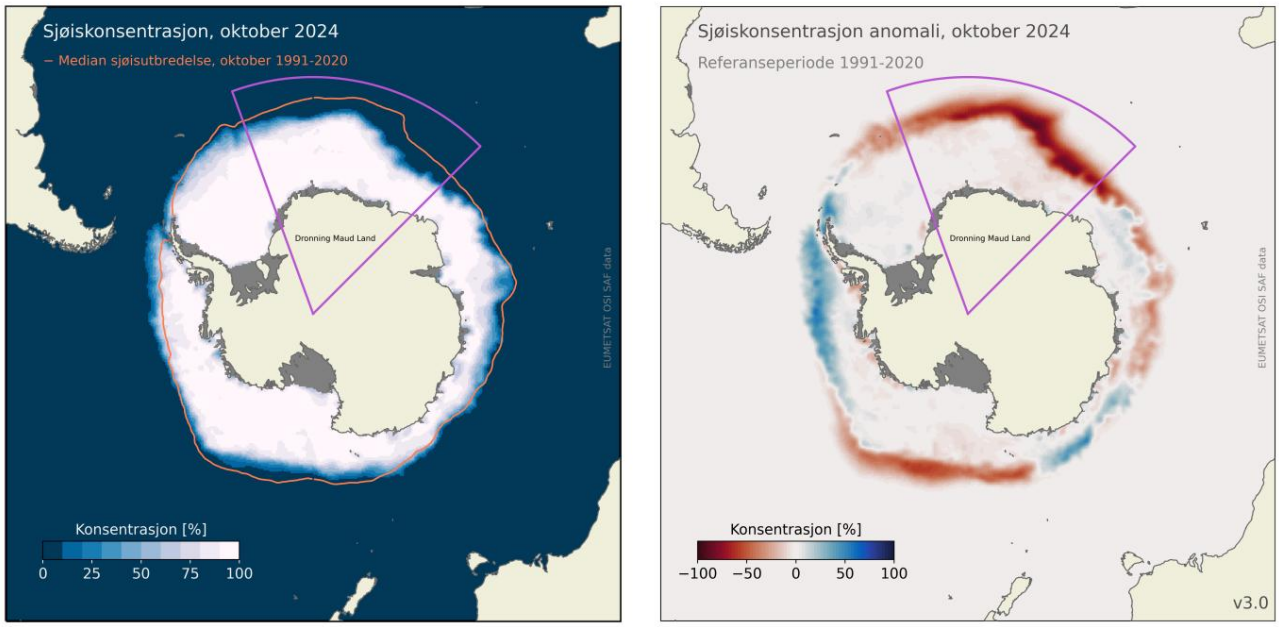
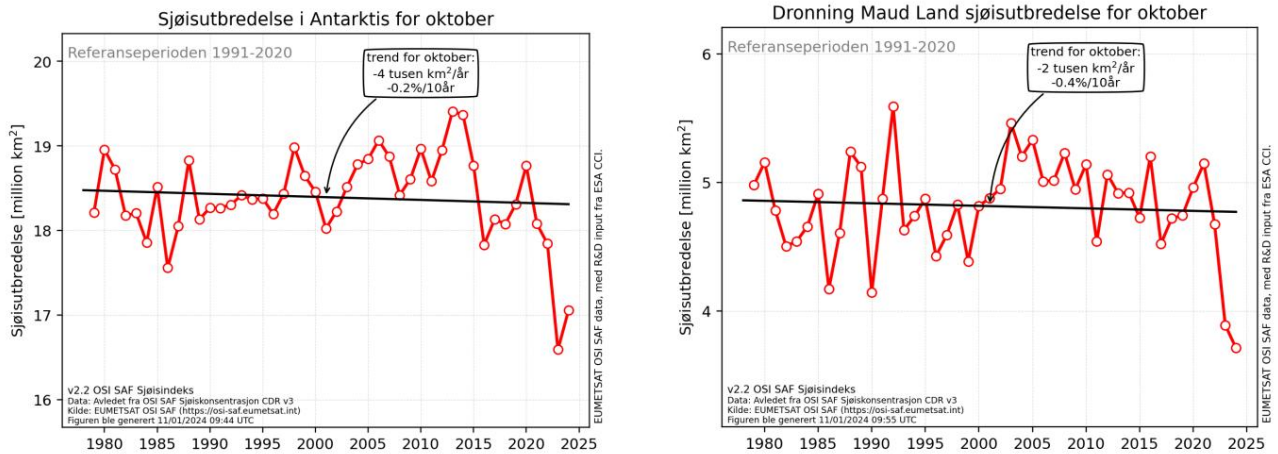



**Figure** 3: Left: The sea ice concentration in Antarctica for October 2024, where blue represents open sea and white represents 100% ice cover. The orange contour marks the middle ice extent (median) for the period 1991–2020. Right: Deviation in percentage of the ice concentration from the reference period 1991–2020. Red areas have less ice than normal while blue have more. The gray areas towards land represent ice shelves.
The purple box indicates the sea area outside Dronning Maud Land shown in Figure 4b.




(a) Antarctica

(b) Queen Maud Land sector

**Figure** 4: Sea ice extent (a) in Antarctica and (b) for a sector outside Queen Maud Land (b) for October in the period 1979–2024. The trend is calculated in relation to the reference period 1991–2020. The Queen Maud Land sector is marked on the map in Figure 3.

See more updated graphs for sea ice on MET's website about the cryosphere https://cryo.met.no/nb/sjoe-is-indeks.

**Records**

Data from weather and precipitation stations that report daily, and which have been in operation for fifteen years or more. "Start" indicates the first year of local October measurements. * means tangent of record.

**Stations with a new October record for 24-hour rainfall**

| Stnr | Name | Municipality | mm | Date | Start | Previous mm | | |
|---|---|---|---|---|---|---|---|---|
| 15730 | Bråtå - Slettom | Chess (Inland) | 30.8 | 22 | 1999 | 27.10.2014 | 30.8 | |
| 64300 | Kristiansund - Karihola | Kristiansund (Møre and Romsdal) | 57.2 | 6 | 32.3 | 1973 | 10.10.1998 | 51.2 |
| 69420 | Kluksdal | Meråker (Trøndelag) | 31 | 35.3 | 24 | 2000 | 02.10.2015 | 26.8 |
| 77425 | Majavatn V | Grane (Nordland) | 31.7 | 25 | | 2008 | 02.10.2015 | 33.3 |
| 83710 | Drag - Ajluokta | Hamarøy (Nordland) | | | | 2007 | 16.10.2011 | 28.6 |

**Stations with a new October record for high monthly rainfall**

| Stnr | Name | Municipality | mm | Start | Previous | mm | |
|---|---|---|---|---|---|---|---|
| 65370 | Smøla – Moldstad | Smøla (Møre and Romsdal) | 284.6 | 1964 | 1983 | 275.2 | |
| 69420 | Kluksdal | Meråker (Trøndelag) | 134.8 | 2000 | 2012 | 130.4 | |
| 76250 | Sømna - Stein | Sømna (Nordland) | 324.5 | 1984 | 1986 | 272.5 | |
| 79764 | Hjartåsen | Rana (Nordland) | 281.9 | 2009 | 2018 | 257.5 | |
| 82000 | Setså | Saltdal (Nordland) | 152.2 | 2009 | 2015 | 131.8 | |
| 83710 | Drag - Ajluokta | Hamarøy (Nordland) | 216.3 | 2007 | 2015 | 158.6 | |
| 85890 | Røst Airport | Voice (Nordland) | 145.0 | 2009 | 2021 | 139.9 | |
| 87640 | Harstad stadium | Harstad (Troms) | 177.0 | 2003 | 2003 | 149.6 | |
| 99710 | Bjørnøya | Svalbard (Svalbard) | 114.3 | 1920 | 1970 | 104.0 | |
| 99754 | Hornsund | Svalbard (Svalbard) | 141.0 | 2002 | 2016 | 137.3 | |