



Winter 2021/2022 Outlook

By TransRe's Catastrophe Research and Reporting Team

EUROPE WINTER STORM OUTLOOK

The current NAO forecasts suggest a NAO negative phase through December, possibly transitioning into NAO positive phase from January 2022.

● We expect a colder Autumn and the early arrival of winter in Europe.

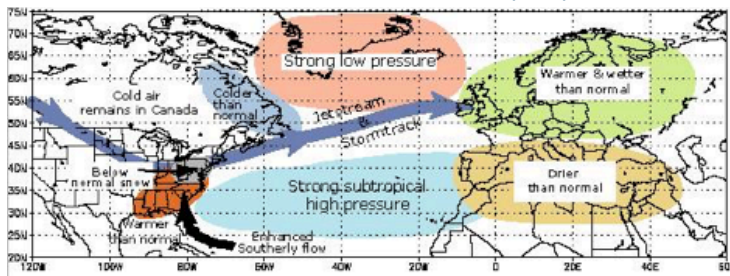
Supporting Notes:

North Atlantic Oscillation (NAO) index measures the variation in the strength and position of the Icelandic Low (low air pressure near Greenland and Iceland) and the Azores High (high air pressure over Central North Atlantic Ocean). NAO impacts the intensity and location of the North Atlantic jet stream and storm track as well as temperature and precipitation patterns in Europe.

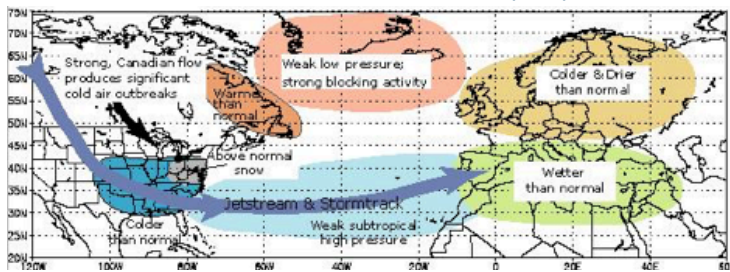
NAO positive means Northern and Central Europe may expect a higher likelihood of winter storms, above average precipitation and warmer than average temperature = increased winter storm frequency and clustering of the events.

NAO negative means Southern Europe may expect higher likelihood of winter storms, above-average precipitation, and warmer-than-average temperatures.

POSITIVE PHASE OF THE WINTERTIME NORTH ATLANTIC OSCILLATION (NOA)



NEGATIVE PHASE OF THE WINTERTIME NORTH ATLANTIC OSCILLATION (NOA)



Source: [NOAA](https://www.ecmwf.int/en/forecasts/charts)

1 The European Centre for Medium-Range Weather Forecasts <https://www.ecmwf.int/en/forecasts/charts>

NORTH AMERICA WINTER STORM OUTLOOK

The current above normal water temperatures in the Western Atlantic will potentially result in heavier precipitation early in the season, and a higher likelihood of Northeast flooding.

● We expect a colder winter in North America, compared to the past seven years.

Supporting Notes:

- Fast growing snowpack across Canada
- Active storm tracks in Northern US states, with frequent snow and ice
- Weaker Polar vortex allows surges of cold (arctic) air/snowfall moving down toward mid-latitudes
- Large scale heavy snow and ice storms increase chance for commercial power outages
- Potential disruption to travel, demand for salt and sand for roads, and heating demand, especially for natural gas



Source: [Accuweather](https://www.accuweather.com)



EL NIÑO/SOUTHERN OSCILLATION (ENSO)

● We expect weak-to-moderate La Niña conditions to continue December-February.

North America – continuing drought conditions for US Southern Plains, and high risk of wildfires in southwest/central California

South America – above average rainfall for Northern Brazil, drier conditions in Argentina

Australia/southeast Asia – above average rainfall

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