

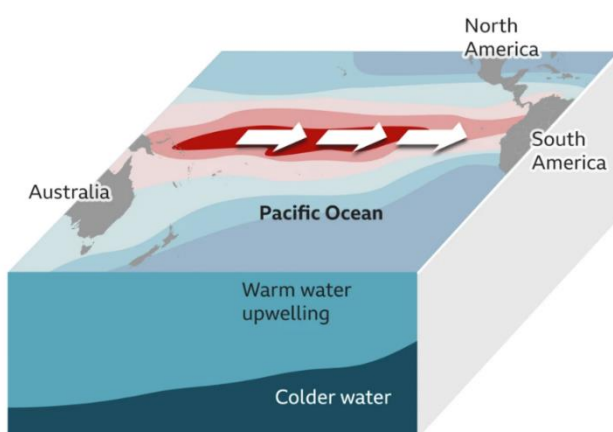
What has the El Niño and La Niña got to do with rural Somerset?

At hand on your smart phone, you will probably have an app that will show if it's going to rain in the next few minutes and how long before it stops. Without the scientific tools of the present day, ancient people had to rely on natural observation and religious beliefs to predict storms, rain, and other weather phenomena. Each civilisation developed its own system, from observing nature to trying to interpret the actions they attributed to their gods.

Even as some politicians in the USA are presently trying to suppress the empirical evidence of scientists that has been acquired by painstaking and direct observation, the overall consensus is that our planet Earth, is on track to be 2.7°C hotter by 2100.

The UK is seeing more frequent and intense heatwaves like we saw in the summer of 2022, when 40°C temperatures were reached for the first time in the UK. This year, the prolonged dry spell has already caused agriculture to suffer and it is reasonably predicted that we will inevitably experience more frequent intense downpours of rain that will stretch the capacity of our lowland drainage again.

For many years it has been recognised that events on the other side of the world in the Pacific Ocean, affect climate elsewhere across the globe. What is new, is the realisation that global warming is making everywhere more sensitive to what are known as the El Niño – Southern Oscillation Cycle (ENSO). El Niño and La Niña are two opposing climate patterns which may each last for 9 to 12 months or longer. The events occur every two to seven years, on average and El Niño occur more frequently than La Niña.

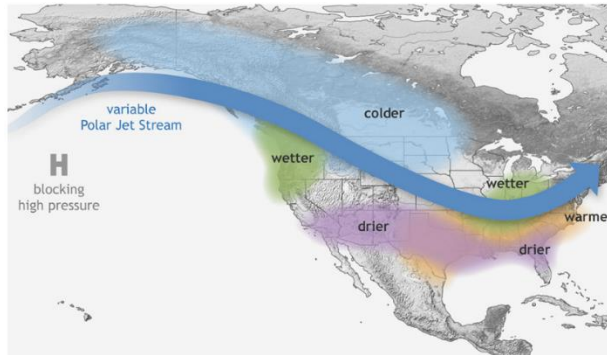


During normal conditions in the Pacific ocean, trade winds blow west along the equator, taking warm water from South America towards Asia. To replace that warm water, cold water rises from the depths — a process called upwelling.

During El Niño, trade winds weaken. Warm water is pushed back east, toward the west coast of the Americas.

El Niño is declared when the water warms up by half a degree Celsius higher than the long term average. El Niño can have widespread effects beyond the Americas. The warmer waters cause the Pacific jet stream to move south of its neutral position. Paradoxically, El Niño can cause us to have really cold winters here in the United Kingdom. 2009-2010 was the coldest winter in the UK for 31 years, since 1979, and that was during an El Niño.

It is commonly expected that La Niña will follow immediately on from an El Niño event, but this is not always the case. During La Niña events, trade winds across the Pacific Ocean are even stronger than usual, pushing more warm water toward Asia. Off the west coast of the Americas, upwelling increases, bringing cold, nutrient-rich water to the surface.

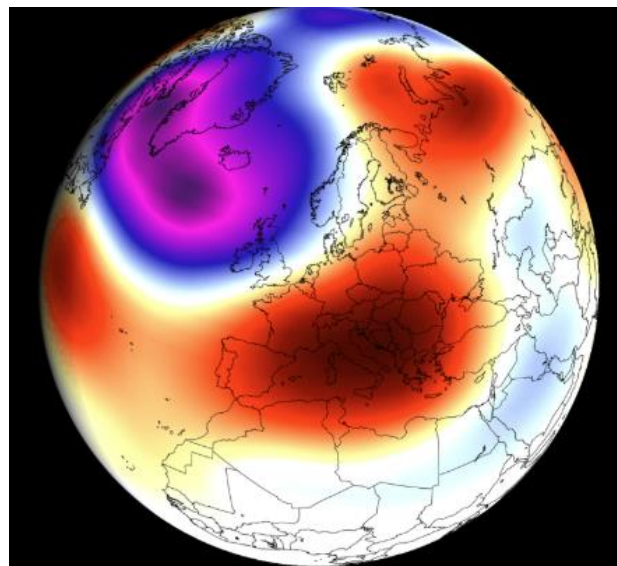


These cold waters in the Pacific push the jet stream northward. This jet stream then sits over the Atlantic ocean and can use its moisture to boost rainfall as well as influence the path that storms take. La Niña has less of an effect in Europe but it does tend to lead to milder winters in Northern Europe (the UK especially).

While some scientists say the link between climate change and La Niña and El Niño is not entirely clear, it is certainly intensifying weather extremes globally. In recent years, rainfall has become more variable - deviating from historical averages and expected patterns.

This spring, there has been a dominant high-pressure system over the continent and a low over the west/northwest, which is also a common signal for La Niña springs in Europe, as seen in past data. Normal to lower temperatures are usually found far north in a La Niña spring, associated with a northerly shift of the jet stream.

La Niña tends to bring warmer and drier springs over parts of central and western Europe.



The increase in greenhouse gases caused by the unabated burning of fossil fuels has also increased the frequency and intensity of extreme weather events, according to a report by the Intergovernmental Panel on Climate Change (IPCC).

[Climate change is happening. We can see it in our observations. But adaptation to climate change needs to keep up with the weather - Met Office](#)

[What are El Niño and La Niña?](#)

[Spring 2025 in Europe: Unexpected impact of La Niña, seen in the latest Long-Range Forecasts » Severe Weather Europe](#)