

climate intelligence

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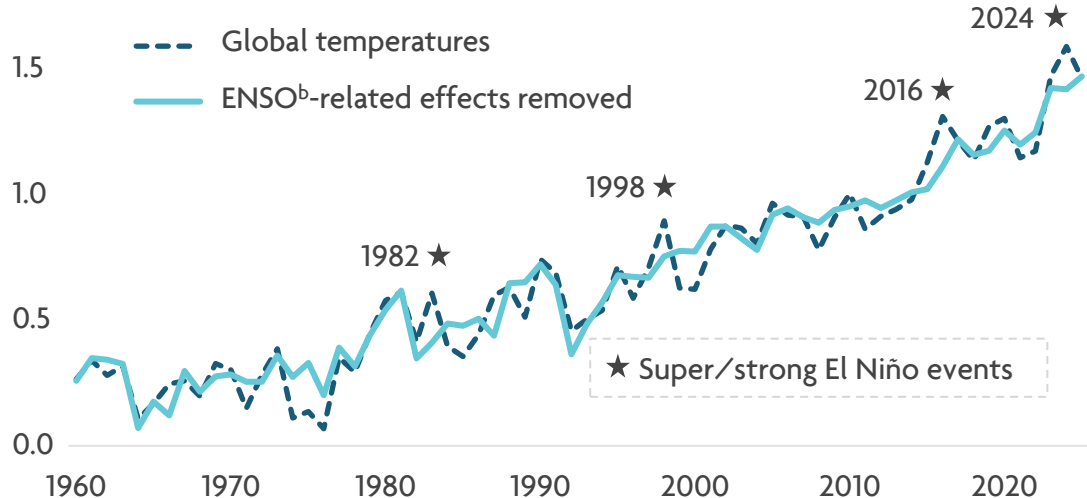
What to expect from a super El Niño?



The world is facing mounting economic losses from severe climate-related disasters (~US\$ 380 bn in average globally in the last decade¹). In 2026, these increasing impacts may be compounded by the prospect of a strong El Niño. While this phenomenon itself is not caused by climate change, its impacts are unfolding against the backdrop of a warmer planet, posing threats for businesses worldwide

There is a >95% chance of a super El Niño^a to be developed in 2026, potentially setting unprecedented warming until 2027²

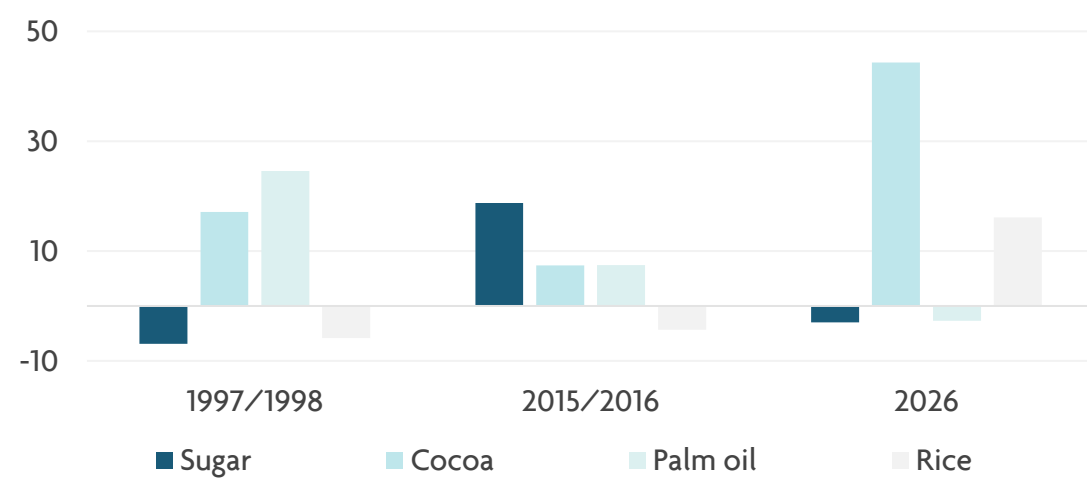
Warming vs. 1850 – 1900 average²
°C



- El Niño is a **recurring natural climate pattern** in the tropical Pacific that releases heat from the ocean into the atmosphere
- It temporarily **raises global temperatures** on top of human-induced warming. A +2 °C increase in the ocean is expected in 2026³

As a result, food commodities and trade infrastructure are the first ones to suffer the impacts⁵

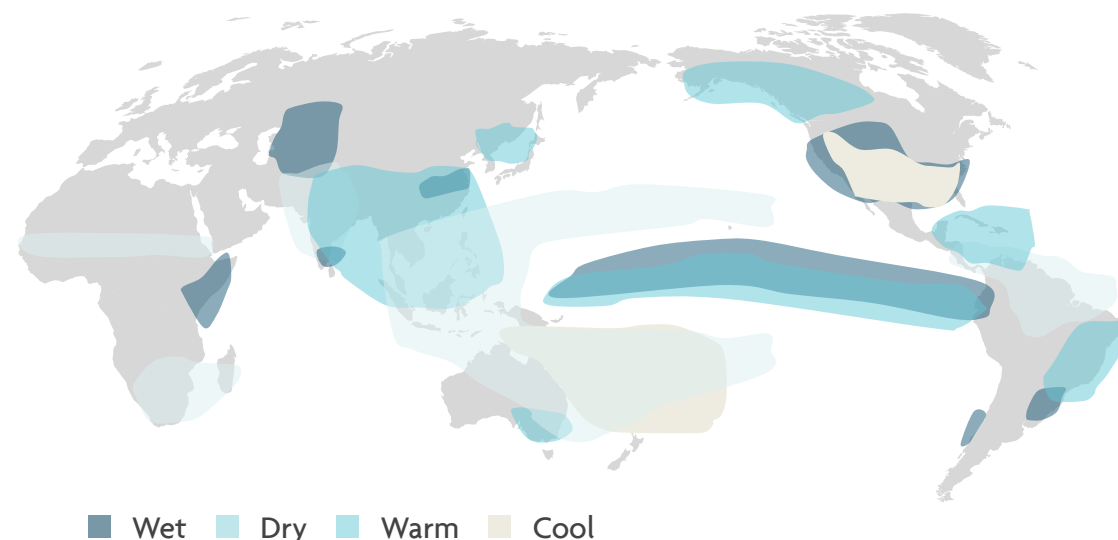
Change in food commodity prices during El Niño events⁶
% of change during cycles



- The Panama Canal will restrict daily vessel transits from 36 to 32 as of mid-Sep2026, due to low water levels in the canal's reservoirs⁷
- The Rhine River (80% of inland shipping trade in Germany), is facing record lows, with ships running at 20% capacity only⁸

El Niño intensifies extreme weather events, affecting regions in different ways and impacting economic growth trends

Typical impacts of El Niño²



- The 1997–98 and 2015–16 events decreased global GDP growth by **1% in the period**, but >5% cumulated over the next 3 years³
- As an example, El Niño conditions have leveraged the 2026 **summer wildfires in the EU**, with expected costs of € 3 bn⁴

In addition, El Niño-related more severe heatwaves, droughts and floods pose energy-security risks, disrupting supply and demand

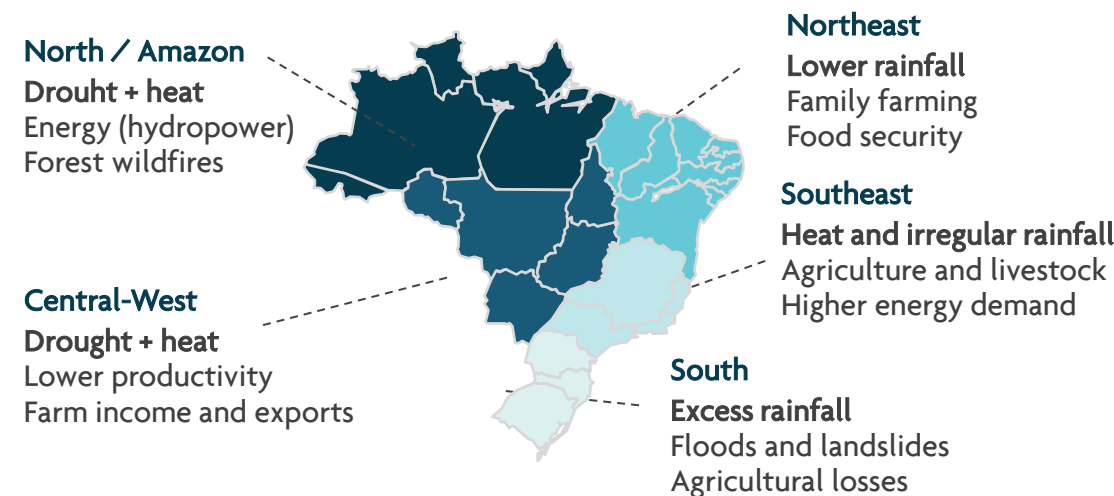
Hydropower generation is sensitive to rainfall patterns⁹ - the effects of ENSO are often one of the main causes of uncertainty in precipitation projections in South America's hydropower forecasts, affected both by droughts and floods

Nuclear and thermal powerplants become less efficient¹⁰ - 14% of nuclear plants depend on water from run-off rivers to cool down, shutting down during droughts. At 40 °C, gas-fired power plants produce 7% less vs. running at 20 °C

El Niño increases cooling demand¹¹ - a sensitivity analysis by the IEA indicates that events every 03 years could add -700 TWh to electricity demand by 2035 for air conditioning, raising immediate challenges for supply systems

In Brazil, heat and droughts are expected up North, while wetter conditions and excess rainfall should happen in the S/SE²

How can activities be impacted by the El Niño?¹²



- The two largest hydropower plants in the Amazon received inflows **-60% below average** in November 2023, affecting power generation¹³
- Additionally, under ENSO effects, Brazil recorded **30.2 Mha burned in 2024**, the second highest annual area with wildfires since 1985¹⁴

Companies are facing the threats of a super El Niño in an already hotter world, what makes adaptation more urgent than ever

The benefits of investing in adaptation could outweigh the costs – every US\$ 1 invested can yield over US\$ 10 in benefits, including avoided losses and wider socioeconomic and environmental gains¹⁵

The private sector still lags when it comes to preparedness – it finances less than 10% of tracked adaptation finance globally¹⁶, while only 35% of S&P 1200 companies have an adaptation plan¹⁷

Businesses must proactively act before impacts are realized - companies should aim at building capabilities, including for supply chains, and foster institutional coordination to enhance responses

Technology and innovation can help the anticipation of El Niño impacts – AI, satellite monitoring and advanced forecasting can improve early warning, strengthening operational resilience



Preparing for El Niño and other physical climate risks **requires moving from reactive crisis management to practical resilience**. This means integrating physical risks into enterprise risk management, as well as using scenario planning to anticipate disruptions. It also means protecting critical assets, building redundancy across operations and supply chains, and ensuring robust business continuity. Above all, **adaptation spending should be viewed as an investment in security**, strengthening the ability to maintain operations, protect value and respond in an uncertain environment

^a A normal El Niño is one in which the Oceanic Niño Index exceeds 0.5°C over a certain period of time. A strong El Niño will be above 1 °C and a super El Niño would be above 2 °C. ^b ENSO (El Niño–Southern Oscillation) - natural tropical Pacific cycle with two phases, El Niño and La Niña, driving short-term swings in global temperature. La Niña is characterized by stronger trade winds and cooler-than-average sea surface temperatures in the tropical Pacific.

¹ / AON. 2026 Climate and Catastrophe Insight. 2026; ² / CarbonBrief. How the 'super El Niño' will reshape the world's weather. 2026; ³ / Science. Persistent effect of El Niño on global economic growth. 2023; ⁴ / Financial Times. European wildfire costs this year have already surpassed €3bn. 2026 ⁵ / WEF. The coming El Niño is more than a climate event. It is a systemic shock. 2026; ⁶ / Eurasia. El Niño economic toll will be shaped by government responses. 2026; ⁷ / Canal de Panamá. Panama Canal Adopts Additional Measures to Address Reduced Precipitation in the Canal Watershed. 2026; ⁸ / DW. Germany: Low Rhine River levels could weigh down economy. 2026; ⁹ / IEA. Climate Impacts on Latin American Hydropower. 2021; ¹⁰ / CarbonBrief. How nuclear, gas, wind and solar power are affected during heatwaves. 2026; ¹¹ / IEA. Cooling a hotter world: El Niño meets strong growth in global electricity demand. 2026; ¹² / Catavento analysis based on ClimaTempo. El Niño: principais impactos em cada região do Brasil. 2026; ¹³ / ANA. Painei El Niño 2023-2024 - Nov.2023. 2023 ¹⁴ / MapBiomass. Relatório Anual do Fogo 2025. 2025; ¹⁵ / WRI. Strengthening the Investment Case for Climate Adaptation: A Triple Dividend Approach. 2025; ¹⁶ / CPI. Global Landscape of Climate Finance 2026. 2026; ¹⁷ / S&P Global. Climate costs are rising, but few companies have an adaptation plan. 2025;