Allianz Global Investors

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Heat – the new supply shock

Nedialko Nedialkov, CFA
Portfolio Manager

El Niño is back, and it is arriving into a warmer world.

NOAA confirmed on **9 July 2026** that El Niño is strengthening, with a **97% chance it lasts into early spring 2027** and an **81% chance it becomes "very strong" in October-December**, potentially ranking among the largest events in records going back to 1950.[1] El Niño is the warm phase of a natural Pacific climate cycle: warm water builds across the central and eastern equatorial Pacific, trade winds weaken, and the ocean releases more heat into the atmosphere.[1]

El Niño does not cause climate change. But it now operates on a hotter baseline. NOAA reported that **June 2026 was the second-warmest June in a 177-year record**, at **1.09°C above the 20th-century average**.[2] A strong El Niño on top of that becomes a stress test for food, water and power.

1. Agriculture: the rice bowl problem

Rice is a useful pressure point because it is a staple for more than half the world's population and highly sensitive to water availability and heat. The World Bank warned that if El Niño persists into 2027, **rice output could fall by 20-50% in affected regions**, with South Asia, Southern Africa and parts of East Asia most exposed.[3]

A drought in one major rice region can quickly become a food-price event, a subsidy event and, in some countries, a political event. Relevant solutions include precision irrigation, soil sensors, laser land levelling, variable-rate farm machinery, drought analytics and seed technologies. Agriculture accounts for roughly **70% of global freshwater withdrawals**, so producing more with less predictable water is becoming a core productivity challenge.[4]

2. Water: the leak you can no longer afford

In a heatwave, every litre of lost water becomes more expensive.

One underappreciated problem is "non-revenue water": treated water that never reaches a paying customer because of leaks, theft or

metering errors. The World Bank has estimated the global cost to utilities at about **USD 14 billion per year**, and cutting losses in developing countries by half could serve an additional **90 million people**.[5]

Droughts lower reservoirs. Heat raises demand. Ageing pipes lose water before it reaches homes, farms or factories. That puts a premium on leak detection, pressure management, smart meters, pumps, valves and analytics that help utilities find losses before shortages become visible.[5]

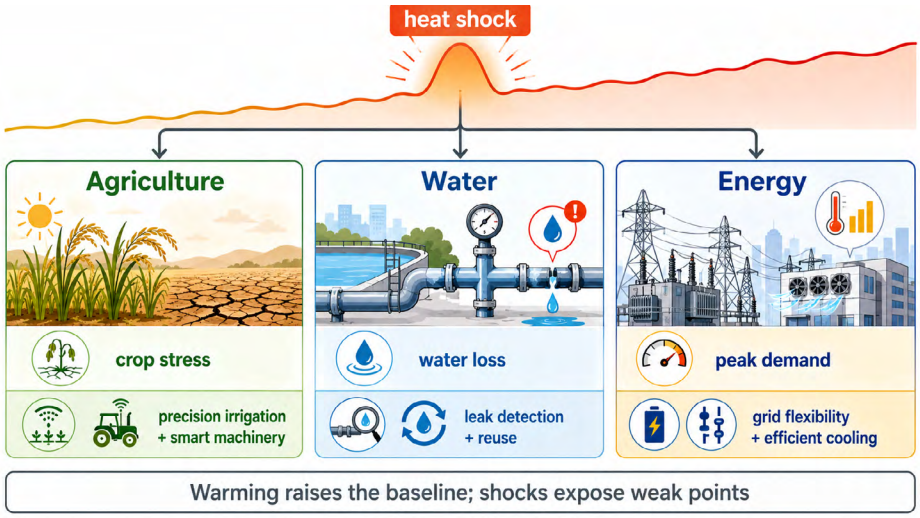
3. Energy resilience: when rivers get too hot to cool power plants

France shows how climate stress can hit even low-carbon power systems. Nuclear power typically provides around **two-thirds to 70% of French electricity**, but reactors need cooling water.[6] During the current European heatwave, unusually warm rivers and low water levels have forced output reductions and temporary shutdowns.[7] Le Monde reported in June that heat-related nuclear restrictions affected around **4.6% of France's nuclear capacity**.[8]

Heat creates a double hit: electricity demand rises through cooling, while parts of the power system become less reliable. To address such problems in a world with a growing power demand investments in grid flexibility are needed: batteries, demand-response software, power electronics, transformers, transmission equipment, building efficiency and efficient cooling. The IEA estimates that meeting national energy and climate goals will require adding or replacing **80 million kilometres of power lines by 2040**, with annual grid investment needing to roughly double to more than **USD 600 billion by 2030**.[9]

Three Heat Signals To Watch

Pressure point	Why it matters now	Solution areas
Rice and food staples	Rice output could fall **20-50%** in affected regions if El Niño persists	Precision irrigation, farm machinery, crop analytics, resilient seeds[3]
Leaking water systems	Non-revenue water costs utilises about **USD 14bn/year**	Leak detection, smart meters, pumps, valves, pressure management[5]
Heat-stressed power grids	Heat has restricted French nuclear output; **80m km** of grid lines need addition/ replacement by 2040	Grid equipment, batteries, demand response, efficient cooling[7,8,9]



Sources:
1. NOAA Climate Prediction Center, ENSO Diagnostic Discussion, 9 July 2026.
   Used for: El Niño status, 97% persistence probability, 81% "very strong" probability, mechanism and Pacific ocean-atmosphere conditions.
2. NOAA National Centers for Environmental Information, Global Climate Report: June 2026.
   Used for: June 2026 being the second-warmest June in the 177-year record and 1.09°C above average.
3. World Bank, Food Security Update, July 2026.
   Used for: El Niño food security risk and potential 20-50% rice output decline in affected regions.
4. FAO / UNESCO water withdrawal statistics.
   Used for: Agriculture accounting for roughly 70% of global freshwater withdrawals.
5. World Bank, The Challenge of Reducing Non-Revenue Water in Developing Countries.
   Used for: USD 14bn annual cost of non-revenue water and potential to serve 90m additional people by halving losses in developing countries.
6. World Nuclear Association / IEA country data on France.
   Used for: France deriving roughly two-thirds to 70% of electricity from nuclear power.
7. The Guardian, July 2026 reporting on warm rivers affecting French nuclear power plants.
   Used for: warm rivers, low water levels, Golfech shutdown and output restrictions.
8. Le Monde, June 2026 reporting on French heatwave and EDF nuclear restrictions.
   Used for: heat-related restrictions affecting around 4.6% of French nuclear capacity.
9. IEA, Electricity Grids and Secure Energy Transitions.
   Used for: 80m km of power lines needing addition/replacement by 2040 and annual grid investment needing to double to over USD 600bn by 2030.

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