

# Study reveals economic impact of El Nino

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(Phys.org) —El Niño has a significant impact on the world and local economies - and not always for the worst - and countries should plan ahead to mitigate its effects, according to a new Working Paper from the University of Cambridge.

The Paper, Fair weather or foul: the macroeconomic effects of El Niño, by Dr Kamiar Mohaddes of Cambridge's Faculty of Economics and Paul Cashin and Mehdi Raissi of the International Monetary Fund comes as the Australian Bureau of Meteorology says there is at least a 70% chance of an El Nino weather event developing in 2014.

El Niño is a band of above-average ocean surface temperatures that periodically develops off the Pacific coast of South America, and causes major climatological changes around the world. The last one was in 2009/2010.

El Niño can affect commodity prices and the macroeconomy of different countries. It can constrain the supply of rain-driven agricultural commodities; reduce agricultural output, construction, and services activities; create food-price and generalised inflation; and may trigger social unrest in commodity-dependent poor countries that primarily rely on imported food.

The El Niño effect is found to be most severe in the Asia and Pacific region. For instance, it causes hot and dry summers in southeast Australia; increases the frequency and severity of bush fires; reduces wheat exports, and drives up global wheat prices. Moreover, El Niño conditions usually coincide with a period of weak monsoon and rising temperatures in India, which adversely affects India's agricultural sector, increases domestic food prices, and adds to inflation and inflation expectations. Furthermore, mining equipment in Indonesia relies heavily on hydropower; with deficient rain and low river currents, less nickel (which is used to strengthen steel) can be produced by the world's top exporter of nickel. For the United States, on the other hand, El Niño typically brings wet weather to California (benefiting crops such as limes, almonds and avocados), reducing fires in the west and bringing warmer winters in the Northeast, increased rainfall in the South, diminished tornadic activity in the Midwest, and a decrease in the number of hurricanes that hit the East coast.

The Cambridge paper analyses the international macroeconomic transmission of El Niño weather shocks in a dynamic multi-country framework, taking into account the economic interlinkages and spillovers that exist between different regions.

Overall, the paper shows that while Australia, Chile, Indonesia, India, Japan, New Zealand and South Africa face a short-lived fall in economic activity in response to an El Niño shock, other countries may actually benefit from an El Niño weather shock (either directly or indirectly through positive spillovers from major trading partners), for instance, Argentina, Canada, Mexico and the United States. Furthermore, most countries in the sample experience short-run inflationary pressures following an El Niño shock, while global energy and non-fuel [commodity prices](#) increase.

The researchers argue that, given these implications, macroeconomic policy formulation should take into consideration the likelihood and effects of El Niño episodes. Kamiar Mohaddes says: "Our research shows that the economic consequences of El Niño differs across countries – some lose and some benefit from such a weather shock. This is important for economic planning, particularly as such weather events are happening in cycles and their impact is sometimes very large. Countries with elevated inflation like India could be particularly susceptible to such episodes."

**More information:** The working paper is available online: [www.econ.cam.ac.uk/research/re ... cam/pdf/cwpe1418.pdf](http://www.econ.cam.ac.uk/research/re...cam/pdf/cwpe1418.pdf)

Provided by University of Cambridge

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