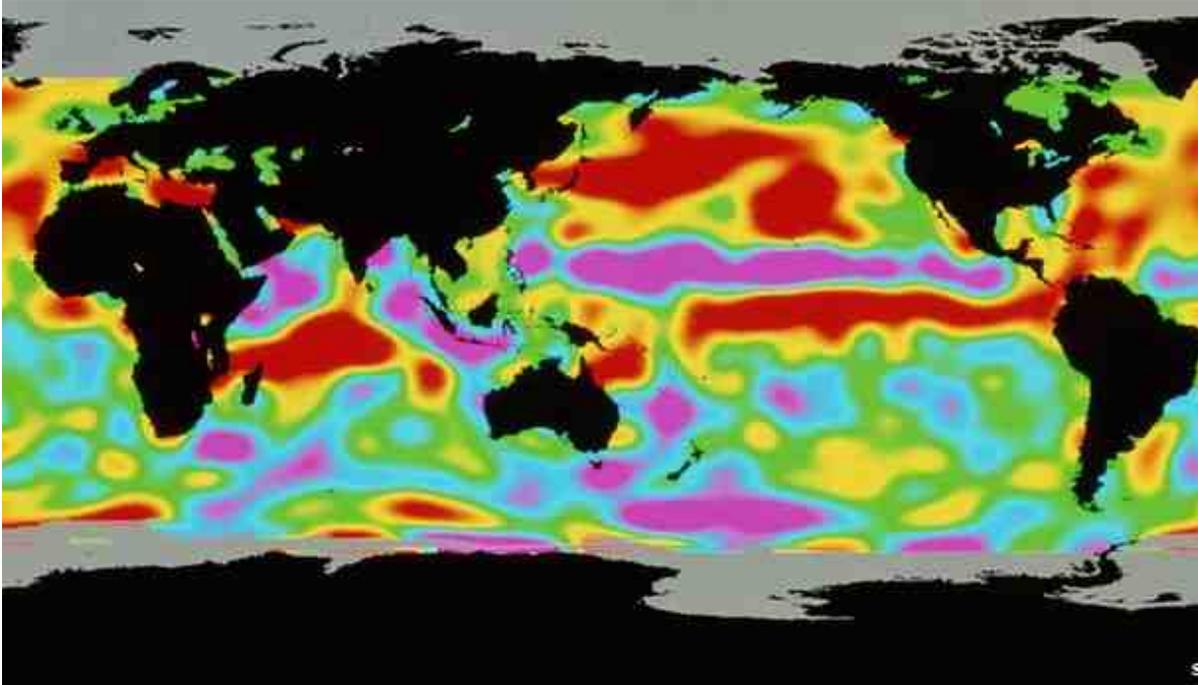


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# Global warming will increase intensity of El Nino, scientists say

By Matt McGrath Environment correspondent, BBC News



How the impact of El Nino is felt on sea height across the world

Scientists say they are more certain than ever about the impact of global warming on a critical weather pattern.

The El Niño-Southern Oscillation (ENSO) occurs in the Pacific Ocean but plays an important part in the world's climate system.

Researchers have until now been unsure as to how rising temperatures would affect ENSO in the future.

But [this new study](#) suggests that droughts and floods driven by ENSO will be more intense.

"This study finds that both wet and dry anomalies will be greater in future El Niño years"

Dr Wenju Cai CSIRO

The ENSO phenomenon plays a complicated role in the global weather system.

The El Niño part of the equation sees a warming of the eastern and tropical Pacific, while its cooler sister, La Niña, makes things chillier in these same regions.

Impacts across the world

Like water in a bathtub, the warmer or cooler waters slosh back and forth across the Pacific Ocean. They are responsible for rainfall patterns across Australia and the equatorial region, but

their effects are also felt much further away.

During the Northern Hemisphere winter, for example, you can get more intense rainfall over the southern part of the US in a warmer El Nino phase.

For years, scientists have been concerned about how this sensitive weather system might be changed by rising temperatures from global warming.



This flooding in California in the 1980s was put down to El Nino impacts. Now, in this new paper, published in the journal Nature, researchers give their most "robust" projections yet.

Using the latest generation of climate models, they found a consistent projection for the future of ENSO.

According to the lead author, Dr Scott Power from the Australian Bureau of Meteorology, global warming interferes with the way El Nino temperature patterns affect rainfall.

"This interference causes an intensification of El Nino-driven drying in the western Pacific and rainfall increases in the central and eastern equatorial Pacific," he said.

#### Models in agreement

According to Dr Wenju Cai, a scientist at the Commonwealth Scientific and Industrial Research Organisation (CSIRO), who was not involved with the study, the paper is "significant".

"Up until now, there has been a lack of agreement among computer models as to how ENSO will change in the future," he explained.

"This paper is significant in that there is stronger agreement among different climate models in predicting the future impact.

"This study finds that both wet and dry anomalies will be greater in future El Nino years. This means that ENSO-induced droughts and floods will be more intense in the future."