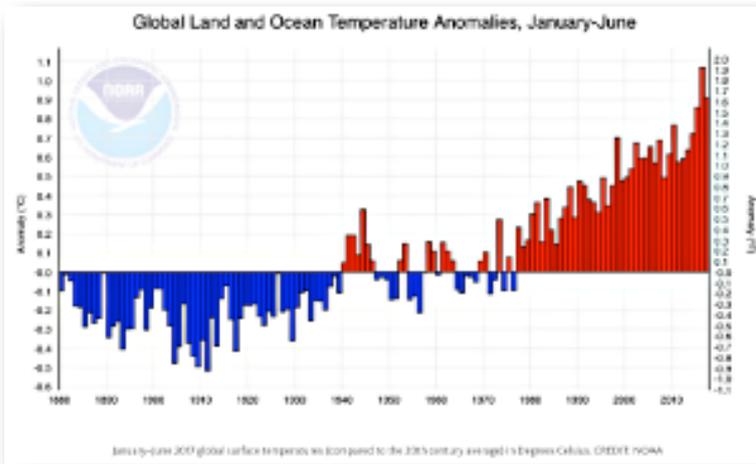


2017 is so unexpectedly warm it is freaking out climate scientists

“Extremely remarkable” 2017 heads toward record for hottest year without an El Niño episode.



January–June 2017 global surface temperatures (compared to the 20th century average) in Degrees Celsius. CREDIT: NOAA

Normally, the hottest years on record occur when the underlying human-caused global warming trend gets a temporary boost from an **El Niño's enhanced warming** in the tropical Pacific.

So it's been a surprise to climate scientists that 2017 has been **so remarkably warm**—because the last *El Niño* ended a year ago. The National Oceanic and Atmospheric Administration (NOAA) **reported** Tuesday that the first half of

2017 was the second-warmest January-June on record for Earth, topped only by 2016, which was boosted by one of the biggest *El Niños* on record.

“As if it wasn't shocking enough to see three consecutive record-breaking years, in 2014, 2015, and 2016, for the first time on record,” leading climatologist Michael Mann wrote in an email to ThinkProgress, “we're now seeing near-record temperatures even in the absence of the *El Niño* 'assist' that the previous record year benefited from.”

How January-June temperatures globally rank compared to the 20th century average. CREDIT: NOAA

NOAA climatologist Ahira Sanchez-Lugo told **Climate Central**,

“After the decline of the strong *El Niño*, I was expecting the values to drop a bit... This year has been extremely remarkable.”

Usually we see global records in years when the short-term *El Niño* warming adds to the long-term global warming trend (see

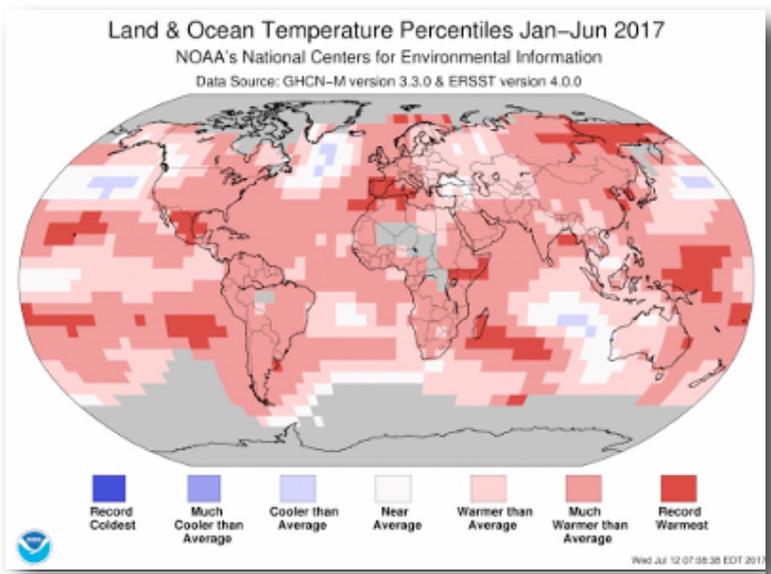
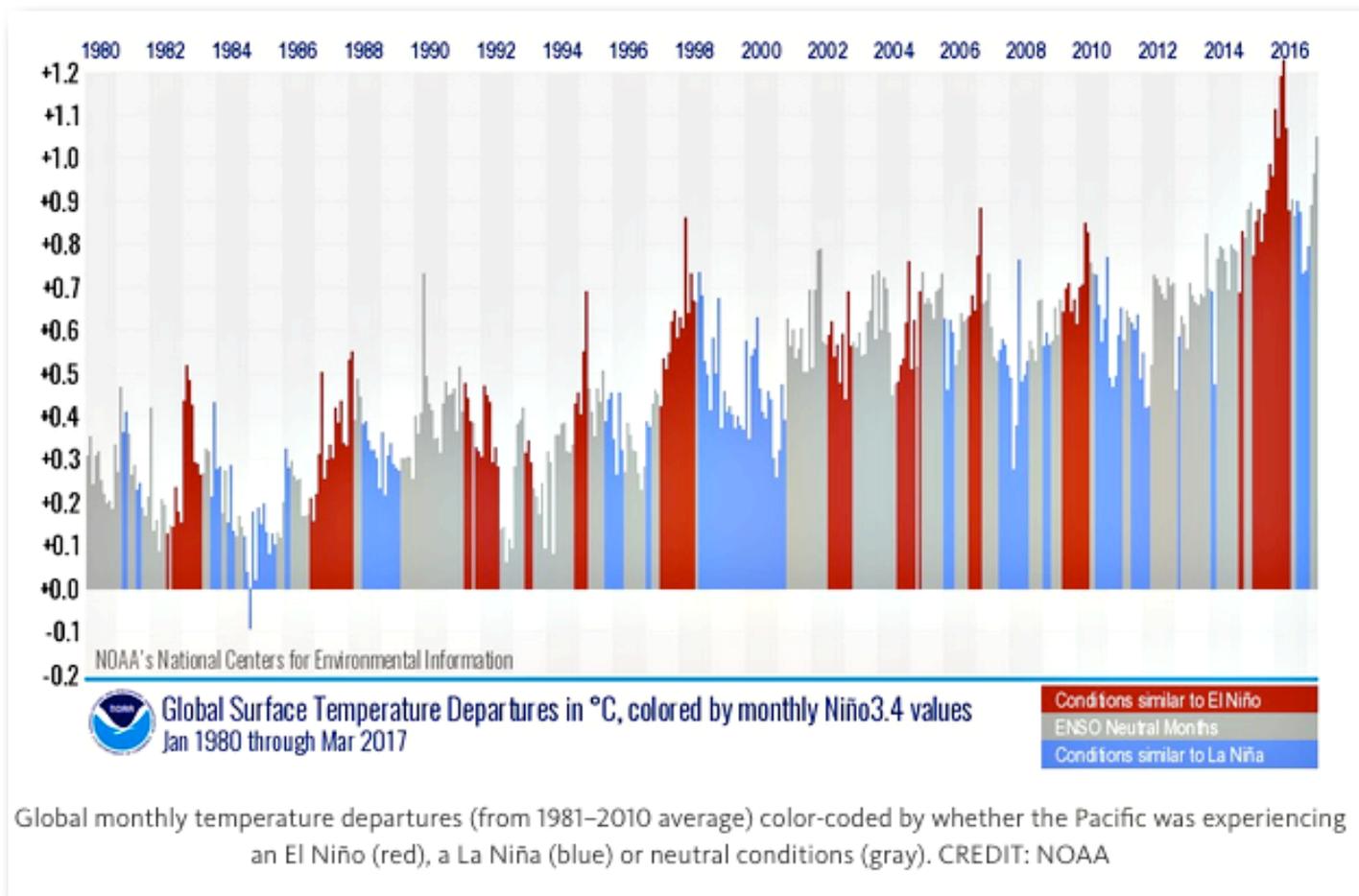


chart below). As NOAA noted in its **March report**, without an *El Niño*, no month before March 2017 had ever exceeded the “normal” temperature (the 1981–2010 average) by a full 1.8°F (1.0°C).



Global monthly temperature departures (from 1981–2010 average) color-coded by whether the Pacific was experiencing an *El Niño* (red), a *La Niña* (blue) or neutral conditions (gray). CREDIT: NOAA

This matters because when a month—or six-month period—sees record high global temperatures in the absence of an *El Niño*, that is a sign the underlying global warming trend is stronger than ever.

The latest NOAA report is

“a reminder that climate change has not, despite the insistence of climate contrarians ‘paused’ or even slowed down,” Mann said.

Bottom line: Human-caused global warming continues at a dangerous pace, and only human action to slash carbon pollution can stop it.

Joe Romm

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