

'Mega-droughts' forecast for Africa

By [Global Research](#)

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The study warned that dry periods will be more severe and more difficult for people in Africa [EPA]Severe droughts could devastate sub-Saharan Africa following a recent decades-long drought that killed 100,000 people in Africa's Sahel region, scientists say.

Sub-Saharan Africa often suffers droughts, but the group of specialists reported on Thursday that global climate change will make these dry periods more severe and more difficult for the people who live there.

The prediction is contained in a study published in the journal of Science by the scientists at the University of Arizona, US.

"Clearly, much of West Africa is already on the edge of sustainability, and the situation could become much more dire in the future with increased global warming," said Jonathan Overpeck, a climatologist and co-author of the study.

Rise in temperatures

Temperatures in the Sahel region are expected to rise by five to 10 degrees this century, the scientists said, despite some curbing of the greenhouse emissions that cause climate change.

"We might actually proceed into the future ... we could cross a threshold driving the [climate] system into one of those big droughts without even knowing it's coming," Overpeck said.

The Sahel is an area between the Sahara desert and the wetter parts of equatorial Africa.

It stretches across the continent from the Atlantic Ocean in the west to the Red Sea in the east.

Overpeck and his colleagues studied sediments beneath Lake Bosumtwi in Ghana that gave an almost year-by-year record of droughts in the area going back 3,000 years.

Until now, the instrumental climate record in this region stretched back only 100 years or so.

The researchers found a pattern of decades-long droughts like the one that began in the Sahel in the 1960s, as well as as centuries-long “megadroughts” throughout this period, with the most recent lasting from 1400 to 1750.

The scientists also described signs of submerged forests that grew around the lake when it dried up for hundreds of years.

The tops of some of these tropical trees can still be seen poking up from the lake water.

During the Sahel drought, the lake’s water level dropped by almost 5m. By contrast, during megadroughts the level fell by as much as 30m.

Temperature fluctuations

“What’s disconcerting about this record is that it suggests that the most recent drought was relatively minor in the context of the West African drought history,” said Timothy Shanahan of the University of Texas, a co-author of the study.

The most recent decades of data culled from Lake Bosumtwi show that droughts there appear to be linked to fluctuations in sea surface temperatures, a pattern known as the Atlantic Multidecadal Oscillation, or AMO, the researchers said.

Overpeck said: “One of the scary aspects of our record is how the Atlantic ... changes the water balance over West Africa on multidecadal time scales.”

The cause of centuries-long megadroughts is not known, but Overpeck said the added burden of climate change could make this kind of drought more devastating.

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