

April 13, 2008

OP-ED COLUMNIST

Extended Forecast: Bloodshed

By NICHOLAS D. KRISTOF

Here's a forecast for a particularly bizarre consequence of climate change: more executions of witches.

As we pump out greenhouse gases, most of the discussion focuses on direct consequences like rising seas or aggravated hurricanes. But the indirect social and political impact in poor countries may be even more far-reaching, including upheavals and civil wars — and even more witches hacked to death with machetes.

In rural Tanzania, murders of elderly women accused of witchcraft are a very common form of homicide. And when Tanzania suffers unusual rainfall — either drought or flooding — witch-killings double, according to [research](#) by Edward Miguel, an economist at the University of California, Berkeley.

“In bad years, the killings explode,” Professor Miguel said. He believes that if climate change causes more drought years in Tanzania, the result will be more elderly women executed there and in other poor countries that still commonly attack supposed witches.

There is evidence that European witch-burnings in past centuries may also have resulted from climate variations and the resulting crop failures, economic distress and search for scapegoats. Emily Oster, a University of Chicago economist, tracked [witchcraft trials](#) and weather in Western Europe between 1520 and 1770 and found a close correlation: colder weather led to more crackdowns on witches.

In particular, Europe's “little ice age” led to a sharp cooling in the late 1500s, and that corresponds to a renewal in witchcraft trials after a long lull. And there's also micro-evidence: in one area, a brutally cold May in 1626 led outraged peasants to call for punishment of witches thought responsible. Some scholars have also argued that the Salem witch trials occurred after a particularly cold winter and economically difficult period.

The point is that climate change will have consequences that will be difficult to foresee but will go far beyond weather or economics. There is abundant evidence that economic stress and crop failures — as climate scientists anticipate in poor countries — can lead to violence and upheavals.

In the United States, for example, some historians have found correlations between recessions or declines in farm values and increased lynchings of blacks.

Paul Collier, an Oxford University expert on global poverty, found that economic stagnation in poor countries leads to a rising risk of civil war. Professor Collier warns that climate change is likely to reduce rainfall in southern Africa enough that corn will no longer be a viable crop there. Since corn is a major form of sustenance in that region, the result may be catastrophic food shortages — and civil conflict.

The area that may be hardest hit of all — aside from islands that disappear beneath the waves — is the fragile Sahel region south of the Sahara Desert in West Africa. The Sahel is already impoverished and torn by religious and ethnic tensions, and reduced rainfall could push the region into warfare.

“The poorest people on Earth are in the Sahel, barely eking out an existence, and climate change pushes them over the edge,” Professor Miguel said. “It’s totally unfair.”

His research suggests that a drought one year increases by 50 percent the risk that an African country will slip into civil war the next year.

Ethnic conflict in Darfur was exacerbated by drought and competition for water, and some experts see it as the first war caused by climate change. That’s too simplistic, for the crucial factor was simply the ruthlessness of the Sudanese government, but climate change may well have been a contributing factor.

In a forthcoming book, “Economic Gangsters,” Mr. Miguel calls for a new system of emergency aid for countries suffering unusual drought or similar economic shocks. Such temporary aid would aim to reduce the risk of warfare that, once it has begun, is enormously costly to stop and often damages neighboring countries as well.

The greenhouse gases that imperil Africa’s future are spewing from the United States, China and Europe. The people in Bangladesh and Africa emit almost no carbon, yet they are the ones who will bear the greatest risks of climate change. Some experts believe that the damage that the West does to poor countries from carbon emissions exceeds the benefit from aid programs.

All this makes the United States’ reluctance to confront climate change in a serious way — like a carbon tax to replace the payroll tax, coupled with global leadership on the issue — as unjust as it is unfortunate.

So let’s remember that the stakes with climate change are broader than hotter summers or damaged beach houses. The most dire consequences of our denial and delay may include civil war — and even witch-killings — among the poorest peoples on earth.

I invite you to comment on this column on my blog, www.nytimes.com/ontheground, and join me on Facebook at www.facebook.com/kristof.

Copyright 2008 The New York Times Company

[Privacy Policy](#) | [Search](#) | [Corrections](#) | [RSS](#) | [First Look](#) | [Help](#) | [Contact Us](#) | [Work for Us](#) | [Site Map](#)