POLICY

Thumbs down for 'Common Rule' revisions

Panel nixes US government changes to research ethics.

BY SARA REARDON

The US government's proposed overhaul of regulations that govern research with human participants is flawed and should be withdrawn, according to a review by the US National Academies of Sciences, Engineering, and Medicine.

The regulations — known collectively as the Common Rule — address ethical issues such as informed consent and storage of study participants' biological specimens. In their 29 June report, the academies said that the government's suggested changes are "marred by omissions and a lack of clarity" and would slow research while doing little to improve protections for patients (see go.nature.com/29afkwd). Instead, the panel recommends that an independent commission craft new rules for such research.

"This is a total smack-down," says Ellen Wright Clayton, a bioethicist and lawyer at Vanderbilt University in Nashville, Tennessee, of the academies' report.

The Common Rule, which was introduced in 1991, seeks to ensure that research with humans is ethical by minimizing patient harm and maximizing the benefit to society. Over time, achieving these goals has become more complex because of technological advances such as the rise of DNA identification, which can make it harder to maintain patient privacy.

The reforms, proposed in September by the US Department of Health and Human Services (HHS), attempt to address such emerging concerns. For instance, the HHS proposal would require participants' consent to use stored samples, such as blood or tissue, for future research. Even if samples are anonymized, the HHS says, it is fairly simple to re-identify people on the basis of their DNA.

But the US academies' panel says that the proposed consent requirements would slow research unnecessarily, because little harm is likely to come to a person as a result of the use of stored biospecimens. And if the specimens are de-identified, the extra consent forms themselves would further link the specimens to the person's name and therefore increase the risk that the person would be identified.

An HHS spokesperson says that the government is still mulling the new report and more than 2,000 public comments on its reforms. ∎

Most fires in the Amazon are started by landowners trying to clear fields and forests for cultivation.

ECOLOGY

Amazon set for record fire season

Warm oceans presage intense blazes in rainforest.

BY JEFF TOLLEFSON

The Amazon is ready to burn. After an unusually dry rainy season, the southern section of the rainforest is heading into winter with the largest moisture deficit since 1998. This has set the stage for an unusually intense fire season, according to a forecast issued on 29 June that is based on sea-surface temperature trends in the Atlantic and Pacific oceans.

"The region is primed to have record fire activity," says forecast co-author Douglas Morton, a remote-sensing expert at NASA's Goddard Space Flight Center in Greenbelt, Maryland. More broadly, a team led by Morton and James Randerson, a biologist at the University of California, Irvine, says that it can predict fire risk across much of the globe — based in part on the influence of the weather pattern El Niño and its counterpart, La Niña.

The Amazon burn predictions stem from the epic El Niño weather event that emerged last year. El Niños warm the tropical Pacific Ocean, which tends to reduce rainfall during the rainy season, and the warmer temperatures in the tropical Atlantic Ocean can suppress rains during the dry season.

The El Niño that emerged last year also helped to spawn devastating forest fires in Indonesia, the researchers say. Their work reveals that sea-surface temperatures in the Atlantic and Indian oceans foreshadow fire trends in Central America, Africa and some boreal forests in Earth's high northern latitudes.

In each case, Morton and Randerson say, ocean conditions can provide a hint of precipitation trends in key forested areas on land several months in advance. "All of these processes are contributing to both the build-up of fuels and the moisture level of those fuels going into the dry season," Randerson says. "That's what leads to a predictability in global fire regimes."

FORECASTING VULNERABILITY

Other teams are looking to include fire risk in short-term and seasonal weather forecasts by incorporating independent fire models. These models attempt to account for factors such as vegetation type and the likelihood of lightning strikes or agricultural fires. Eventually, such forecasting systems could integrate more complex phenomenon such as the dynamics of vegetation growth, the way that fire tends to propagate across a landscape and the gases and particles that are emitted during a fire, says Allan Spessa, a