

## NOW CLIMATES FACE EXTINCTION

We are all familiar with the term “climate change”, but “climate replacement” might be more accurate, or even “climate disappearance”. In 100 years half the world’s climates may have vanished for good as a result of global warming.

That’s the conclusion of the first assessment of how all climates will be affected as the world heats up. Gone too will be thousands of species, and new types of climate will emerge, with higher temperatures and more rain.

“It’s the coldest climates that would be replaced,” says John Williams of the University of Wisconsin, Madison. As temperatures rise by several degrees, so glaciers will retreat and ice disappear from mountains such as Kilimanjaro. New types of climate would emerge in more tropical regions, particularly the Amazon and Indonesian rainforests. “What we’re concerned about is what

happens to the species in these regions,” says Williams. The only options are migrating or adapting, but some will have nowhere to migrate to, or will be outcompeted by invading species.

Williams and his colleagues assessed both small-scale and global effects on climate using the latest projections developed by the UN Intergovernmental Panel on Climate Change for high and low emissions of carbon dioxide.

Comparing best and worst outcomes, the team estimates that between 20 and 40 per cent of the world’s land would develop completely novel climates, and existing climates would vanish in 20 to 48 per cent of land area (*Proceedings of the National Academy of Sciences*, DOI: 10.1073/pnas.0606292104). “There’s a big difference, so reductions in carbon dioxide do give cause for hope,” says Williams.



Disappearing, not changing

## Flu stand-off

AN INTERNATIONAL crisis over pandemic vaccines has been resolved – but only partially. As *New Scientist* went to press, Indonesia announced at an emergency meeting in its capital, Jakarta, that it would end its boycott on sending viral samples from people with deadly H5N1 flu to foreign labs. However, it will only let the samples be used for research. Any use for vaccine development will have to wait for a “new mechanism” to convince Indonesia to consent to such work.

It could take some doing. Virtually all flu vaccine is made in rich countries, which have laws

**“Poor countries are effectively helping make vaccines they may never have access to”**

prohibiting its export in an emergency. So poor countries hit hard by H5N1 are effectively sending virus samples to develop pandemic vaccines that they may never have access to.

Indonesian health minister Siti Fadilah Supari stopped

sending H5N1 samples to the World Health Organization late last year, saying she needed some assurance that Indonesia will get vaccine in return (*New Scientist*, 17 February, p 3). Last week Thai health official Suwit Wibulpolprasert told *New Scientist* that Thailand could join Indonesia, “depending on what happens in Jakarta”.

What has also emerged from the meeting, which included delegates from 16 countries hit by H5N1, plus vaccine makers and donors including the Bill & Melinda Gates Foundation, is that the WHO has few immediate assurances to offer. It is trying to arrange a “virtual stockpile” of pandemic vaccines for developing countries, but it is not clear how this will evade the export restrictions of manufacturing countries. And while it is also trying to fund six new vaccine plants in countries such as Brazil and China so they can make their own vaccine, this will take years.

The WHO hopes that member states meeting in Geneva, Switzerland, in May will back a new rule that countries must share samples of novel viruses.

## Chilling end

“IT WAS a huge bang and I was expecting to die,” says Peter Wadhams. Last week the University of Cambridge oceanographer was aboard the British submarine HMS Tireless – which was under the Arctic collecting data on the thickness of the ice – when air purification equipment exploded. Tragically, two men did die.

Wadhams was using sonar equipment to determine how global warming is affecting the ice. “I could see the thinning since

my last cruise in 2004,” he says. The state of the ice worried him, though it did save the sub, because after the explosion it had to smash its way through the ice. “The sonar was crushed as we surfaced,” he says, “but before the accident we got data from across 2000 kilometres of the Arctic from Spitsbergen to Alaska.”

The next question is whether the data will be fully analysed. As *New Scientist* reported last week (p 16), Wadhams is in dispute with the UK’s Natural Environment Research Council over funding.

## FRANCE RELEASES UFO FILES

The truth is online. In a world first, the French space agency, CNES, made its official UFO archives public on 22 March.

The agency went public because people were concerned about secrecy and conspiracies, says Jacques Arnauld of GEIPAN, the CNES unit set up to investigate UFOs in 1977. “We really have nothing to hide.”

So far, the GEIPAN website ([www.cnes-geipan.fr](http://www.cnes-geipan.fr)) contains just a quarter of the more than 6000 eyewitness UFO reports sent to the unit by police over

three decades. Typically, such reports are followed up by police and scientific and military experts. GEIPAN has debunked about 75 per cent of them. “Usually people are seeing weather balloons, lightning flashes or debris from satellites or rockets,” says Jacques Patenet, head of GEIPAN.

The rest are unexplained. “In all probability, they have scientific explanations,” says Patenet. “But frankly, we can’t disprove the extraterrestrial thesis.”