

Apocalypse... but not as we know it

12 December 2012, by Richard Ingham

The End Of The World As We Know It—TEOTWAWKI—is littered with predictions that didn't quite pan out.

Just ask the folks who are still chewing through the food they stashed away at the time of the Killer Blob scare four years ago.

That was when doomsters predicted [CERN](#) physicists would reduce the Earth to goo when they switched on their new particle smasher.

In October, a German woman who feared the Earth would be sucked into oblivion in a black hole failed in her court bid to stop the work of the European Organisation for [Nuclear Research](#) (CERN).

Armageddon experts thus are cueing weary smiles for another non-TEOTWAWKI moment on December 21, supposedly named by the [Mayan calendar](#) as the Big One.

"One thing all apocalyptic predictions have in common is that they are false. They never happen," sighs Stephen O'Leary at the University of Southern California.

Even so, many hard-headed scientists take TEOTWAWKI seriously.

Not, of course, in a mystical context.

Nor even as an event that is Goodnight Vienna, a global slate-wiper.

Instead, they tend to see it in the context of a relatively smaller episode that is amplified by human frailty, and so becomes cataclysmic.

The reason: Today's seven billion humans live in a complex and mainly urban society, dependent on long supply chains for food, power and water.

One big shock, and this fragile structure starts to crack.

"A lot of things in this world are very interconnected, and it does make us vulnerable," says Jocelyn Bell Burnell, a top British [astrophysicist](#) at Oxford University.

"For example, one thing many people may not have appreciated is that if there is a bad [solar storm](#) that knocks out several [communications satellites](#), things like the GPS (the [Global Positioning System](#)) will go down."

In the worst scenarios, many millions could die, economies [collapse](#) and civilisations could retreat or die, even if the planet—and humans as a species—survived.

— Lobsters in a pot?—

In 1918-1919 so-called Spanish flu, a new strain of influenza against which people had no immunity, killed between 20 and 50 million people, making it the deadliest disease of the 20th century. In rough terms, it was the equivalent of up to 200 million deaths today.

There was a near-miss in 1997, when H5N1 bird flu, a strain that kills up to 60 percent of those it infects, broke out in Hong Kong. The virus was stopped by a drastic cull of poultry. And in 2009, a new virus, H1N1 swine flu, turned out to be relatively harmless.

But virologists say we cannot dodge the bullet forever. Another highly virulent, novel strain, mixed by farm animals and transmitted to humans, is just a matter of time.

Another biggie is climate change.

Super-storm Sandy has prompted much hand-wringing about extreme weather events caused by man-made disruption to the climate system.

But many experts say the worst impacts of global

warming will be progressive, not monster single events.

Like the lobster that is slowly cooked to death in a pan of water but doesn't know it, these accumulating threats easily pass under the political radar.

Some specialists foresee repeated droughts that hit the world's bread-basket regions, forcing up the price of cereals and millions of poor people into famine.

"In low-lying areas where you have massive numbers of people living within a metre (3.25 feet) of sea level, like Bangladesh, it means that the land that sustains their lives disappears, and you have hundreds of millions of climate refugees," warns Grant Foster of US climate consultancy Tempo Analytics.

"That can lead to resource wars and all kinds of conflicts."

Then there is the threat from space rocks.

"We have that pretty well under control but it could be nasty if we slipped up," says Bell Burnell.

A familiar nightmare is of the rogue asteroid or comet that smacks into Earth, creating vast fires whose dust would rise into the stratosphere and linger there for years, cooling the planet and shrivelling the vegetation on which land life depends.

In such a way was ended the reign of the dinosaurs, 65 million years ago.

A US-led initiative is monitoring the skies for the biggest asteroids.

But less well-mapped are smaller ones, capable of wiping out a city or region. There are also comets that are undocumented because they return to our neighbourhood on a span of centuries.

In the Cold War, scientists feared a "nuclear winter" from an all-out war between the United States and the Soviet Union.

But recent calculations suggest this scenario could occur even from a limited nuclear exchange at regional level.

A study reported in Scientific American in 2009 found that fires from 100 Hiroshima-sized warheads detonated by India and Pakistan would generate at least five megatonnes of smoke.

"Within nine days the soot would extend around the globe," it said.

"After 49 days, the particles would blanket the inhabited Earth, blocking enough sunlight that skies would look overcast perpetually, everywhere."

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APA citation: Apocalypse... but not as we know it (2012, December 12) retrieved 22 May 2019 from <https://phys.org/news/2012-12-apocalypse.html>

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