

Catch up: suspect in court after German market attack; American strikes on Yemen



The Saudi doctor accused of attacking a **Christmas market** in the German city of Magdeburg appeared in court. At least five people, including a child, were killed and more than 200 injured when a car drove into crowds on Friday. The 50-year-old suspect arrived in Germany in 2006 and has a history of anti-Islamic posts on social media. The motive for the attack remains unclear, authorities said.

America's navy accidentally shot down one of its own planes over the **Red Sea**, according to America's armed forces. The two pilots, who had taken off from the *USS Harry S. Truman*, safely ejected from the jet. The friendly-fire incident took place as America launched several strikes on **Houthi** targets in Yemen. The [Iran-backed group](#) has been attacking vessels in the Red Sea and launching strikes against Israel.

Albania banned **TikTok** for a year, citing concerns about the [platform's influence](#) on children. The measure comes after a teenager was killed last month in a confrontation that allegedly emerged on social media. Edi Rama, Albania's prime minister,

called TikTok the “thug of the neighbourhood”. The firm insisted its app was not related to the murder and requested “urgent clarity” from the government.

America’s Senate voted to pass a new spending deal, averting a **government shutdown**. The proposal—which will fund the government through March and includes a \$110bn disaster-aid package—dropped a provision to extend America’s [debt ceiling](#), despite backing from Donald Trump to include it. In an earlier vote in the House of Representatives, most Republicans supported the deal, and no Democrats voted against it. President Joe Biden signed the bill into law on Saturday.

Ministers in **Britain** reportedly pushed back against calls to change political-donation laws to prevent **Elon Musk** from funding [Reform UK](#), a hard-right party headed by Nigel Farage. Some senior members of the governing Labour party have been alarmed by the pair’s meeting in Florida last week. On Friday Mr Musk also endorsed Alternative for Germany, another hard-right party.

Canada’s prime minister, Justin Trudeau, looked set to lose power after Jagmeet Singh, a key ally, said he would introduce a no-confidence motion against the minority Liberal government when parliament reconvenes in the new year. Mr Singh’s New Democratic Party has been propping up the Liberals. If his motion succeeds it would trigger an election. After nine years, voters have tired of Mr Trudeau’s leadership; Canada’s Conservatives lead the polls.

Ukrainian drones struck Kazan, a **Russian** city more than 1,000 kilometres from the border between the two countries. The attack damaged several buildings, and flights were temporarily halted at the city’s airport, but no casualties were reported. Meanwhile some 113 Russian drones attacked Ukraine overnight. On Friday a Ukrainian attack on a town in Russia’s Kursk region, using American-supplied weapons, killed six people.

Word of the week: *ikejime*. The process used to kill the world's finest tuna sold at Toyosu market. [Read the full story](#).

AI collects its awards



We are looking back on 2024. Today, science and technology.

It has been a big year for artificial intelligence models. For the first time ever, insights enabled by an AI model were deemed sufficiently significant to earn its developers one of the highest accolades in science: the [Nobel prize in chemistry](#). The award jointly honoured the use of AI for protein-structure prediction and protein design.

Innovations that underpin [machine learning](#), meanwhile, were awarded the [physics prize](#) (the definition of the field was stretched to include computer science). Geoffrey Hinton (pictured), one of the winners, mused that by assisting mental labour, generative AI might have as big an effect on society as the industrial revolution did by assisting physical labour. But he also fretted, as many in the field do, about how machine intelligence that outstripped the human variety would go on to treat its creators. For now, though, those creators are being treated very nicely indeed.

The everything drugs



First the drugs tackled diabetes. Then they took on obesity. Now GLP-1 receptor agonists like Ozempic are showing promise in treating unexpected conditions. This year they were approved in America to treat cardiovascular disease in overweight people. They are also being tested as therapies for Alzheimer's and addiction. As global demand for the drugs grows, pharma companies are racing to make them work as pills (rather than injections) and to reduce their side-effects.

How can GLP-1S do so much? In addition to acting in the gut, they also bind to receptors all over the body as well as in the brain. The drugs appear to reduce inflammation and interact with mechanisms linked to cravings and feelings of reward. Every new finding is helping researchers learn more about the workings of disease. It is early days yet, but GLP-1S may turn out to be **one of the most successful classes of drugs** in history.

Reasons to be hopeful about climate change



The climate news may seem grim. A global temperature record was set once again in 2024; there have been deadly disasters, from [flooding](#) to [heatwaves](#); and negotiations at the COP29 climate talks made only modest progress.

Both activists and sceptics tend to agree on one thing: fighting for a stable climate is dauntingly expensive. *The Economist* [looked at estimates](#) of the global cost of an “energy transition” to a zero-emissions world. They range from around \$3trn to almost \$12trn a year. Yet we found that most analysts overestimate energy demand, underestimate technological advances and exaggerate the cost. In fact, renewables are getting cheaper every year. We calculated that the investment needed to meet new energy demand with clean technology, rather than without it, appears to be less than 1% of the world’s GDP. Climate change is a real and difficult problem, but one that can be curbed affordably.

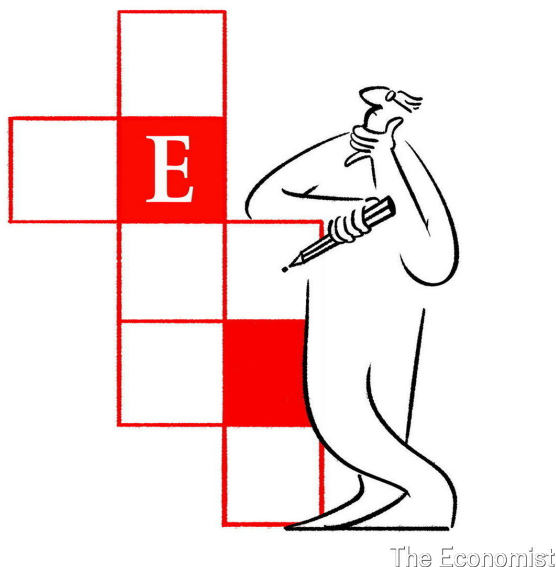
Solving a nutritional mystery



Processing innovations have made food cheaper, tastier and more convenient. But concerns are growing that these methods may be harmful to those who eat them. Most hotly debated are “ultra-processed foods”, which are packed with high concentrations of fat, sugar and salt. At the heart of the debate is a question: are UPFs unhealthy because their nutritional content is poor, or does the processing somehow pose risks in itself? This year scientists took a step towards solving the mystery.

The key is a randomised controlled trial, a form of experiment where researchers can track a person’s food intake and control for all other variables. Few have been done in this field, but Kevin Hall, a researcher at America’s National Institutes of Health, is currently leading one. The full results are expected next year. They could help [refine the understanding of UPFs](#) and pave the way for more balanced and useful guidelines.

Weekly crossword: Christmas edition



Our crossword is designed for experienced cruciverbalists and newcomers alike. Both sets of clues give the same answers, all of which feature in articles in this week's edition of *The Economist*:

Cryptic clues

1 down Redhead with cash is a festive sort of man (11)

1 across The word of God: mix almost all sloes with a dash of gin and a little prosecco (6)

2 across Rinse out something found in Christmas trees (5)

3 across Meal discovered in old inn, erroneously (6)

Factual clues

1 down Type of house likely to get decorated in a cheesy Christmas film (11)

1 across What a Nigerian megapreacher is bringing to the churches of Ukraine (6)

2 across A new renewable material that Lego is starting to make its bricks out of (5)

3 across Of what *Kaiseki* is a particularly fine example (6)

Email all four answers by 9am GMT on Monday to crossword@economist.com, along with your home city and country. We will pick randomly from those with the right answers and crown three winners in next week's edition.

The winners of this week's quiz



The Economist

Thank you to everyone who took part in this week's quiz. The winners, chosen at random, were:

Iker Urrutia, Bermeo, Spain

Stefano Colombu, Ang Mo Kio, Singapore

Hugh, Judith & Emma Tinsley, Wells, Britain

They all gave the correct answers of: George Michael, Edward Cullen, George Foreman, Elizabeth Barrett Browning and Charles Schulz. The theme is the regnal names of the last five British monarchs: George V, Edward VIII, George VI, Elizabeth II and Charles III.

The questions were:

Monday: Which famous singer died on Christmas Day 2016?

Tuesday: Which character marries Bella Swan in the Twilight book and film series?

Wednesday: Which heavyweight boxer made a fortune promoting a grill after retirement?

Thursday: Which Victorian poet had a secret courtship and marriage with the writer Robert Browning?

Friday: Which artist drew the Peanuts cartoon strip?

ikejime

The process used to kill the world's finest tuna sold at Toyosu market.

Read the full story.

**The few wonders of the world only exist
while there are those with the sight to see
them.**

Charles de Lint