

What the landmark Brexit deal means for science

The eleventh-hour trade agreement between Britain and the European Union came as a relief to UK researchers because it means that they can be funded by EU programmes.

Researchers reacted with relief to the news that the United Kingdom and the European Union had reached a last-minute trade deal on 24 December — ending years of uncertainty over what their relationship after Brexit would look like.

The deal has wide-ranging impacts for scientists — most importantly, it means that UK researchers will take part in the EU's €85-billion (US\$106-billion) flagship research programme, Horizon Europe.

In his speech outlining the agreement, UK Prime Minister Boris Johnson said that the deal meant “certainty for our scientists, who will be able to continue to work together on great collective projects”.

The agreement will also shape data regulations, student exchange, nuclear science, space research and clinical trials. *Nature* looks at what the long-awaited Brexit deal means for scientists.

Funding: UK scientists can win EU grants

The trade deal means that the United Kingdom will become an ‘associate’ member of Horizon Europe, which formally starts this month. UK-based researchers will be able to take part in the programme in the same way as their EU colleagues — for example, by competing for prestigious European Research Council grants. But UK researchers and firms will be excluded from Horizon Europe's new innovation fund, which is designed to support start-up firms.

The association is “fantastic news for the scientific community on both sides of the channel”, said Vivienne Stern, director of Universities UK International, a body that represents UK universities globally, in a statement.

The United Kingdom will pay into Horizon Europe a sum that is proportional to its gross domestic product, and this cash will boost the programme's overall budget, although the figure has yet to be announced.

Nuclear research: UK and EU to cooperate

Under the Brexit agreement, the United Kingdom will also now become an associate



UK Prime Minister Boris Johnson signs the Brexit trade deal, struck on 24 December 2020.

member of the Euratom research programme, which covers nuclear research and UK participation in ITER, the world's largest nuclear-fusion experiment, currently under construction in France. “It's what we were hoping for all along,” says Ian Chapman, head of the UK Atomic Energy Authority. The United Kingdom formally left Euratom on 31 January 2020, although its participation remained unchanged during the transition period. It could be months before a separate agreement for this association is reached, but Chapman says that it will be applied retroactively from 1 January.

Space: Britain still part of satellite programme

The United Kingdom will remain part of the Copernicus Earth-observation satellite programme. This fleet of satellites generates climate data on atmospheric gases, air quality, temperature and sea-level changes, for example. But the country will not participate in the EU's Galileo satellite-navigation system.

Clinical trials: drug standards agreed

The United Kingdom and EU have agreed to recognize each other's quality standards and inspections of medicines, which means that extra safety checks won't be needed when moving drugs over the border. That “should minimize any disruption”, says Emlyn Samuel, director of policy and public affairs at the London-based charity Cancer Research UK.

But a feared bureaucratic hurdle has arisen:

despite the deal, UK-led trials that span several European countries will now need to hire an individual or organization in the EU to act as a legal representative. “This is a hindrance for international collaboration,” says Samuel.

Separately from the deal, the United Kingdom is still waiting for the EU to decide whether its data-protection regulations are “adequate”. This would allow UK institutions to continue to freely receive personal data from EU countries, including patient data from clinical trials.

Students: UK leaves exchange programme

Many scientists are lamenting the United Kingdom's decision to withdraw from Erasmus+, a popular programme that allows EU citizens to study abroad in dozens of countries and is seen as key to encouraging international collaboration. In 2018, more than 17,000 UK university students used the programme. The United Kingdom is replacing Erasmus with the Turing Scheme, a £100-million (\$138-million) initiative that the UK government says will be more global.

Immigration: points-based system starts

Brexit ended freedom of movement between the United Kingdom and the EU, which means people can no longer move unrestricted between the two regions to work and live. Short visits remain visa-free.

A new UK immigration system, which was agreed before the trade deal, includes special provision for scientists. EU scientists and engineers seeking to work in the United Kingdom now have to apply through a points-based system for skilled workers, which came into effect on 1 January. Their applications are considered alongside those from researchers from the rest of the world. Scientists can also apply for a Global Talent visa, which offers a quicker path to permanent settlement than does the skilled-worker route.

But the rules for UK scientists seeking to work in EU countries are fragmented, with freedom of movement replaced by a patchwork of national immigration schemes, says Christine Sullivan, a Brussels-based attorney at Fragomen, a law firm that specializes in immigration issues.

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