JULIAN ABRAM WAINWRIGHT/GETTY

**The Philippine government wants to boost the number of agricultural scientists in the country.**

The programme cost 173 million Philippine pesos (US$3.2 million) from 2007 to the end of 2017.

The department has not yet established exactly how the changes to the programme will work and how much extra money it will get. Several sectors are listed as high-priority recruitment areas, including space, energy, artificial intelligence and agriculture and food.

### GROWING DIASPORA

In 2013, the Philippines had only 187.7 scientists per million people, one of the lowest densities of researchers in the region. The latest figures from the Department of Science and Technology estimate that the number of Filipino science and technology workers who moved overseas jumped from 9,877 in 1998 to 26,917 in 2013.

The revamped Balik programme is part of a government plan to increase development in the country, which came into effect last year. The government aims to boost the scientific workforce to 300 researchers per million people by 2022.

Biologist Michael Velarde, a current Balik scientist at the University of the Philippines Diliman, says that the extra support for the programme is a good idea because the country needs more overseas-trained researchers to address challenges including preventing the spread of diseases such as Zika and studying how climate change affects health.

And he thinks the added financial incentives will attract more talent back to the Philippines.

But Bongolan is frustrated that the country is paying to relocate scientists from abroad rather than offering more scholarships that encourage local students to pursue science at university.

She participated in the Balik programme in July 2008 after studying and working in the United States for a decade, and is sceptical about whether some participants are in the Philippines for long enough to contribute meaningful research and development.

The Department of Science and Technology did not respond to *Nature*'s request for details on what participants had achieved. But a department spokesperson said each scientist sets goals for their time in the country, and that all participants so far have met their targets. A statement posted on the department's website last month noted that the Balik programme had "significantly contributed to the acceleration of the scientific, agro-industrial and economic development of the country".

Miguel Garcia, a Filipino neuroscience and economics PhD student at the University of Zurich in Switzerland, says that the Philippines needs more than money to lure researchers back from overseas. Scientists need access to the right facilities and other researchers in their discipline; these are lacking in his field, he says.

Garcia also thinks the government should be encouraging scientists of any nationality to work in the Philippines. "Why tie your research interests based on someone's nationality when the government could set up the kind of research it needs, and attract scientists — regardless of nationality — to do it?" he asks. ■

PUBLISHING

# Mega-publisher cuts off German scientists

*Negotiations with Elsevier have stalled over open access.*

BY HOLLY ELSE

Elsevier last week stopped thousands of scientists in Germany from reading its recent journal articles, as a row escalated over the cost of a nationwide open-access agreement. The move comes just two weeks after researchers in Sweden lost access to the most recent Elsevier research papers, when negotiations on a contract there broke down over the same issue.

Negotiators in Germany and Elsevier now seem to be waiting for the other to blink, says Joseph Esposito, a publishing consultant in New York City. The highly public nature of the stand-off means that "any deal Elsevier does with them becomes the de facto deal for the entire world", he adds.

Elsevier's move to cut off some German researchers also provides a test as to whether the scientists can survive without a subscription deal with the mega-publisher, says Ralf Schimmer, director of scientific information at the Max Planck Digital Library in Munich, Germany. "If it comes to hardship and misery, then the negotiators might be forced back to the negotiating table." His organization provides journal access to the dozens of Max Planck Institutes and their libraries, and its contract with Elsevier finishes at the end of this year.

Elsevier declined to comment on the move, which was reported by negotiators, some affected libraries and Germany's national university association. The Amsterdam-based company instead reiterated a 5 July statement saying it was committed to reaching a deal with the German consortium Projekt Deal, which is brokering an agreement on behalf of hundreds of Germany's universities and research organizations. Projekt Deal declared on 6 July that it had suspended talks with Elsevier. The publisher produces more than 2,500 journals, which issue in excess of 400,000 papers each year.

### SUBSCRIPTION SHUTDOWN

The stand-off was sparked by talks between Elsevier and Projekt Deal, which is pushing to create a collective subscription agreement to replace the individual deals each institution has held with the publisher.

This new type of deal would offset the cost of publishing under open-access terms against the price paid for subscriptions to paywalled journals. These 'read and publish' contracts have become popular in recent years, as governments in some European countries have tried to make the fruits of publicly funded science open to all.

Academic library consortia in Austria, the Netherlands, the United Kingdom, Sweden and Finland have all struck read-and-publish deals with various publishers — including Wiley, Springer Nature and Taylor and Francis — that cover varying parts of their portfolios. (*Nature*'s news team is editorially independent of its publisher, Springer Nature.) Last month, the Massachusetts Institute of Technology in Cambridge became the first US institution to enter into one, covering journals published by the UK Royal Society of Chemistry. But some national consortia are now coming up against fierce resistance to such contracts from Elsevier.

In May, talks collapsed between Elsevier and the Swedish Bibsam Consortium, which brokers deals on behalf of 85 institutions across the country. Their existing contract expired on 30 June, and some researchers in Sweden have now lost access to all Elsevier journal articles published after this date.

### TOUGH COMPROMISE

Negotiators in Germany and Sweden want all their papers published in Elsevier journals to be open access as part of any new contracts. They have said that they will not pay more than they did previously for subscriptions. But, until now, the Dutch publisher has offered other countries read-and-publish deals that cover only a small proportion of a country's publishing output.

Apart from a brief shutdown in early 2017, which affected about 70 German institutions, Elsevier has provided mostly uninterrupted access to German institutions whose contracts have expired, while negotiations continue. Around 200 are thought to be affected by the latest switch-off, according to Projekt Deal.

The affected universities and research institutes can still source missing Elsevier articles through inter-library loans from the 150 or so institutes whose contracts have not yet expired.

The pressure on Elsevier to accept a read-and-publish contract is increasing, says Bernhard Mittermaier, head of the central library at the Jülich Research Centre in Germany and a member of the Projekt Deal negotiating team. He sees the widespread shift to 'gold' open access — whereby journals make papers freely available once published — as inevitable. "Publishers would be well advised to take it into their own hands and flip by themselves," he says. "Science in Germany will not break down."

Esposito thinks that the German institutes have leverage over Elsevier because their researchers can access papers on the illicit sharing site Sci-Hub — but that does not necessarily mean that Elsevier will back down.

"The Germans insisted on conducting this negotiation in public," he says, which could lead to a no-deal scenario because other countries might now want the same. If the stand-off continues without resolution, Elsevier will be closely monitoring journal article submissions from researchers based in Germany, Esposito predicts. "If it drops sharply, Elsevier will likely reconsider its position." ■

EARLY UNIVERSE

# Big Bang telescope finale is end of an era in cosmology

*Collaboration behind Europe's Planck mission releases its final maps of the early Universe.*

BY DAVIDE CASTELVECCHI

A transformative era in cosmological science ended last week when the European Space Agency's Planck telescope released its final maps of the early Universe. Planck was the last in a line of three major space telescopes to study the cosmic microwave background (CMB), the faint afterglow of the Big Bang, resulting in the most precise measurements yet of the age, geometry and composition of the cosmos. With space agencies in Europe and the United States hesitant to fund a follow-up mission, Planck looks set to be the last CMB-focused satellite for many years — marking a big change for cosmologists.

"There's a whole generation of young scientists who grew up with Planck," says cosmologist Jan Tauber, the mission's project scientist with the European Space Agency (ESA) in Noordwijk, the Netherlands.

For more than two decades, scores of ground-based and balloon-borne experiments have also studied the CMB. They have largely focused on mapping minute variations in the CMB's temperature across the sky to create charts of the Universe that have become the gold standard of cosmology. Planck, which collected data from 2009 to 2013, helped researchers to pin down the age of the Universe (about 13.8 billion years), its geometry (essentially flat) and its composition (95% dark matter and dark energy). In particular, the latest release solidifies an earlier prediction based on Planck data that the Universe should be expanding 9% slower than is currently observed (see go.nature.com/2jt0sbi).

***"There's a whole generation of young scientists who grew up with Planck."***

The temperature maps and the science they produced have been a "great achievement" but they don't have much more to give, says Peter Coles, a theoretical cosmologist at Maynooth University in Ireland who is not part of the collaboration.

### PLANCK DIASPORA

Many scientists who worked on the mission have already moved on to other projects. Silvia Galli, who help to lead the latest study, became part of Planck in 2013 after her PhD and is one of the few dozen scientists left. Now, she says she will probably join many of her colleagues who are working on Euclid, a major European mission to map the Universe's galaxies on an unprecedented scale that is preparing for launch in 2021. Euclid is an optical telescope, not a microwave detector, which makes it a technically different kind of mission. On a personal level, it is exciting to move on to new endeavours, she says.

But the prospect of no major CMB mission in the pipeline worries many researchers. "Scientifically, it would be a disaster," says Galli, who is based at the Institute of Astrophysics in Paris (IAP). "There is a risk that a lot of know-how ▶