

A pandemic is no time to cut the ERC's funding

The European Research Council will be crucial to a post-COVID world. Slashing its budget would be a senseless act.

Jean-Pierre Bourguignon is furious. The mathematician is interim president of the European Research Council (ERC), and is outraged by proposals that the agency's budget for 2021–27 is to be cut by €1.3 billion (US\$1.5 billion), a reduction of almost 10% from the €14.7 billion that had been proposed by the European Commission in 2018. "I don't understand it," he told *Nature*. He wants the decision reversed. So do we.

The EU has seen more than 2.5 million cases of the coronavirus, leading to the deaths of more than 142,000 people – out of 925,000 worldwide. At a time like this, you would think that the continent's leaders would want to strengthen the ERC, whose grant recipients are and will be key to understanding SARS-CoV-2, defeating COVID-19 and rebuilding societies and economies during and after the pandemic. But the leaders plan to cut back.

Created in 2007, the ERC is Europe's main funding agency for fundamental research. It is investigator-driven, and the benefits show. Whereas politicians have been slow or late to anticipate and respond to the pandemic, 180 existing ERC projects have been found to be highly relevant to the crisis. ERC investigators are ahead of the curve.

Unexpected setback

The council's main difficulty is that its fortunes are tied to those of the EU's larger research and innovation funding programme, Horizon Europe. In previous years, both budgets had been rising. But now the pandemic is devastating economies and, with the United Kingdom no longer in the EU, its contribution will be absent.

In 2018, the European Commission proposed €94.1 billion for Horizon Europe, an increase on the €80-billion budget for the 2014–20 funding programme (known as Horizon 2020). But in July this year, EU leaders chopped that back to €81 billion, including a €5-billion fund for COVID-related research. As a consequence, the ERC's budget will also be cut, even though little of the extra funding is expected to flow to the type of work that the ERC supports, such as developing models to track virus transmission, researching technologies for use in diagnostics and studying human behaviour in a pandemic.

The ERC's other challenge is that returns to society from fundamental research are not always immediately obvious to policymakers – particularly when compared with returns from other parts of the Horizon Europe budget,



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such as those that support climate science, cancer research and commercial partnerships.

Protecting funding for basic science during a time of budget cuts is monumentally difficult for any research agency, but a turbulent six months for the ERC's leadership has made it harder still.

In April, the agency's then-president, nanoscientist Mauro Ferrari, resigned after three months in office, at just the time when the agency needed to strengthen its coalition of support ahead of budget discussions. Previous president Bourguignon returned in an interim capacity on 27 July – days after the crucial meeting of EU leaders at which budget cuts were proposed.

The ERC is seen as stellar by the standards of basic research agencies. According to the latest evaluation report, almost one-fifth of projects report a breakthrough and more than half lead to a major scientific advance (see go.nature.com/3iyhn9i). Some countries – notably Poland – have even remodelled how they award grants to mirror the ERC's approach.

About 25% of all patents filed by projects supported by Horizon 2020 have come from ERC projects, even though commercialization of research is not the agency's main aim. Bourguignon and his colleagues rightly argue that many advances in fundamental research ultimately contribute to innovation and benefit society. But that is a hard message to get across at a time of constrained funding and competing priorities.

Winds of change

The ERC has also been buffeted by Europe's broader political cross-winds. During previous budget-setting periods, it was able to draw on the support of research and finance ministers from Europe's three biggest economies: Germany, France and the United Kingdom. But the United Kingdom has left the EU; and Germany, for now, is unable to provide its usual strong public backing. Since July, it

has held the rotating presidency of the Council of the European Union, the EU body representing member states' governments. In a statement, Germany's research ministry has said that it supports the ERC but cannot take a position during budget negotiations.

Still, the ERC retains strong support from the European Parliament, from the EU's smaller countries and from research and university leaders. That is why Bourguignon is right to take his case for support directly to these constituencies, which he has been doing. But time is short: the budget will be finalized before the end of this month.

The ERC is a rare success story in multilateral research funding. Its generous starting grants have had a profound impact on the quality of research in Europe. It has helped more experienced scientists to mature as researchers and mentor new talent. That talent is needed to tackle today's crises – and tomorrow's, too.

For their campaign to succeed, the ERC and its supporters need the research community and politicians across Europe to make a stronger case, especially to EU member states' ministries of finance. France and Germany have backed the ERC from the start. Now is not the time to dilute that support for an agency that will be essential to a post-COVID future.

Keep collaboration open when doors are closing

As some countries begin to raise barriers to international collaboration, scientists in the S20 engagement group are right to keep them down.

One by one, doors to international collaboration in research are starting to close.

The US government is leaving the World Health Organization and continuing its crack-down on scientists with connections to China (see page 335). China's government, meanwhile, is ending a policy that actively encouraged researchers to publish with colleagues in other countries.

In the European Union, some leaders have been suggesting that the flagship Horizon Europe research-funding programme should put more conditions on international participation – a dismaying development for an institution founded to strengthen bonds and protect against conflict.

At the beginning of this month, the European Commission published a foresight study aimed, in part, at achieving what it is calling 'technological sovereignty', a phrase that would have been unthinkable even a year ago.

The report finds that the EU has become overly reliant

on other countries, especially China, for supplies of crucial raw materials – including graphite, cobalt and lithium – that are needed in batteries and fuel cells, as well as in solar and wind-energy technologies. As fossil-fuel use declines, the EU will need nearly 60 times as much lithium by 2050 as it does today, according to one scenario. It will be looking for ways to bring mining of these materials – and the manufacturing processes they are involved in – closer to home. All of this suggests that the curtain is about to fall on an era of expanding international collaboration in research and technology.

But one group of researchers is sensibly keeping lines of communication open. On 26 September, Saudi Arabia will host the S20 – a meeting of scientists in advance of the G20, the annual gathering of heads of government of the world's 20 biggest economies, due to take place in Riyadh in November.

With science in the spotlight and with research being essential to ending the global coronavirus crisis, the S20 has been conducting a foresight exercise for global benefit. The aim is to assess how all countries could become more resilient to external shocks, such as pandemics, and how they can prepare for the transition to sustainable development. The S20 canvassed expert and lay opinions from around the world, surveyed academic literature and held evidence sessions to discuss what they found.

The final results are due to be published in time for the 26 September meeting, but an interim paper seen by *Nature* makes its timely message clear. The world is now more interconnected than at any time in human history, which means international research collaboration must be central to any ambition to understand how to make societies more resilient.

It's the right message. Societies that seek to erect barriers – for example, by restricting the flow of ideas – will find it tougher to withstand sudden shocks than will those that are open to sharing what they know, from genome sequences and clinical-trial results to designs for personal protective equipment and source code for contact-tracing apps.

The question is whether the intended audience of politicians and policymakers is ready to listen. Right now, it is hard to see the leaders of the G20 nations pivoting to adopt a more collegial approach to dealing with the pandemic. Too often, it's every country for itself. Take vaccine purchasing as an example. G20 governments, led by the United States, the United Kingdom and the EU, have pre-ordered more than two billion doses. The United Kingdom has purchased 340 million doses – 5 for each citizen – which will leave limited supplies for low- and middle-income countries.

Often, when researchers are involved in providing advice to policymakers – as in the current pandemic – it is deemed necessary for them to step back from decisions based on that advice, on the grounds that research stops where politics and policy begin. But there are exceptions: when countries unilaterally put up barriers to collaboration, researchers cannot remain silent.

That makes the key message of this year's S20 meeting more important than ever: the shifting sands of geopolitics must not affect the relationships that power research.

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Correction

The Editorial 'A pandemic is no time to cut the ERC's funding' misspelt the name of Jean-Pierre Bourguignon. It also erroneously stated that EU leaders had agreed a budget for the ERC of €14.7 billion in May. In fact, the €14.7-billion figure was proposed by the European Commission in 2018.